AN EVALUATION OF THE COMPLETION AND RECIDIVISM RATES FOR
FOR A COLLABORATIVE COMMUNITY AND COLLEGE BASED ALCOHOL
AND OTHER DRUG OFFENDERS DIVERSION PROGRAM

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AN EVALUATION OF THE COMPLETION AND RECIDIVISMD RATES FOR
FOR A COLLABORATIVE COMMUNITY AND COLLEGE BASED ALCOHOL
AND OTHER DRUG OFFENDERS DIVERSION PROGRAM (130 pp.)

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The purpose of this study is to quantify the impact of the Nelsonville Mayor’s Court Diversion Program on participants’ program completion, dismissal of criminal charges, and rate of recidivism over a three year period compared with three year statistics prior to the program. The program utilized intervention strategies including Brief Focused Therapy, Motivational Interviewing Techniques, Cognitive-Behavioral Skills Training and Life Style Management Strategies for mandated alcohol or drug-related misdemeanor offenders in the college and host community.

Students and community members who became involved with the Mayor’s Court for alcohol or drug-related offenses were mandated to a 10-week diversion program consisting of 13 hours of educational and therapeutic intervention. Data was collected on participants’ rates of program completion, dismissal of criminal charges, and rate of recidivism for three years and were compared with arrest and recidivism data from the court records for the three years prior to the initiation of the program. A chi square test for comparison was utilized with the collapsed years of 2000-2002 and 2003-2005 to test the program’s effectiveness. Assessment instruments including the MAST, CAGE and AUDIT were evaluated to determine if the severity of alcohol abuse, as measured by these instruments, had any relationship to participant outcomes.
Data for a three year period prior to the program’s initiation was compared to data for a three year period while the program was operational. Results indicated a 5% reduction in the number of arrests during the three year period the program was in operation. There was an overall 60% participant completion rate and the number of criminal charges that were dismissed increased by 93% for program completers. The number of repeat offenders was reduced by 40% for the three year period of the program’s operation. The Nelsonville Mayor’s Court Diversion Program was proven to be statistically significance in reducing arrests, reducing recidivism, and getting participants’ charges dismissed during the three years of operation in comparison to the three years prior to its existence at p>.05.

In conclusion, the total eradication of alcohol abuse on college campuses is not realistic. However, mandated intervention programs that utilize effective treatment modalities that address educational and life style management approaches may be effective in defining positive outcomes for individuals who participate in these programs. Seven recommendations for addressing the problem of the culture of alcohol abuse on college campuses and host communities are identified.

Approved: ________________________________________________________

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CHAPTER ONE
INTRODUCTION

Studies of the use of alcohol on college campuses have been prevalent in the literature since the classic study *Drinking in College*, written in 1953 by Strauss and Bacon. This pioneering research, written over half a century ago, described college drinking as a critical situation affecting American college society; it is perhaps an even more serious problem now (Biden, 2000; Robert Wood Johnson Foundation, 2001). However, recent concerns about alcohol abuse on American college campuses and the related negative consequences to students have been the subject of great controversy within the academic community (Preseley, Meilnan, & Lyerla, 1995). The concerns have centered on how heavy drinking and its pervasive collateral problems and issues are interwoven throughout the culture of the college institution. The consequences of excessive and underage drinking affect virtually all college campuses, college communities, and college students, whether they choose to drink or not.

The National Institute on Alcohol Abuse and Alcoholism reports that over 1,700 college students between the ages of 18 and 24 who are enrolled in 4-year college institutions die each year from unintentional alcohol-related injuries, including motor vehicle crashes (Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., Wechsler, H., 2005). More than 599,000 students between the ages of 18 and 24 are injured unintentionally while under the influence of alcohol every year (Hingson et al., 2005). Students who have been drinking assault more than 696,000 of their fellow students between the ages of 18 and 24 per year (Hingson et al., 2005). About 25% of college students report academic consequences due to drinking, including missing class, falling
behind academically, doing poorly on exams or papers, and receiving lower grades overall (Engs, R. C., Diebold, B. A., & Hansen, D. J., 1996; Presley, C. A., Meilman, P. W., & Cashin, J. R., 1996a; Presley, C. A., Meilman, P. W., Cashin, J. R. & Lyerla, R., 1996b; Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F., & Lee, H. P., 2002). About 5% of 4-year college students become involved with police, college judicial systems, and municipal or state judiciary systems as a result of drinking (Hingson et al., 2005). An estimated 100,110 college students between the ages of 18 and 24 are arrested per year for alcohol-related violations such as public drunkenness, underage consumption or possession, and driving under the influence of alcohol (Hingson, R.W., Heeren, T., Zakocs, R.C., Kopstein, A., Wechsler, H., et al., 2002).

Perhaps of most concern is that according to self-reported questionnaires about their drinking, 31% of college students met criteria for a diagnosis of alcohol abuse. The DSM-IV denotes these criteria as a maladaptive pattern of substance use that leads to clinically important distress or impairment as shown in a single 12-month period by demonstrating tolerance, withdrawal symptoms, extended duration of use, an inability to control or reduce alcohol use and the legal, psychological or physical problems that are incurred within this time period (Morrison, 1995). Evidence indicates that 6% of college students had been diagnosed with alcohol dependence within the past 12 months (Knight, J. R., Wechsler, H., Kuo, M., Seibring, M., Weitzman, E. R., & Schuckit, M. (in press). These facts corroborate numerous other national studies that have determined that overuse of alcohol, alcohol abuse, and high-risk drinking habits have become entrenched behavior on our American college campuses and have tainted American college culture (Wechsler & Isaac, 1992; Wechsler & McFadden, 1979).
The National Monitoring the Future survey found that of 1,440 full time 2- and 4-year college students surveyed in 1999, 40% reported consuming five or more drinks on a single occasion at least once in the previous two weeks (Johnston et al., 2000). This is defined as “binge drinking.” A lower percentage of binge drinkers was found among same age noncollege peers (35%) and high school seniors (31%). These surveys have determined that a large proportion of college students drink heavily— an even larger proportion than persons of the same age who are not in college (Hingson et al., 2005). These facts support the assumption that students believe heavy drinking is the social norm for college students. In reality, if the outcome research is examined, it can be postulated that heavy drinking is a negative behavior that can lead to extremely negative life consequences. These areas include, but are not limited to, death, injury, academic problems, and legal problems that could adversely affect career development, as well as cause mental, emotional and physical dysfunction within the foreseeable future (Wechsler, H., Lee, H., Kuo, M. & Lee, J. E., 2000b).

Statement of the Problem

Identifying and implementing effective interventions for college student drug and alcohol use have been a perplexing concern for college administrators, faculty, parents, students, campus and local police, and community leaders for some time. Unfortunately, increased campus alcohol prevention programs have not reduced national binge drinking rates or serious alcohol-related problems for college students. Hence, it is not surprising these rates have remained unchanged for over a decade (Wechsler, Lee, et al., 2000b).

First-year college students are at especially high risk for alcohol abuse and misuse problems. The author administered the CORE survey to more than 400 students at
Hocking College, a 2-year college located in a rural southeastern Ohio town, Nelsonville. The results indicate that 60% of first-year enrollees are at high risk for alcohol and other drug-related problems. Pilot studies conducted by the author at this 2-year institution indicated that 44% of first-year enrollees do not complete their first two quarters without experiencing negative consequences of alcohol abuse and the precipitating problems. Less than 30% of students who enroll at this institution complete their degree and graduate. The national three-year graduation rate is 31% (NICHEPA, 2005).

The legal consequences of alcohol use can affect students’ careers. In the state of Ohio, individuals who are arrested for AOD-related offenses and who are convicted or plead guilty incur a criminal record with a first-degree misdemeanor charge for AOD-related offenses. Students who attend a technical or community college usually seek a 2-year associate degree in a service-related field that often has potential for state or federal employment. Information obtained from students and staff reported at this 2-year college indicated that students who had graduated and successfully passed the necessary certifications and licensure exams still encountered problems that negatively effected their employment opportunities when their background checks contained first-degree misdemeanor charges that were alcohol or drug (AOD) related. These graduates often were deemed unacceptable for hire.

This anecdotal evidence is borne out by research that indicates that criminal records, even for misdemeanors, can have serious career consequences for students (National Institutes of Health, 2002). This problem has become even greater since the terrorist attacks of September 11, 2001. The newly created federal Department of
Homeland Security has increased the intensity of background checks at all levels in U.S. society in both public and private sectors. This increased scrutiny includes the student population, particularly those who apply for government service positions.

Furthermore, the author studied municipal public records for the years 2000 and 2001 to examine the number of student arrests, convictions, guilty pleas, forfeitures, and criminal charges involving for AOD-related offenses. The data indicated that over 30% of the students with AOD charges were repeat offenders. None of the students had requested to have their records expunged or the charges dismissed. The remaining majority of students charged had paid a fine, or made an agreement to pay and were not aware that the criminal charge would remain a part of their record.

Town and Gown Relationship

The city of Nelsonville is more than 200 years old. Originally the town supported local coal-mining and brick-making operations. Today, its only industries are Hocking College and Rocky Shoes and Boots, an international maker of work and hiking footwear. In the 1990s, Rocky moved its manufacturing operations out of the U.S., leaving only retail and administrative offices in Nelsonville.

In a speech given by Senator George Voinovich at the Nelsonville Opera House (2000), the following information was provided:

Distressed counties are the poorest of the poor, with unemployment at least 150 percent of the national average, a poverty rate of at least 150 percent of the national average, and per capita market income of no more than two-thirds of the national average. This means that a distressed county has an unemployment rate of greater than 8 percent, a poverty rate of at least 19.7 percent, and per capita market income of less than
$13,674. In fiscal year 2000, 111 counties, or roughly one-fourth of the counties in the Appalachian Regional Counsel (ARC), are classified as distressed. Nine of these counties are in Ohio (2000). The city of Nelsonville and the county of Athens are served by ARC. Additionally, the city has few activities available for college students or other young adults. The city of Athens however, is 15 miles away. Athens is home of Ohio University, a much larger 4-year institution, as well as more than 40 bars.

Of Nelsonville’s 5,000 residents, more than 2,000 are between the ages of 26 and 30. “This growing population of students and young adults in the community has become a burden to the small local judiciary systems,” said Nelsonville Mayor Clinton Stanley. “The problem of low employment, limited recreational resources, and proximity to Athens combine to exacerbate alcohol and other substance abuse problems in the community” (Mayor Stanley).

Hocking College administrators, faculty, and concerned parents, as well as the residents of Nelsonville, have voiced concerns about the problem of alcohol and drug use in the student population and young adults in the community at large.

*Diversion Programs*

Jail and court diversion programs provide court-based services to first-time offenders with substance abuse disorders who are arrested for misdemeanor offenses. The primary function of these programs is to facilitate access to the appropriate education or treatment services necessary to help offenders correct their behaviors and make restitution without receiving a criminal record. The goal of these programs is to have the offender learn from the experience and avoid future contacts with the legal system. These programs mainly target nonviolent criminals and are used only when the case has been
deemed eligible by the mayor or prosecutor and when the defendant volunteers to enter the program. Upon successful completion of the program, the charges will be dismissed. (www.dublin.oh.us/court/programs.php).

First-Year College Students: “High Risk”

College drinking occurs at a stage in life when drinking levels are generally higher. The Final Report of the Panel on Contexts and Consequences of the National Institute on Alcohol Abuse and Alcoholism’s Task Force on College Drinking reported:

Problems among college students are closely related to their developmental processes. First-year college students are at high risk for problems and challenges associated with the transition involving their search for identity, their development of social relationships, their increased perceived peer pressure, new living arrangements and a developmental focus pre-occupied with the concepts of invincibility and enjoying the here and now phenomena (National Institutes of Health, 2002).

The period between ages 19 and 24 is associated with the highest prevalence of periodic heavy alcohol consumption during the individual’s life span (Johnson et al., 2001, p. vi). The NIH panel also noted, “There is no one cause of excessive alcohol use by college students, and it would be naïve and misleading to adopt a simplistic view of, or approach to, this problem” (National Institute of Health, 2002, pg. v). Hence, when designing the curriculum for the program described in this study, it was important to consider the multiple influences that co-exist within the target population.
Diversion Program

The Diversion Program intervention strategy was designed to help students and young adults take a conscious look at the negative consequences of the use of alcohol and other drugs at this crucial developmental juncture in their lives and the impact the consequences can have now and in the future. The Diversion Program helps participants understand the difference between use and abuse, dependency, and addiction and help them identify where their use falls on the continuum of alcohol or substance use. The Diversion Program provides information and social tools to teach life and decision-making skills that lead to appropriate and healthy choices about alcohol or drug use. The psycho-education teaching process provides cognitive-behavioral skills training tools to help participants identify and recognize the high-risk zone when confronted with AOD use and/or abuse issues.

The specified outcomes of this research will be evaluated quantitatively. The quantitative expectation is the program will decrease the number of repeat offenders for AOD-related offenses and reduce the number of students who receive criminal records due to AOD-related charges. The qualitative expectations are that participants in the project will gain tools to help them make choices and decisions that reduce the negative consequences when they choose to use alcohol. The anecdotal expectation is that participants will change their attitudes, thinking, and behaviors from a lifetime perspective that will help them identify at what level they are functioning on their personal continuum (use, abuse, dependency, or addiction) of AOD use and the potential negative consequences abuse, dependency, or addiction can have on their lives.
In the Nelsonville Mayor’s Court, those who are arrested and summoned to court can plead “guilty”, “not guilty” or “no contest”. Those who plead “no contest” are not subject to the complicating factors of a guilty plea, thus avoiding personal responsibility for any civil liability that may be involved in the case of an accident. Offenders who plead “no contest” or “guilty” are offered an opportunity to participate in the court’s Diversion Program in lieu of a receiving a criminal record. Participation in this program does not automatically eliminate the arrest record; however, upon successful completion of the program and a letter to the mayor requesting the charges be dismissed, the first-degree misdemeanor charges are dismissed.

*Research Design and Questions*

In their book *By Design, Planning Research on Higher Education*, Light, Singer and Willet write that “you cannot investigate all research questions using randomized experiments, when studying the effects of programs that have already begun taking place” (Light, Singer and Willet, 1990, pg.123). This study is based on collected data of misdemeanor criminal charges for AOD-related charges from city of Nelsonville’s public records for 3 years before the inception of the Diversion Program and 3 years after the program began. Therefore, the design model is an historical comparison.

**Null Hypothesis**

1. There is no significant difference in the proportional percentages of repeat offenders who participate in Diversion Program compared to the proportional percentages of repeat offenses three years prior to existence of the diversion program for alcohol- or drug-related misdemeanor charges in the city of Nelsonville.
2. There is no significant difference in the proportional percentages of arrests in the city of Nelsonville for alcohol- or drug-related misdemeanor crimes compared to the proportional percentages of arrest for similar offenses three years prior to its inception.

3. There is no significant difference in the proportional percentages of alcohol- or drug-related misdemeanor criminal charges that have been dismissed or expunged by the court compared to proportional percentages of dismissed or expunged cases three years prior to the program’s inception.

Null Hypothesis: Treatment Program Research Questions

1. There is no significance in the participant’s score on the Severity of Alcohol Abuse Index determined by the Alcohol Use Disorder Assessment (AUDIT) screening instrument that will predict whether the participant will successfully complete the Diversion Program.

2. There is no significance in the participant’s score on the Severity of Alcohol Abuse Index determined by the Michigan Alcohol Screening Test (MAST) that will predict whether the participant will successfully complete the Diversion Program.

3. There is no significance in the participant’s score on the Severity of Alcohol Abuse Index determined by the CAGE screening instrument that will predict whether the participant will successfully complete the Diversion Program.
Limitations

All students or young adults in the community who are apprehended for underage alcohol-related offenses may not have their cases heard in city of Nelsonville Mayor’s Court. Therefore, they may not be candidates for the Diversion Program.

Students who are apprehended on the Hocking College campus or in the college’s residence halls for alcohol- or drug-related offenses are not always mandated into local courts. They may appear before a college judiciary officer and receive a hearing or plead guilty at the review. Some students who receive hearings through the Hocking College judiciary system who are found guilty are sanctioned into the Hocking College Department of Student Affairs AOD program and subsequently are sanctioned into the Nelsonville Mayor’s Court Diversion Program. They do not incur criminal charges; however, they participate in the program and therefore are included in the evaluation.

The research will include all participants in the program including Hocking College students, Ohio University students, local community residents, and transient individuals who have been arrested and requested to participate in the program. However, specific data relating to the recidivism rate, dismissal of criminal charges, and successful completion of the program among Hocking College students will be separately identified and charted.

The impact of moderate predictors such as the influencing social-environmental-economic explanatory factors, maturation, chance, methodological artifact, spuriousness, and directionality might suggest some cultural phenomenon that may adversely affect the outcome for certain participants in the program. Consideration for the implications of Hocking College students being influenced by these factors may have a significant
impact upon the outcome and are therefore considered a limitation in the data outcome. Additionally, with the aforementioned factors, this study will consider that Hocking College students are often hands-on learners who are more technically oriented than those a 4-year college admits, as well as Hocking College’s open admission policy, all of which are unique characteristics of students who choose to attend Hocking College. These factors all may be considered limitations of the study.

The study will include all individuals who participate in the program; therefore, the use of comparison group and random assignment present potential degree for flaw in this study. The author has chosen to do an historical comparison of the outcomes of participants who participated to those who did not in the three prior years. The historical comparison is a moderating variable to be considered due to the public’s awareness of the program and its very existence. This may have some impact on the overall consequence of offender intent. The statistical relevance for Hocking College students will be documented independently for student outcome comparisons; however, the overall research outcomes will include all participants in the program.

Delimitation

The research is being conducted in a small community with a population less than 6,000, and with a 2-year college that has on-campus residential facilities. Hence, findings in this research may not be generalized to colleges in larger communities or to 4-year institutions. However, the overall outcomes may be generalized to communities of similar size and to other 2-year institutions.
Definition of Terms

AOD
An excepted abbreviation for the terms Alcohol and Other Drugs. This term allows for alcohol to be defined as a drug, yet gives it differential recognition NIAAA (2000).

AUDIT
Alcohol Use Disorder Identification Test, developed by the World Health Organization to identify hazardous and harmful alcohol use in adults. It is a brief 10-item instrument with a core section of 10 items that comprise the subscales. The core items focus on the recent past, rather than assessing alcohol consumption over the lifespan (Measurement Excellence Initiative, 2003).

Binge Drinking
A term for a drinking behavior in men who report consuming five or more drinks in a row at least once in two weeks and in women who report consuming four or more drinks in a row at least once in two weeks. More than two out of five college students (44%) are classified as binge drinkers. (NIAAA, 2000).

Brief Counseling
A heterogeneous set of interventions conceptually planned to target a broad range of students and diverse problems. These interventions are intentional and consider the impact of the number of group intervention sessions and the measurement time utilized to indicate a successful outcome from the process (Steenbarger, 1992, 1994).
CAGE

A self-reported screening instrument that appears to be suited to a busy clinical setting where there is limited time for client interviews. CAGE is a mnemonic for Cut down on drinking, Annoyance with criticisms about drinking, Guilt about drinking, and using alcohol as an Eye-opener. (Ewing, JA Rouse, 1970).

Charges dismissed

The criminal charges for a crime are rescinded by the court because the court determined it would be in the offender’s best interest. Usually for this to occur, some compensating action has occurred that was deemed necessary by the court. In this study, charges were dismissed when the offender successfully completed the Nelsonville Diversion Program.

Cognitive-Behavioral Skills Training

Teaching individuals to analyze thoughts, feelings, and physical reactions that lead either to the decision not to drink or to enhance confidence in the ability to resist temptation, and to become aware of maladaptive thought patterns and challenge them. (Garvin, et al., 1990).

CORE Drug and Alcohol Survey

CORE is an alcohol and drug survey developed in the late 1980s by the United States Department of Education and advisors from several American universities and colleges. The survey is used to determine the extent of substance use and abuse on college campuses. (Southern Illinois University, Carbondale, 2003).
**Homeland Security**

The recent establishment of a new set of relationships that tie federal, state and local governments, international organizations, quasi-government organizations, and the private sector into complex coordinated networks to prevent and mitigate terrorist attacks. (National Academy of Public Administration. (2004).

**Motivational Enhancement Therapy**

A therapeutic approach based on the premise that clients will be able to make behavioral change when motivation comes from within themselves rather than being imposed by the instructor or counselor. (Miller and Rolnick, 1991).

**MAST**

The Michigan Alcoholism Screening Test is a formal 25-item questionnaire that requires approximately 25 minutes to complete. The MAST focuses on the consequences of problem drinking and on the subject’s perceptions of their alcohol problems. (Selzer, 1971).

**Negative consequences**

Outcomes that are punitive in nature and are usually legal, emotional, psychological, financial and/or health related. These are problems that arise due to abuse of alcohol or other drugs.

**Psycho-education**

A specialized form of education aimed at helping people learn about a broad range of physical, psychological, emotional, cognitive, and behavioral challenges and issues, and the appropriate strategies to facilitate solution-finding. Psycho-education is
neither therapy nor treatment. However, it is designed to either stand alone or to complement psychotherapy.

*Recidivism*

The relapse into a condition or a mode of behavior; relapse into criminal behavior.

*Retention*

The outcome when a college student is making sufficient academic progress in accord with the standards established by the institution and remains enrolled in coursework. Retention rates can be used as a measure of an institution’s ability to effectively educate students by meeting their academic support needs, as well as their psychosocial needs.
CHAPTER TWO
REVIEW OF THE LITERATURE

There is a paucity of science-based studies to be found on the success of treatment approaches for alcohol and drug abuse. This scarcity has been an obstacle to progress regarding these social problems. The subject to be addressed will include findings in the literature related to the problems of underage consumption of alcohol in the college environment and community. Chapter Two will present and examine literature related to heavy alcohol consumption or binge drinking, individual variations in drinking rates, and the dysfunctional development that ensues among the student population when alcohol use and abuse affects their lives. It will demonstrate the need for multiple points of intervention to effectively educate individuals in identifying, changing, and managing the complications of abuse or excessive use of alcohol and/or drugs that occurs during the latter developmental stages of life (between the ages of 18 and 24). Underlying concerns such as developmental and transitional issues encountered by the college population and the multiple influences within the college culture and the college’s community also will be reviewed in this chapter.

This chapter will examine theory, research, and outcome studies pertaining to prevention-based brief focused approaches, motivational interviewing and motivational enhancement techniques, and cognitive-behavioral skills training. Outcome studies pertaining to brief alcohol interventions with mandated or adjudicated college students also will be explored. Finally, the chapter will report on the outcomes of studies that promote the effectiveness of the trans-theoretical model of change when applied to multilevel interventions for alcohol abuse in the college and community. This is a
collaborative approach for college and community to address underage drinking, binge drinking and its resulting problems, and potential effective strategies that produce positive outcomes.

Underage Drinking

The National Survey on Drug Use and Health (2004) in The NSDUH Report found that rural areas (such as Nelsonville), reported higher rates of underage drinking than their counterpart urban areas. The report adds, underage consumption is a cultural norm and is exacerbated by the socio-cultural and environmental circumstances. The Task Force of the National Advisory Council of Alcohol Abuse and Alcoholism reports in High-Risk Drinking in College (2002), “Students on rural campuses drink more than students on urban or suburban campus.” The College Alcohol Survey (CAS) data show that binge drinking rates of rural or small town campuses are consistently higher than those of urban/suburban campuses; for example: 49% versus 42% in 1999” (p. 24). These socio-cultural, economic-environmental concerns, coupled with the developmental and transitional issues first-year college students encounter, set the stage for major high-risk drinking and the behavioral problems that accompany it.

College students under the minimum legal drinking age (MLDA) are at high risk for a number of alcohol related problems due in part to their stage of development. G. Stanley Hall, founder of the scientific study of adolescence noted this as a time of unavoidable “storm and stress”. Hall states, “We can do little to ease adolescents’ pain because development is largely controlled by evolution and biology” (Schulenberg & Maggs, 2002, p. 55). Adolescence is characterized by change and is challenging, but it
need not be tumultuous and problematic unless societal conditions prompt it (Peterson and Leffert, 1995).

Alcohol abuse is arguably the nation’s number one public health problem and has an especially powerful impact on youth (Robert Wood Foundation, 1999). Because colleges and universities are the social institutions in which many youth make the transition from adolescence into adulthood, they often become the playing field on which developmental problems, including alcohol misuse, unfurl. However, these transitions also affect non-college peers, suggesting that what is often interpreted as a campus-based problem may be attributable, in part, to the broader social and biological process that characterize late adolescence and early adulthood in general (NIAAA, 2002). The Panel on Context and Consequences developed by the Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism points out the drinking patterns of some college students represent the continuation of behavior that began during high school or even earlier. When these problems emerge at age 18 or 19, they are labeled from this perspective. While the college experience may serve to identify or, in some cases, amplify excessive underage drinking, it does not necessarily cause it. However, research does suggest there are aspects of certain college environments that may support or facilitate drinking among underage college students.

College drinking occurs at a stage in life when drinking levels generally are already elevated. Young people between the ages of 19 and 24 exhibit the highest prevalence of periodic heavy alcohol consumption during their life spans (Johnson et al., 2001b). College students’ drinking differs from that of their peers who are of legal drinking age in that underage students drink less often, but they have more drinks per
occasion when they do drink (Wechsler, Lee, Nelson Kuo., 2002). Anecdotal evidence indicates that the first six weeks of enrollment in college are critical to first-year students' success (College Alcohol Study, 1989). Heavy drinking during the early days of college can interfere with successful adaptation to campus life. Unfortunately, many alcohol prevention and intervention programs do not target this critical, high-risk time.

Drinking behavior is complex, and the social-economic and political environment of the college campus lends itself to certain ecological factors that need to be considered. The disposition of the community in which the institution exists and whether the community allows the legal purchase and consumption of alcohol within its geographical boundaries is a pertinent factor in the context of the college-drinking environment. Additional factors include the number of drinking establishments and alcohol-related products sold in the college community; "town and gown" relationships; campus police, judiciaries, and municipal police; local business involvement with the college; and the demographics of the college and community itself (Dowdall, Wechsler, 2002). Multi-developmental individual and interactive issues -- including a student’s disposable income and social integration into college life -- affect the problem. These factors are influenced by the students' family roles, family background, peers, and family history of alcoholism. In addition, students’ belief systems and personalities, their expectations about alcohol’s effects, and the social context in which drinking takes place all come into play (NIAAA, 2002).

Minimum Legal Drinking Age

Minimum legal drinking age (MLDA) laws were established in part to combat heavy alcohol use by college-age students who are underage. The 1984 National
Minimum Purchase Age Act is associated with a significant decrease in traffic fatalities involving drivers from 18 to 20 years of age (Rosenfield & Wagenaar, 1996). The proportion of youth traffic fatalities involving alcohol dropped from 63.2% in 1982 to 35.1% in 1999 (Morbidity and Mortality Weekly Report, 2001). The National Highway Traffic Administration estimates that since 1975, laws mandating an MLDA of 21 years have saved more than 19,000 lives in collisions involving drivers between ages 18 and 20 (Wechsler, 1980). In contrast, studies of highway fatalities in the 1970s, when the MLDA in some states was lowered below 21, revealed an increase in deaths during that period (Wechsler, 1980).

A recent review of literature from 1960 to 2000 revealed that MLDA laws were associated with reduced alcohol consumption by those under age 21, as well as fewer alcohol-related traffic fatalities and fewer social and health problems (Wagenaar, Toomey, 2000). However, enforcement of MLDA laws is often unsuccessful. Law enforcement agencies are often low on staff and funding for adequate enforcement. A recent study of alcohol retailers reveals a wide variability in compliance with MLDA laws (Toomey, Foster, Wagenaar & Perry, 1996). To aid in managing the enforcement of MLDA laws, additional laws have been implemented governing the use of alcohol, including prohibitions on the attempt to purchase or consume alcohol using false identification and mandated prosecution of those purchase alcohol for and/or supply alcohol to individuals under age 21. Other laws limit high-volume alcohol purchase and sales, such as registration of keg sales, "happy hour" limits on sales of pitchers, and greater scrutiny of identification checks at establishments that sell liquor.
Despite these measures, underage alcohol use remains a serious national problem, as does binge drinking in the underage college student population. College students binge drink more often than their former high school classmates who do not attend college (Bachman, O’Malley & Johnston, 1984). The Safe and Drug Free Schools Act of 1989 requires colleges and universities to publish information about laws that regulate alcohol and drug use, including the MLDA; to acquaint students with the consequences of breaking those laws; and to periodically evaluate the effectiveness of the institution’s policies (American Council on Education, 1994).

MLDA laws may have played a role in reports that underage students drink on fewer occasions and less often in public settings. However, when they do drink, they consume more alcohol per occasion. First-year students are, as a group, at higher risk for episodic drinking (binge drinking) patterns of alcohol consumption (Dowdall, Kuo, & Wechsler, 2002).

Episodic Drinking (Binge Drinking) as a High-Risk Behavior

Binge drinking on is considered to be one of the most serious health problems confronting American college students (Lee, Glendhille-Hoyt, Maenner, Dowdall, Wechsler, 1998). The Final Report of the Panel of Contexts and Consequences states, “The U.S. Surgeon General and the U.S. Department of Health and Human Services (USDHHS) have identified binge drinking among college students as a major health problem” (2002, p. 5). The publication Healthy People 2010, which sets the U.S. public health goals through the year 2010, states, “The federal government has singled out binge drinking among college students for a specific, targeted reduction …. Binge drinking is a national problem, especially among males and young adults” (2002, p. 5).
Binge drinking is defined in males as consuming five or more drinks in a row in the past two weeks and in females as consuming four or more drinks in a row. This is based on extensive analyses equating the risk of alcohol-related health and behavior problems across gender (Wechsler, Dowdall Davenport, Rimm, 1995). Dr. Henry Wechsler, Ph.D., Director of the College Alcohol Studies at Harvard School of Public Health, states, “If you are a traditional college student and you drink, the odds are seven in ten that you are a binge drinker” (NIAAA, 2002, p.1). A traditional student is defined as a student who attends college between the ages of 18 and 23 and who does not live with parents.

A recent study conducted by the Harvard School of Public Health indicated that 43.6% of underage students were binge drinkers. This rate was similar to the national rate for all college students and did not change over four survey years. The survey also found that over the 4-year period, underage students who drank were more frequently engaged in binge drinking (NIAAA, 2002). The problem is present among both full-time and part-time students at 2-year and 4-year institutions alike, with 45.6% of such students reporting binge drinking (Presley et al., 1998). More underage students reported they were drunk on three or more occasions and they were more likely to have drank to get drunk in the past 30 days than students aged 21 to 23 (Wechsler, Lee, Nelson Kuo, 2002).

Binge drinkers produce problems for themselves and for others both on and off campus. Binge drinking has been linked with a number of seriously negative problems, beginning with bio-psycho-social issues affecting adolescent brain development and evolving into academic difficulties, antisocial behavior, emotional and mental health
problems, safety issues, high-risk sexual behavior, and other “risky behaviors” such as drinking and driving (Lee, Glendhill-Hoyt, Maenner, Dowdall, Wechsler, 1998).

Heavy drinking also affects other students. Students who attend schools where binge-drinking problems exist experience such secondhand effects as verbal and physical abuse, sexual assault, increased risk of sexually transmitted disease, and property damage (Moeykens, Davenport, Castillo & Hansen, 1995).

Bio-Psycho-Social Impacts of Adolescent Brain Development

Traditional college students usually begin college in late adolescence, when the human brain is undergoing development. “Human adolescents exhibit an increase in negative affect and depressed mood relative to younger or older individuals” (Spears, 2002). In addition, adolescents seemingly experience and expect to experience positive situations as less pleasurable than older or younger populations (Larson & Asmussen, 1991).

Adolescents are developmentally predisposed to pursue new appetitive reinforcers, which in turn facilitate increases in high-risk taking and novelty-seeking behavior. This may include use and abuse of alcohol and drugs to their current and future detriment, quite often unknown to the adolescent. Further, the adolescent brain is in a state of transition as it undergoes both progressive and regressive changes. Hence, the neural regions such as the prefrontal cortex, as well as other forebrain projection regions, show prominent alterations during adolescence (Spears, 2002). Given the importance of these brain areas in modulating the reward efficacy of reinforcing drugs (Koob, 1992), sensitivity to environment and stressors (Dunn & Kramarcy, 1984) and the association
between the two (Goeders, 1977; Piazza et al., 1991), it is not surprising that adolescents vary notably from more mature adults in their response to alcohol (Spears, 2002).

Many first-year college students may already have experience with alcohol. According to “Monitoring the Future: Survey of the National Institute on Drug Abuse,” 43% of 8th graders, 65% of 10th graders, and 73% of high school seniors reported they had used alcohol in the past year. In addition, 5% of 8th graders, 24% of 10th graders, and 32% of 12th graders also reported getting drunk on one or more occasions during the past month (Johnson et al., 2001). Clearly, many adolescents use alcohol, and evidence of excessive use or binge drinking is emerging in this population prior to entering college.

Adolescents are not immune to the development of dependence on alcohol (Spear, 2002). They may experience difficulty in cutting down or quitting (Pollock & Martin, 1999). Once adolescents become dependent on alcohol, their rates of relapse approximate those of alcoholic adults, despite the much shorter chronicity of alcohol use in the adolescent (Brown, 1993).

In summary, the escalating binge drinking phenomena in adolescent and first-year college students brings concerns that adolescent-onset alcohol use can cause what is described as an accelerated dependency course, with shorter times from first exposure to dependence for alcohol and marijuana (Clark et al., 1998) Evidence suggests that this preexisting potential is a contributing factor in the misuses of alcohol by young adults.
Problems and Consequences and Related to Alcohol Misuse and Binge Drinking in College

The excessive use of alcohol and the related consequences and problems on college campuses is well documented. Over 1,700 college students between the ages of 18 and 24 die each year from unintentional alcohol-related accidents including motor vehicle crash injuries (Hingson et al., 2005). Whereas a small number of alcohol overdose deaths have been recorded, the number of alcohol related deaths have drawn attention to the magnitude of the problem.

**Injury**

Over 59,000,000 students between the ages of 18 and 24 are injured under the influence of alcohol yearly (Hingson et al., 2005).

**Assault**

More than 696,000 students between the ages of 18 and 24 are assaulted annually by other students who had been drinking (Hingson et al., 2005).

**Sexual Abuse**

More than 97,000 students between the ages of 18 and 24 are victims of alcohol-related sexual abuse annually (Hingson et al., 2005).

**Unsafe Sex**

More than 400,000 students between the ages of 18 and 24 had unprotected sex and more than 100,000 students between the ages of 18 and 24 report having been too intoxicated to know if they consented to having sex (Hingson et al., 2002).
**Academic Problems**

About 25% of college students report academic consequences because of their drinking, including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall (Engs et al. 1996; Presley et al., 1996a, 1996b; Wechsler et al., 2002).

**Drunk Driving**

At least 2.1 million students between the ages of 18 and 24 drove under the influence of alcohol in 2001 (Hingson et al., 2002).

**Health Problems/Suicide Attempts**

More than 150,000 students develop an alcohol-related health problem every year (Hingson et al., 2002). Between 1.2% and 1.5% of students indicate that they tried to commit suicide within the past year due to drinking or drug use (Prisley et al., 1998).

**Vandalism**

About 11% of college drinkers report that they have damaged property while under the influence of alcohol (Wechsler et al., 2002). More than 25% of administrators from schools with relatively low drinking levels and over 50% from schools with high drinking levels say their campuses have a moderate or major problem with alcohol-related damage (Wechsler et al., 1995).

**Legal Liability**

A survey of colleges and university found that 10% of the institutions responding had been sued over alcohol-related incidents; 39% stated they were very concerned their institution may be litigated for such incidents in the future (Gonzalez and Broughton, 1986). “Colleges and universities increasingly are in danger of being sued for property
damage or injuries resulting from student drinking; it is likely that the campuses will lose more of these lawsuits than they would have previously” (Smith, 1987, p.11). College and university out-of-court settlements for alcohol-related personal injury law suits averaged $450,000 (Gehring & Greasy, 1989).

Police Involvement

About 5% of 4-year college students and 3% to 5% of 2-year college students are involved with the police or campus security as a result of their drinking (Wechsler et al., 2002). An estimated 110,000 students between the ages of 18 and 24 are arrested for alcohol-related violations such as public drunkenness or driving under the influence (Hingson et al., 2002).

Alcohol Abuse and Dependence

About 31% of college students met criteria for a diagnosis of alcohol abuse and 6% for a diagnosis of alcohol dependence in the past 12 months according to questionnaire-based self-reports (Knight et al., 2002).

Confronting College Drinking From a Multidimensional Perspective

Research consistently shows that no single factor influences whether a college student will abuse alcohol or drugs. In “How to Reduce High-Risk College Drinking” (2002), the Panel on Prevention and Treatment (the Panel) presented its top recommendations in four major areas for universities and researchers to implement effective strategies to confront the problem of high-risk drinking: environmental intervention approaches; individual-and group-focused approaches, both prevention and mandated approaches; comprehensive campus and community approaches; and program
implementation continuity. Each of these will be examined in this section.

**Environmental Interventions**

Interventions that change the broader environment increase the likelihood of long-term reductions in alcohol use and alcohol-related problems (Bangert-Drowns, 1988; Moskowitz, 1989; Perry & Kelder, 1992; Rundall and Bruvold, 1988; Tobler 1992; Toomey & Wagenaar, 2002). Current research suggests that multi-developmental factors exist for the individual and for the environment in which they interact. Research indicates there are a number of environmental factors that can be shaped to institute change in the cultural components of the college and community to deal with the problems of high-risk drinking and their negative consequences they present.

**Public Policy**

Laws affecting consumption and consequences, and related problems include MLDA laws, lowered blood alcohol concentration (BAC) limits, and administrative revocation of driving licenses and liquor licenses. The Uniform Drinking Age Act withholds federal highway funds from states that fail to increase their MLDA to 21 (King, 1987). By 1988, all states had established a MLDA of 21. In a review of 48 published studies that analyzed 78 alcohol consumption outcome measures, the Panel found a preponderance of evidence that establishing higher legal drinking ages reduces alcohol consumption (NIAAA, 2002).

States that enact laws lowering legal blood alcohol content (BAC) from 0.10 to 0.08 experienced a 6% post-law decline in fatal alcohol-related crashes (Hingson et al., 2000; Shults et al., 2001; Voas et al., 2000). Evidence also suggests that when all states adopt these laws, 400 to 500 fewer traffic fatalities will occur annually. Laws that set
underage drivers’ BAC at 0.02 produced a 9% to 24% decline in alcohol-related
deaths and driving while intoxicated (DWI) offenses (Hingson et al., 1994; Shults et al.,
2001; Wagenaar et al., 2001).

Legally mandated revocation of driving licenses for drinking and driving, driving
under age while over the legal BAC limit of 0.02, and mandatory seat belt laws have
resulted in decreases in alcohol-related auto crash fatalities (Voas, Zador, et al., 1989).

A summary of the Safe and Drug Free Schools Act of 1989 – which requires
colleges and universities to publish information about laws that regulate alcohol and drug
use, including the MLDA; acquaint students with the consequences of breaking those
laws; and periodically evaluate the effectiveness of the institution’s policies -- is included
in Appendix I.

Institutional Policy

For years, alcohol use and abuse on campuses were considered student rites of
passage. If this situation were left to its own end, it was believed, students would pass
through the phase without major problems or injury to self or others (Jessor & Jessor,
1975). That attitude has changed. “Underage drinking to excess has a negative effect on
everything were trying to do as a university,” said Dr. Judith Ramaley, former president
of the University of Vermont. “It compromises the educational environment, the safety of
our students (both high-risk drinkers themselves and other students hurt by their actions)
and the quality of life on campus, town/gown relationships and our reputation” (NIAAA,
2002). Recent years have witnessed a proliferation of published books, articles surveys,
national policy statements, and regional and national conference presentations dealing
with college student alcohol use (Roe, 1973; Fischer, 1987). While student personnel and
administrators have little or no control over students’ drinking, they do have control over the campus environment where drinking occurs (McBrien, 1981). Institutional policies are aimed not only at protecting students, but also the university. In a survey of colleges and universities, 79% of respondents stated they believe the best defense against being successfully sued is a clearly stated, enforceable policy (Gonzalez & Broughton, 1986).

Student affairs professionals are engaged in risk management by updating, implementing, and enforcing more stringent alcohol policies relating to university activities (Gehring & Geraci, 1989). Alcohol awareness or prevention programs were found to exist on 88% of the campuses surveyed in 1985, an increase of 18% from 1982. Of those surveyed, 86% required alternative non-alcoholic beverages to be served at college social functions. In addition, 715 of the campuses required food to be served when alcohol is served, an increase of 47% since 1979. In 1976, 67% of campuses required pre-registration of events at which alcohol would be served; by 1985, 77% of campuses had such a requirement (Gadaleto & Anderson, 1986, p.10).

Although alcohol awareness and prevention programs are the most commonly reported institutional policy, their efficacy is questioned by some. Gonzalez (1986) reported a statistically significant increase in the number of correct responses by students on his student alcohol surveys from 1981 to 1985. “There is a consistency in a trend toward the reduced consumption of alcohol and an increase knowledge of the effects of alcohol” (Gonzalez, 1986). The most common approach to alcohol awareness and programming focuses on sharing information intended to foster responsible drinking attitudes and behaviors (Fischer, 1987). But these programs appear to do little in working
with specific populations such as high-risk individuals and students predisposed to substance abuse or addressing the transitional developmental issues that most first-year students face (Gehring & Greasy, 1989). Anecdotal evidence suggests that the first six weeks of enrollment are critical to first-year students’ success. Because many students initiate heavy drinking during these early days, excessive alcohol consumption can interfere with successful adaptation to campus life. Unfortunately, many alcohol prevention and education programs do not target this high-risk population (Gehring & Greasy, 1989).

Individual- and Group-Focused Approaches

Traditional Alcohol Awareness Programs and Normative Reeducation

Modern school and college alcohol education programs, which assume that students are unaware of the potential health and other problems associated with alcohol abuse, evolved from state-mandated school curriculums developed during the Temperance Movement and Prohibition (Straus and Bacon, 1953). Yet there is very little evidence to suggest that knowledge deficits are related to high-risk alcohol use or that a change in knowledge leads to a change in behavior (Moskowitz, 1989). Some studies have shown that alcohol education in school-based prevention programs is actually associated with increased drug use among adolescents (Botvin, 1996). Several outcome studies evaluating traditional informational programs with college students have been conducted in the past 15 years, but many are considered to have serious methodological limitations.

programs (including values clarification approaches) produce, on average, only small effects on behavior (Maddock, 1999). However, Schroeder and Prentice (1998) reported that students who received a 1-hour peer-delivered normative education program reported significant reductions in drinking compared with the alternative values clarification program. Note, however, that participants in this study were freshman and had less exposure than non-freshmen to campus norms (Larimer & Cronce, 2002). This suggests that freshmen may be more amenable to normative interventions because they have had less time to be exposed to prevalent college culture and norms. Educational programs based on normative reeducation approaches are less costly and may hold more promise, but have yet to be widely tested (Larimer & Cronce, 2002).

*Cognitive-Behavioral Skills-Based Prevention Programs*

Cognitive behavioral skills training programs incorporate information, values clarification and normative reeducation components, but do so within the context of teaching skills to modify beliefs or behaviors associated with high-risk drinking. These programs range from specific alcohol-focused skills training -- including expectancy challenge and self-monitoring/self assessment of alcohol use and its associated problems -- to general life skills training. These programs are multimodal in nature and incorporate assessment as a major component (Larimer & Cronce, 2002). Studies of expectancy challenge procedures demonstrate trends in drinking supportive of the expectancy challenge interventions, but did not achieve statistical significance.

Drakes & Goldman (1993) conducted expectancy challenge procedures in which participants received either alcohol or a placebo. Participants consumed alcohol in a social setting or sexual context and then attempted to guess which participants had
consumed alcohol or the placebo based on their interactions and behaviors. These studies were conducted over a 4- to 6-week period. The results suggested expectancy challenge procedures might have considerable utility for decreasing alcohol use among college males (Larimer & Cronce, 2002).

Self-monitoring or self-assessment also may have significant positive effects on consumption and/or negative consequences. Cronin (1969) assessed student drinking rates and experiences among students who were randomly assigned to complete a diary anticipating alcohol consumption during spring break and problems that might occur. A control group did not keep a diary. Students who completed the diary reported fewer negative consequences at the end of the break, while the control group reported greater negative consequences (Larimer & Cronce, 2002).

Miller (1999) compared students who participated in three computerized assessments of their drinking. One group received only assessments during their freshman year; the other group received a peer-facilitated, two-session CD-ROM skills training session in addition to the computerized assessments. Results indicated that students from all groups reported decreases in drinking and negative consequences at the end of a 6-month follow up. However, the group that did not experience the peer CD-ROM skills training had a higher rate of negative consequences. The overall outcome suggests that the opportunity to respond to questions about drinking and negative consequences in the absence of any additional feedback serves as a marginally effective intervention (Larimer and Cronce, 2002).

Baer et al (1992) examined formats of three similar alcohol skills training programs (ASTP) to evaluate whether the intensity of format would affect the magnitude
of change in participant outcome. Volunteer heavy drinkers were randomly assigned to receive a six-session version, a single individual session incorporating risk feedback including advice, or a self-help manual with the ASTP content. Results indicated participants in all three conditions who completed the program showed significant change from baseline to follow-up in drinking rates and problems (Larimer & Cronce, 2002).

In summary, several cognitive-behavioral prevention interventions indicate that multi-component skills training approaches are associated with behavioral changes in drinking. The magnitude of the effectiveness varies depending on the interventions and populations studied (Larimer & Cronce, 2002). Further studies with mandated, adjudicated, and repeat offenders within the college student population should be implemented to determine the efficacy of cognitive-behavioral approaches as they apply to college student drinking issues and problems.

*Brief Motivational Prevention Approaches*

Individual or group brief, motivational enhancement approaches incorporate alcohol information, skills training and personalized feedback designed to increase motivation to change drinking habits. Bosari and Carey (2002) instituted studies at a large northeastern university. Participants -- Students in an introductory psychology course -- who reported consuming more than five or more drinks on two or more occasions in the previous month, were recruited. Students were randomly placed into two groups, one of which received a 45-minute personal brief motivational feedback session. Feedback included personal drinking behavior and negative consequences, accurate normative information, a comparison of personal drinking to the actual campus norms, and information regarding drinking reduction techniques (Borsari & Carey, 2002). The
corresponding control group received an assessment after six weeks (Dimeff et al., 1999). Participants reported significant reductions in both quantity and frequency of alcohol consumption, as well as a decline in the number of reported heavy episodic drinking events in comparison to the control group (Larimer & Cronce, 2002).

Monti et al. (1999) incorporated a brief motivational intervention (BMI) to reduce alcohol use and the subsequent negative consequences among individuals between the ages of 18 and 19 who were seen in a hospital emergency room following an alcohol-related event. Participants were randomly selected to receive the regular emergency room care and/or the BMI. A 3-month follow up indicated that individuals who had received the BMI had a significantly lower incidence of traffic violations, drinking and driving episodes, injuries, and alcohol-related problems than the participants who had received only the standard emergency room treatment (Larimer & Cronce, 2002). However, all individuals who had emergency room treatment reported reductions in overall consumption (Larimer & Cronce, 2002).

Larimer and colleagues (2001) implemented a study among first-year members of fraternities and sororities using a 45-minute BMI feedback while the control group received only an assessment (Anderson et al., 1998; Larimer et al., 2001). Results after a 1-year follow-up indicated that members who received the BMI decreased alcohol consumption from 15.5 to 12 drinks per week compared to an increase in the control group from 14.5 to 17 drinks per week. Participants in the BMI group reported a decrease in estimated blood alcohol concentration from 0.12% to 0.08% compared to the control group, which reported no change in peak BAC over time (Larimer & Cronce, 2002).


BMI With Mandated or Adjudicated College Students

According to a large survey of U.S. college administrators, more than one half of violators of campus policies involve alcohol (Anderson & Gadaleto, 2001). This population has been noted to be at high risk for problem alcohol involvement because they have shown a disproportionate composition of binge or heavy drinkers and alcohol abusers compared with non-adjudicated samples (Caldwell, 2002; O’Hare, 1997). Most colleges and universities now require students who violate campus alcohol policies to attend alcohol education classes or mandatory alcohol counseling. However, few studies have adequately described these students, nor have studies provided statistical data that indicate potential outcomes in reducing alcohol use or abuse or the problems that stem from alcohol use.

The following studies were presented at the 2003 Research Society on Alcoholism (RSA) conference in Ft. Lauderdale, Florida, organized and chaired by Nancy Barnett and presented in Alcoholism: Clinical and Experimental Research Vol. 28, No. 6 (June 2004). These studies were the few in the literature that addressed interventions that were post arrest, mandated, and for the adjudicated college student. In addition to addressing adjudicated college students, the studies used BMI, harm reduction theory and techniques, alcohol education, and risk skill training and lifestyle management training in their implementation.

Alcohol use and readiness to change

Several studies suggest that individuals who are mandated to receive treatment for substance abuse show significant increases in compliance and attendance (Lawental et al. Martin et al., 2003). Interventions that target motivation and readiness to change have
demonstrated promise in improving treatment participation, retention, and completion rates among court-ordered individuals (Lincour et al., 2002; Sia et al., 2000). Concerns have been raised regarding harm-reduction approaches that may be incompatible with mandated treatment. This combination may be associated with worse outcomes in some populations (Hohman et al., 2003; Stark and Campbell, 1988). However, to date, harm reduction approaches such as motivational enhancement interventions have shown considerable promise in reducing hazardous drinking and drinking-related problems among college student drinkers (Larimer and Cronce, 2002).

Baseline comparisons evaluating levels of substance use, motivation, and individual difference variables between mandated college students and their selected peers by age and gender match with non-mandated college students without alcohol infractions. To ensure the student-peer relationship was stable, meaningful, and positive, mandated students’ level of investment in their relationships with their nominated peers was assessed using the Important People Instrument (Longabaugh & Zywaik, 1998). Nominated peers were to be 18 to 24 years of age, not currently or formally a ‘significant other’, of the same gender, and someone with whom the nominator spent time together at least once a week.

Mandated students reported significantly higher numbers of heavy drinking days and higher levels of alcohol-related problems. Nonmandated and mandated students were similar in their motivation to change hazardous drinking, their perceptions of peer norms for drinking, and the size and quality of their social support networks. These findings support the notion that targeting the social network of students cited for alcohol-related infractions may be an effective strategy to use social norming perceptions of peer
drinking and to increase the effectiveness the social norming strategies (Tevyan, Monti & Colby, 2003).

Lifestyle Management Class

Lifestyle Management Class (LMC) is based on a harm reduction model designed to reduce heavy drinking, reduce associated negative consequences of acute intoxication, reduce drinking and driving, and decrease perceived peer-drinking norms. The LMC facilitates a nonjudgmental approach toward substance use and abuse and strives to present a realistic attitude toward assessment and evaluation of behaviors and negative consequences when overdrinking becomes the norm. Students learn to examine their negative consequences and outcomes; reassess their short-, mid-, and long-term goals; determine whether these goals are consistent with their actions; and make choices that change behaviors and reduce negative outcomes (Fromme & Corbin, 2003).

The LMC consists of two 2-hour group sessions held one week apart. The first session addresses the philosophy of self-management, moderation, and balance. Students explore concepts of lifestyle management through moderation by completing a self-assessment of risk for alcohol-related problems. The second sessions examines harm-reduction concepts related to drinking, with discussion of problem issues such as driving under the influence of alcohol and risky sexual behavior. Feedback prompted by pretest measures is also examined. Feedback discussion topics include peer drinking, personal drinking, influencing attitudes and behaviors that prompt overdrinking (such as drinking games that lead to risky sexual behavior), ways to appropriately examine the experienced negative consequences of such behaviors, and the appropriate responses to create more positive outcomes. Time management, stress reduction techniques, and coping skills are
explored to help participants reduce stressful environments and circumstances. These explorations help students identify and promote healthy lifestyles (Fromme & Corbin, 2003).

Motivational enhancement is a key component of the LMC, so group discussions must be conducted in a nonjudgmental, sincere, and empathic manner. LMC instructors involved in this research project were peer advisors or student volunteers who received a 3-credit-hour training course followed by a two-semester course in which they contributed 30 hours of volunteer teaching or assisting with campus health outreach. Staff leaders in the project were doctoral candidates in clinical psychology with a minimum of three years of training in clinical assessment and therapy skills and a research background in addictive behaviors. Professional leaders also completed a 2-day training course in the LMC philosophy and curriculum (Fromme & Corbin, 2003).

Efficacy was tested by using a randomized, controlled design with classes facilitated by either peer advisors or professional staff. Participants were campus volunteers and students referred by judiciaries and thus mandated to participate in the intervention. All participants were randomly assigned to two groups, either to a peer or professional-led LMC or to a waitlist control group that completed a pretest assessment one week prior to beginning the class. Post-tests were completed four weeks after the end of the LMC and 6 weeks after the pretest. Follow-up questionnaires were completed 6 months after completing the class (Fromme & Corbin, 2004).

Both disciplinary participants and volunteers in the LMC significantly reduced their driving after drinking and decreased negative consequences. Men in the mandated group and those showing readiness to change in the volunteer group showed a significant
reduction in heavy drinking. There was no significant difference in outcomes reported in peer- or professional-led groups (Fromme & Corbin, 2004).

**Brief alcohol interventions for referred students**

Programs designed for adults with drinking problems have shown limited success in adolescent and college student populations because of their abstinence-based philosophy and the failure of most adolescents or students who are heavy drinkers to perceive their alcohol use as a problem (Knight et al., 2002). Yet among young adults, BMI has emerged as a potentially effective method of reducing alcohol use in nondependent drinkers (Bien et al., 1993; Wilk et al., 1997). Due to the nature of brief interventions (1 to 4 sessions), the focus is on risk reduction, motivational strategies to decrease alcohol use, intensive educational information, and a non-judgmental approach, making BMI well-suited for the college student population.

Five published studies (Baer et al., 1992, 2001; Borsari & Carey, 2000; Larimer et al., 2001; Murphy et al., 2001) have evaluated the efficacy of BMI. Although they clearly indicated that BMI leads to reduced drinking and has positive impacts on the number of alcohol-related problems in college student populations (Borsari & Carey, 2004), these studies were performed with students who were identified as being ‘at risk’ during mass screenings and who were asked to participate voluntarily (e.g., Borsari and Carey, 2000). Students who are referred and mandated may feel unjustly accused or believe the interviewer is an enforcer of the judiciary system; these perceptions present unique challenges for the design and implementation of brief interventions post adjudicate, after mandate, or following court referral (Borsari & Carey, 2004).
To address this lack, Borsari and Carey (2004) used a randomized control group design to evaluate the effectiveness of a BMI compared to a session consisting solely of alcohol education with a referred sample. All students who were referred for alcohol violations completed screening measures, and those who met screening criteria were invited to participate in the study to fulfill their obligations to the judiciary system. Participants were heavy drinkers who continued to drink in a hazardous manner an average of 75 days after the triggering event. The screening criteria included a score of 10 or higher on the AUDIT assessment tool and two or more binge drinking episodes in the past month. Similarities of the studies include structural equivalency, sequence of topics, one to one format and senior author administered (Barnett et al 2004).

The BMI followed the Brief Alcohol Strategies and Intervention College Students format (Dimeff et al., 1999), which requires the baseline information be collected to be utilized in a personalized feedback format and to provide an individualized introduction. The topics discussed were normative quantity and frequency of drinking, blood alcohol concentration, tolerance, alcohol-related problems, influence of environmental setting, and triggers of drinking and alcohol expectancies (Barnett et al., 2004). BMI students discussed their heaviest day of drinking during the month and its related BAC. The Harm Reduction Model (Marlatt & Witiewitz, 2002) was introduced to minimize risky behaviors. The four principles of LCM -- expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy for change – were incorporated (Miller and Rollnick, 2002). Options for change were developed over the course of the program, encouraging the student’s collaboration and cooperation (Barnett et al., 2004).
The Alcohol Education (AE) session was designed to present the same type of information currently provided in AE groups across the college population. Information about alcohol and its effects and risk reduction strategies were provided. Topics discussed in the session were not linked to personal use, student’s questions were not answered factually, and personal goals to reduce alcohol use were not engaged.

Outcome evidence suggests that at the 6-month follow-up, both the BMI and AE groups experienced a decrease in high-risk drinking and alcohol-related problems, as well as reductions in binge drinking episodes in the past month and the BAC. However, the BMI group demonstrated significantly greater reductions in alcohol-related problems than the AE group. More significantly, previous research involving non-referred students showed a small to moderate effect on alcohol-related problems, but the mandated BMI group showed a very large effect on reduction of alcohol-related problems (Barnett et al., 2004).

A 1 hour individualized session was associated with significant reductions in alcohol use 6 months later. This is an encouraging finding for colleges and universities that seek to reduce alcohol use and related problems among this population (Barnett et al., 2004).

_BMI following medical treatment or discipline for alcohol_

Alcohol-related incidents such as vandalism, fights, sexual assault, and arrests by campus police and local police are common triggers of disciplinary cases in college judiciary systems (Dannells, 1991; Stone & Lucas, 1994). Motivational interviewing is a client-centered and empathic approach that may be well-suited for application with students who have been mandated to intervention when alcohol or drug use has induced
disciplinary action. Mandated students typically may be uninterested in discussing their alcohol use under duress of a mandated sanction. However, it may be that capitalizing on a salient alcohol-related event will pique the student’s interest in avoiding another encounter. Motivational interviewing interventions have been well tested and clearly efficacious for high-risk college students (Baer et al., 2002; Borsari and Carey, 2000; Larimer et al., 2001), but little is known about the efficacy of motivational intervention with mandated students (Barnett et al., 2004).

Barnett, Colby, and Monti (2004) designed a 2 x 2 study comparing BMI with standard alcohol education, either coupled with a 1-month booster session on drinking and alcohol-related consequences or on its own. The population was undergraduates who had encountered an alcohol-related medical problem and/or a disciplinary sanction related to alcohol. Of the participants, 82% had received emergency medical services (13% of those were transported to the hospital), while 20% had received disciplinary sanctions due to alcohol-related violations. Participants reported vomiting (74%), blackouts (54%) and self-blame for incidents leading to negative consequences (71%). Severity of alcohol abuse is measured and based on number of extreme consequences that the drinker experiences. This group was considered to be “heavy drinkers” (Barnett et al., 2004).

Participants completed a baseline assessment consisting of demographics, measures of incident characteristics, measures of participant’s response to the incident, and self-report on motivation to change, alcohol consumption, alcohol risk habits, and alcohol-related consumption. The average score on the AUDIT was 10, which coincides
with moderate to severe concerns, and a BAC range of 0.09% to 0.20% over a 3-day period of heavy drinking (Barnett et al., 2004).

Participants were randomly assigned to receive one 45-minute BMI with a master’s or doctoral level counselor. Participants were given an opportunity to talk about the reason for the referral, evaluate their use of alcohol and evaluate the use of alcohol within their family and friends. They also learned more about alcohol-related risk in general and personally and created strategies to avoid alcohol-related harm, all in a non-judgmental and empathetic environment. The harm-reduction approach was used, focusing on consequences and not the fact they had been drinking (Barnett et al., 2004).

Those who were not assigned to the BMI participated in a standard 45-minute computerized alcohol education (AE) session (Alcohol 101, 1998). The AE program provided information through an interactive “virtual party” that gives the participant the opportunity to experience different outcomes by choosing different scenarios in drinking situations. Drinking rate, sexual decision making, drinking and driving, drinking games, and the effects of different types of alcohol drinks are experienced in the virtual setting. After the intervention, participants were randomly assigned to receive or not receive a 30-minute booster session 1 month later (Barnett et al., 2004).

All participants received follow-up interviews 3 months later. Repeated measures at that interval revealed that both intervention groups significantly reduced their frequency of drinking in terms number of days drinking, heavy drinking days, and number of drinks per week. However, the BAC was significantly reduced in the AE group, but not in the BMI group. There were no differences found comparing the numbers of alcohol-related consequences experienced by either group. Importantly, more
BMI and AE booster participants had sought further counseling as a result of the intervention (Barnett et al., 2004).

**Comprehensive College–Community Approaches**

A number of community-based approaches have proven effective in reduction of underage alcohol use, alcohol-related problems, underage drunk driving, and alcohol-related motor vehicle fatalities (Chou et al., 1998; Hingson et al., 1996; Holder, 1997a, b; Holder & Treno, 1997; Perry et al., 1996); Saltz & Stangletta, 1997; Wagenaar et al., 2000a, b). There is a paucity of research, however, that supports collaborations among colleges and universities and community groups aimed at college drinking.

The National Academy of Sciences has recommended using community coalitions to reduce college age drinking problems (NIAA, 2002). This position is supported by a number of factors. First, this approach reframes the issue by bringing together a range of stakeholders affected by the problem, so the initial stage is set for cooperation among them. Second, collaboration shares the cost vs. yield equation, resulting in less cost for the college through more effective use of its resources in implementing effective policy change and stricter enforcement of codes of conduct as they relate to alcohol use and abuse on and off campus. Third, such alliances can improve ‘town and gown’ relationships through networking between campus and local police, between student affairs administrators and local community mental health agencies, between alcohol and drug abuse agencies, and between collegiate judicial administrators and local courts. These collaborative relationships also enhance the opportunities for research, grant applications, and other efforts to needed enhance positive outcomes for both the community and the educational institution (NIAAA, 2002).
Comprehensive community interventions designed to reduce health problems bring together governmental agencies, as well as private citizens and organizations that use multiple program strategies. These strategies include, but are not limited to, educational policies, media advocacy, community organization, community mobilization, and environmental policy changes, and heightened enforcement of existing policies (Hingson & Howland, 2002).

**Community Clinical Trials**

A 5-year Community Trials Program designed to reduce alcohol-involved injuries and deaths was researched in three communities (Grube, 1997; Holder et al., 1997a, b, 2000; Holder & Treno, 1997; Reynolds et al., 1997; Saltz & Stangletta, 1997; Voas et al., 1997). Theoretical research of this program was designed to alter individual behavior by changing the environmental, social, and structural contexts of alcohol use (NIAAA, 2002). The program consisted of five mutually reinforcing components: 1) community mobilization addressing public policy, general awareness, and concern about alcohol-related trauma; 2) Responsible Beverage Service (RBS) designed to reduce sales to intoxicated patrons, increase enforcement of local alcohol laws by working with state, local law enforcement agencies, and eliciting cooperation with local establishments that sell alcohol; 3) increase ‘driving while intoxicated’ (DWI) arrests using ‘driving under the influence’ (DUI) checkpoints, special officer training and news media blitzes; 4) enforcement of underage drinking laws and sales to minors laws, special training for sales clerks, owners, and managers of establishments where alcohol is purchased and consumed, and major media blitzes on these activities; and 5) using municipal powers to control local zoning for alcohol density to reduce alcohol availability (NIAAA, 2002).
This multi-component approach resulted in a 43% decline in alcohol-related hospital admissions. Intermediate outcomes indicated decreases in alcohol sales to underage youths using false identifications, elimination of pubic sites where drinking was permitted, and more retail outlet liquor sales violations being reported due to increased enforcement. Increased news coverage and additional enforcement and equipment utilization led to more arrests for DWI. Alcohol-related crash involvement declined by approximately 10% to 11% as compared to nonparticipating communities (NIAAA, 2002).

Program Continuity Implementation

Maximum impact on major problems like alcohol abuse can best be accomplished when processes and principles are applied at multiple levels of change (Institute of Medicine, 2001). There is a consensus among leaders in behavioral change that multilevel approach methods are most promising. Transtheoretical Model of Change (TTM) is one of the most promising approaches applicable to the college student population (Prochaska et al., 2004).

TTM construes behavior change as a process that unfolds over time and involves progress through a series of five levels of change: Precontemplation, Contemplation, Preparation, Action, and Maintenance (Prochaska, Diclemente, & Norcross, 1992). The TTM model is comprehensive, integrating concepts from a multitude of approaches about change. Prochaska et al. (2002) suggest this model be applied to college campuses at four levels: leadership, faculty and staff, students, and alumni.

Research has identified strategies or processes that are employed in each TTM stage to facilitate change. Cognitive, affective, and evaluative strategies are utilized in the
early stages to elicit change. Later-stage strategies rely more on behavioral techniques such as social support, reinforcement, commitments, and environmental management techniques (Prochaska et al., 2002). Data suggest that individuals or organizations in the Precontemplation stage respond to Consciousness Raising, Dramatic Relief and Environmental Reevaluation. Entities in the Contemplation stage emphasize Self-Reevaluation. Entities in the Preparation stage emphasize Self-Liberation, and entities in the Action stage respond best to Reinforcement Management, Helping Relationships, Counter Conditioning and Stimulus Control to sustain changes (Prochaska et al., 1992).

The stage process elicits the identification of the pros and cons of change. In the Precontemplation stage, the cons outweigh the pros. When individuals or entities move from Precontemplation to Contemplation, the pros begin to increase and the cons decrease. From Contemplation to Action, the pros begin to outweigh the cons. Therefore, greater emphasis should be placed on increasing appreciation for the advantages on campus and within the community, appreciating the steps necessary for intervening in alcohol abuse on campus (Prochaska et al., 2002).

Stage-based interventions have out-performed “one size fits all” interventions for exercise acquisition, dietary behavior, and other health behaviors in population-based studies (Diclemente & Hughes, 1990). When stage-matched programs are compared to action-oriented interventions, outcomes indicate that stage-based interventions can have greater impact than action-oriented programs. For example, stage-matched interventions for smokers more than doubled cessation rates compared to one of the best action-oriented interventions available. The impact of a program equals the participation rate times the efficacy rate (percent of students who take action). Therefore, the more students
who are at risk for alcohol abuse participate, the greater the impact the program can have. Stage-matched interventions allow all individuals to participate in the change process even if they are not yet prepared to take action to change. These findings and factors about stage-based interventions have important implications for addressing the alcohol problem on our college campuses (Prochaska et al., 1993).

Interventions should be individualized and matched to the organization’s level of readiness to change to reduce resistance, stress, and the time needed to implement change by accelerating movement toward the Action stage (Prochaska et al., 2002, p. 35). The change initiative needs to begin at the presidential leadership level of the educational institution.

The president of a highly rated “party school” declared at its 1995 convocation ceremony, “It is time to take a stand and henceforth, the university would be a university in recovery” (Carothers, 1995). This initial stand piloted the leadership into developing an action plan for the campus. Leadership must develop, debate, and form a consensus on the advantages, disadvantages, and alternative goals for the campus and community campaign. Hence, a movement must be generated with the faculty, staff and students from the Precontemplation stage (in which most entities are, prior to change process) to the Contemplation stage.

The pros of change were addressed at all parent/student orientation sessions. Faculty and staff integrated the program into the curriculum with academic courses related to substance abuse. They also scheduled classes on Fridays to emphasize the importance of academics and diminish the concept of beginning the weekend on Thursday, which seemed to have initiated the partying and drinking syndrome. An
Alcohol Team was created to build a unified, campus-wide collaborative approach to alcohol abuse prevention and research. Participating departments included psychology, cancer research, marketing, counseling center, health services, housing and residential life, and grants. Students created several consciousness-raising programs that provided workshops about drunk driving, social norms about drinking perceptions, healthier alternatives, and trained peer educators to make first-year students aware of the ability to have fun without “the buzz” during their new college experience. Tailgating was banned and the alumni magazine published articles about reducing alcohol abuse on campus. However, alumni proved to be primarily in the Precontemplation stage and more initiatives were implemented to raise the consciousness of this group. Community leaders met with university leaders and established regular “town and gown” meetings to address a multitude of community problems related to students and alcohol, and to suggest potential solutions (Prochaska et al., 2002).

The result of these efforts was an environment and culture that discouraged high-risk drinking and reinforced students to abstain or drink legally or moderately. Outcomes included a significant decrease of availability of alcohol in the university and community, as well as an increase in a number of alcohol-free activities. Binge drinking declined by 13%. Stricter enforcement by local police led to a rise in underage alcohol-related arrests, with declines in vandalism and endangerment violations and a 10% reduction in recidivism on alcohol-related charges. The university saw its incoming students’ SAT scores increase by 140 points, as well as an increase in research grant monies (Prochaska et al., 2002).
The NIAA report on “How to Reduce High-Risk College Drinking” (2002),
cites the Institute of Medicine’s publication, *Prevention and Treatment of Alcohol
Problems: Research Opportunities* (1989) that maximum impact on problems such as
alcohol abuse on college campuses can best be accomplished when principles and
processes are applied at multiple levels. The Transtheoretical Model of Change (TTM)
implies support and direct participation, inclusive of all entities, as a key component to
success. By applying the principles and resources of the model, interventions for alcohol
abuse will achieve maximize impact across the entire university and community setting.
CHAPTER THREE  
RESEARCH DESIGN AND METHODOLOGY

Background

In the year 2000, the president of Hocking College asked the Office of Student Affairs to focus on developing solutions to the problems of alcohol and other drugs and their negative consequences for Hocking College students. The responsibility of dealing with this request was assigned to the Office of Alcohol and Other Drugs (AOD) intervention programming.

In *How to Reduce High Risk College Drinking: Proven Strategies*, the National Institute on Alcohol Abuse and Alcoholism’s National Advisory Council on Alcohol Abuse and Alcoholism identifies three major principles of effective approaches to designing reduction efforts. First, reframe the issue as a community problem, not simply a college problem. Second, bring together a range of players to address the problem and set the stage for cooperative action. Third, integrate the program appropriately to improve relationships between the community in which the college exists and the college itself (U.S. Department of Health and Human Services, 2002, p.19).

This study began by putting the strategies suggested by the NIAAA into operation. Communication efforts with surrounding community judicial systems, law enforcement agencies and public officials were initiated to present the program criteria, intervention strategies, and expected outcomes.

In the state of Ohio, individuals who are arrested for AOD-related offenses and who are convicted or plead guilty incur a criminal record with a first-degree misdemeanor charge for AOD-related offenses. City of Nelsonville arrest records
indicate that many AOD offenders were in their first year of college, which is consistent with research showing that young adults’ most heavy drinking occurs in the first few years after high school and that the rates of college students’ heavy drinking surpass those of their noncollege peers (Schulenberg et al., 1996).

In the Nelsonville Mayor’s Court, those who are arrested and summoned to court are given an opportunity to participate in the court’s Diversion Program in lieu of a receiving a criminal record. Participation in this program does not automatically eliminate the arrest record; however, upon successful completion of the program and a letter to the mayor requesting the charges be dismissed, the first-degree misdemeanor charges are dismissed.

Methodology for Data Analysis

The desired outcomes of this program will be evaluated quantitatively. The quantitative expectations of the program will expect a decrease the number of repeat offenders for AOD offenses and reduce the number of students who incur criminal records for AOD-related charges. The qualitative expectations stem from a multifaceted approach but will not be addressed in the statistical analysis. Participants in the project will learn and operationalize tools to help them make choices and decisions that reduce the negative consequences when they drink alcohol through cognitive skills training, brief focused approaches, motivational interviewing and motivational enhancement techniques, and cognitive-behavioral skills training. The overall expectation is that participants will change their attitudes, thinking, and behaviors from a lifetime perspective to help them identify their functioning levels on their own continuum of
AOD use (use, abuse, dependency or addiction) and the potential negative consequences abuse, dependency, or addiction can have in their lives.

**Assessment Instruments**

Individuals who met the criteria for this study are college students and community members who were arrested for misdemeanor AOD-related offenses in Nelsonville from 1999 through 2005. Some of the community offenders were noted multiple offenders, while the college student offenders were self-declared as students and generally were first-time offenders in Nelsonville. Public records data were examined for statistical verification of the number of individuals who were charged with misdemeanor AOD-related crimes and for the number of individuals who had repeat AOD-related charges. The sample from 2003 through 2005 is the population that participated in the 10-week diversion program intervention.

The Diversion Program began operating in the city of Nelsonville in September 2002. The data examined in the sample will consist of the Nelsonville Mayor’s Court records of individuals arrested on AOD-related misdemeanor charges in the years 2000 through 2005. This sample consisted of community members, transients, and students who were arrested for these violations. The 2000-2002 samples included data for arrests, convictions, dismissals, and re-arrest for the same violation. This sample was used as an historical comparison for the sample of data of arrests, convictions, dismissals, and re-arrest for the same violation in the years 2003 through 2005, when the Nelsonville Mayor’s Court Diversion Program was in place.

In 2000, 169 individuals were arrested and charged with AOD-related offenses. The court dismissed 7 cases and there were 17 repeat offenders. In 2001, 149 individuals
were arrested and charged with AOD-related offenses. The court dismissed 4 cases and
there were 14 re-offenders. In 2002, 138 individuals were arrested and charged with
AOD-related offenses. The court dismissed 8 cases and there were 14 repeat offenders.
Records did not indicate whether individuals that were arrested during the years 2000-
2002 were college students.

In 2003, 94 individuals were arrested and charged with AOD-related offenses. Of
those, 53 were college students and 41 were ancillary individuals (nonstudent population)
who met the criteria for participation in the Division Program. (All participants in the
Diversion Program are subjects in this study.) In 2004, there were 204 participants in the
Diversion Program. Diversion case records indicate 139 were college students and 65
were ancillary individuals who met the criteria to participate in the Diversion Program. In
2005, there were 138 participants, of whom 113 were college students and 25 were
ancillary individuals who were ordered to participate or who met the criteria to
participate in the Diversion Program.

*Instruments*

The reliability and validity of screening methods to detect alcohol and drug use
varies by the method of administration of the assessment in the clinical setting as well as
with the population. There is limited information on the psychometric properties of
alcohol screening tests in college populations; however, these instruments have been
acknowledged as useful tools in assessing overall populations for alcohol abuse issues.

This section will examine the efficacy of the CAGE questionnaire (Ewing, 1970);
the Michigan Alcohol Screening Test or MAST (Selzer, 1971); and the Alcohol Use
Disorder Identification Test or AUDIT (World Health Organization, 1982) screening
instruments as tools that can assist in identifying the level of problematic issues individuals are experiencing with their use of, abuse of, or dependency on alcohol in the college and community environment.

**CAGE Questionnaire**

The CAGE, developed by Dr. John A. Ewing as a tool for identifying the hidden alcoholic (Ewing, JA Rouse, 1970), is a commonly used alcohol screening instrument. The CAGE questionnaire comprises four simple questions, aspects of which form the acronym CAGE:

1. *Have you ever felt you should cut down on your drinking? (Cut down)*
2. *Have people annoyed you by criticizing your drinking? (Annoyed)*
3. *Have you felt bad or guilty about your drinking? (Guilty)*
4. *Have you ever had a drink first thing in the morning or to get over a hangover? (Eye-opener)*

The CAGE questionnaire is appropriate for screening for problem alcohol use as part of the client’s lifetime experience with using alcohol. Its approach is to utilize indirect behavior questions to detect alcohol dependence. One or more positive responses is considered a positive test and further assessment may be deemed appropriate.

Although considerable work has been done on the validity of CAGE scores, relatively little information is available on their reliability. Reliability induction and generalization studies were performed for the CAGE. Of the 259 studies available for analysis, only 19 (7.3%) contained reliability information for the sample scores. Thirteen (5.0%) and 227 (87.6%) articles made what are designated as reliability induction by report and reliability induction by omission. The median internal consistency reliability
across 22 samples was 0.74, with a range of 0.52 to 0.90. Sample age was the only identified sample characteristic that demonstrated a statistically significant relationship with CAGE score reliability (Shields and Caruso, 2004)

**MAST**

The MAST was developed by Melvin L. Selzer, M.D., at the Highway Safety Research Institute at the University of Michigan in Ann Arbor. The MAST is a 25-item, relatively simple and widely used screening instrument that was designed principally to provide a consistent and quantifiable structured interview instrument for the detection of alcoholism in the adult population. The MAST focuses on the consequences of problem drinking and on the subject’s own perceptions of his/her alcohol problems (Selzer, 1971).

The MAST can be self-administered or administered by an interviewer and takes approximately 10 minutes to complete. Each question can be scored by 1 or 2 points; some questions may receive a score of 5 points. Some items are marked with an asterisk to indicate that the test-taker receives more points based on the number of arrests he/she has had. The score is affected more adversely with additional points if the individual has experienced delirium tremors along with the additional number of arrests (Measurement Excellence Initiative, MEI 2003). A copy of the scoring system is included with this report.

Other forms of the MAST include the short MAST (SMAST, 13 items), MAST-G (24 items), Short Generic version (10 items), and Malmo Modification (Mm-MAST, 9 items).
The MAST is frequently chosen for alcoholism research, as well as a treatment practice. The instrument has a longstanding history of successful use with members of its respective population.

The MAST has undergone a great degree of testing for validity. Some of the validity testing consisted of hospitalized alcoholics, persons convicted of drunk driving, drunk and disorderly behavior, alcoholics and drug addicts. Age, race, gender, and educational background vary.

The MAST reveals more problems related to the use of alcohol than a review of historical records of the sample group and took substantially less time to complete. Item analysis results suggest most items on the MAST clearly discriminate between groups of problem and non-problem drinkers of alcohol. In one validation study of 400 adult psychiatric inpatients, 78% agreement was found between the MAST and the psychiatrists’ opinions on whether the patient was a “problem drinker” or “alcoholic” (Moore, 1972). Its internal consistency and test-retest reliability appear to be satisfactory. Reported alpha coefficients from nine different studies ranged from 0.83 to 0.95. Zung (1982) reported test-retest reliability coefficients of 0.97 for 1-day retest interval, 0.86 for 2-day intervals and 0.85 for 3-day interval. Skinner and Sheu (1982) obtained a test-retest reliability coefficient of .84 for an average 4.8-month retest interval with a sample of 91 psychiatric patients.

The advantage of the MAST is that it is a well-established instrument in the research literature on alcoholism. Its internal consistency, content, and construct validity and sensitivity are readily available for use. Most alcoholism studies that have employed the MAST have reported satisfactory measurement results. Studies that have compared
the MAST to other alcoholism tests have found the MAST to perform best. One disadvantage is the MAST explicitly avoids quantification of alcohol consumption. Therefore, its usefulness in tying behaviors directly to physiological outcomes is limited. Hence, the MAST does well in screening out nonalcoholics, but may significantly over-diagnose alcohol problems (Selzer, 1997; Zung, 1982).

**AUDIT**

The AUDIT was developed by the World Health Organization to identify hazardous and harmful alcohol use in adults. It is a brief 10-item screening instrument with a core section of 10 items that make up the subscales. The core items focus on the recent past, rather than leaving alcohol consumption to the lifetime experience. It can be used in clinical and research areas and provides a framework for intervention by helping practitioners identify those who will benefit from reduction or cessation of alcohol use.

The AUDIT has been standardized cross-nationally and can be self-administered or given by interview. A score greater than 8 is indicative of hazardous and harmful use and possible alcohol dependency. Clients scoring 8 to 15 should receive alcohol education focused on reduction of drinking. Clients scoring 15 to 20 should receive brief counseling and follow-up monitoring. Clients scoring 20 and above need further diagnostic evaluation for alcohol dependence. The AUDIT test-retest was $r = 0.86$ and the literature review reports coefficient alphas range from 0.94 for internal consistency (MEI, 2003).

This item has been used in conjunction with the MAST and has been shown to correlate scientifically with the MAST. The AUDIT has been used in conjunction with
the MAST for detecting prevalent and potential alcohol abuse issues in the Hocking College Alcohol and Other Drugs Program.

The significance of these two assessment instruments as they relate to intervention and prevention measures has not been a prominent issue for research. However, one study of 197 college students who had broken their university’s alcohol code of conduct compared the sensitivity, specificity, and positive predictive value of excessive drinking. The MAST was used as the criterion variable. The results showed that when using a Malmo modification, MAST rated a higher level of sensitivity for detecting problem drinkers than its counterpart, the Quality-Frequency default and the 7-Day Diary excessive drinking measurements (O’Hara, Cohen and Sherrer, 1997).

Data Collection Procedures

The program coordinator interviews students who are sanctioned to the Diversion Program by the court. These interviews consist of an initial assessment using the MAST, AUDIT, or CAGE instruments. Assessment scores are analyzed in conjunction with the verbal interview with the student. The student is asked to give a brief history of his/her high school background, his/her relationship with parents, birth order, number of brothers and sisters, sports or hobbies if any, and how the student thinks he/she was doing academically and socially in the college environment. The purpose of this conversation is to begin to establish a level of creditability as to congruencies with assessment answers as they relate to their answers to questions from the assessment instruments. These processes also assist in giving the student the comfort of telling his/her own story in his/her own words. This also provides assurance to the student that the interview and assessment process is not just about alcohol and his/her abuse issues.
The program’s philosophy takes a holistic approach of treating the cause, not just the symptoms of the problem. The student is asked to describe his/her use of alcohol and other substances as it relates to what is considered normal in his/her social circle. The results of the assessment are shared with the student. The student is asked if he/she could benefit from changing some of the behavior patterns that have brought him/her to this intervention. The student responds and the program is explained.

The Diversion Program is a 10-week group education program that meets once a week for an hour. Students are required to meet with the intervention specialist individually for intake and assessment and to also meet in the weekly group session. There are two group sessions per month on Saturdays and Thursdays. The group session lasts approximately one hour, and the individual session last approximately 30 minutes. The students are asked to abstain from alcohol and drug use while in the Diversion Program. They are asked to report weekly in the group format the number of days they have been in the program and the number of days they have been sober or abstained from drug use (similar to AA). If a student has broken his/her agreement and reported this to the group, he/she is encouraged to regain sobriety and will not be judged by the others. This encourages students to identify with the group effort to help each other for the time they are participating in the group.

Students also are assigned an educational project pertaining to their area of career study. Students are encouraged to produce some form of knowledge, i.e. a short paper, about alcohol or drugs related to abuse and addiction issues that correspond to their particular area of study or interest. These bodies of knowledge are prepared in a
publishable manner to be reproduced for circulation to the public and to program participants.

There are two incentives for successful program completion. First, the student’s criminal court record of the student will be expunged if he/she successfully completes the program. Second, the student is awarded a Certificate of Completion for the Nelsonville Diversion Program. This certificate can be used as a proof of certification for Diversion Program education, which leads to a dismissal of criminal charges by the court and enhances the student’s potential to gain employment.

The intervention specialist’s relationship with most of the students who successfully completed the program usually was that of a teacher, mentor, probation officer, coach, and advisor. Between fall 2003 to spring 2005, of the 436 students that had participated in the program, over 60% had successfully completed it.

The use of the MAST, AUDIT, and CAGE assessment instruments were the major instruments in identifying alcohol abuse issues in college students in the Diversion Program. When used in conjunction with appropriate motivational interviewing skills, cognitive-behavioral skills training, AOD education, holistic philosophy, learner-centered interventions, individual and group counseling and community collaboration, the assessment outcomes can facilitate the development of successful and effective intervention modalities for college students who abuse alcohol.

The excessive use of alcohol for incoming college students has been cited as having significant influence on students’ ability to successfully complete the first year of college. The research suggests that many students enter college with existing destructive habits and attitudes about drinking. Research also suggests that students who present or
are assessed as being ‘at risk’ for alcohol abuse are more likely to fit in the “overload model,” which postulates that multiple development transitions may overwhelm the individual’s coping capacities, resulting in health-risk behaviors such as heavy drinking (Schulenburg & Maggs, 2002).

This investigation postulates that with effective treatments offered by motivational, educational intervention, and cognitive behavioral skills training for students who are assessed as being at high risk for alcohol abuse, a potential exists for alcohol and substance abuse diagnosis. This potential, coupled with the accompanying problems of academic impairment, creates a high potential for repeat offending, exacerbated criminal records, dropping out of school, and exposes the individual for high risk levels of alcoholism and/or substance abuse/addiction. This study proposes that this population will benefit from the proposed treatments and that changes in their risky behavior will lead to academic success that will help them achieve the successful continuation of their college careers, successful transition into the world of work, as well as improve their lifestyles and life choices when it pertains to alcohol or drug use and abuse.

Research Design

This study is based on the collected data concerning misdemeanor criminal charges for AOD-related charges from city of Nelsonville public records for 3 years prior to the inception of the Diversion Program and three years when the program was in existence. Therefore, the design model is an historical comparison.

The hypothesis is: The Diversion Program will decrease the number of repeat offenders for AOD-related offenses and reduce the number of students who receive
criminal records due to AOD-related charges. For offenders who choose to participate, the 10-week Diversion Program will provide effective alcohol and substance abuse screening, appropriate counseling, meaningful peer and group encounters, and educational interventions as provided by the Diversion Program staff and have a positive impact on students’ ability to successfully complete their sanctioned diversion educational intervention and not re-offend within 60 days after completion of the program.

The experimental groups consisted of the participants in the Diversion Program and the 3-year historical group who did not participate. The independent variable in this experiment is the 10-week Diversion Program sanctioned by the Nelsonville Mayor’s Court. This treatment distinguishes the participant group from the nonparticipant group. The Diversion Program is the treatment variable. Criminal charges are dismissed after the program is completed to the satisfaction of the program coordinator, the Mayor of Nelsonville, and the Nelsonville prosecutor.

The dependent variable in this experiment is the rate of the proportion of repeat offenders. Did participation in the Diversion Program significantly decrease the number of individuals who re-offend for AOD-related offenses within a 60-day period after program completion compared to the number of individuals who re-offended without participation in the program?

The second dependent variable in this experiment is the AOD-related misdemeanor arrests for the 3 years prior to the initiation of the Diversion Program. Did the data for the 3-year period, while the program operated, demonstrate a significantly reduced number of AOD-related arrests compared to the three years prior to the inception
of the Diversion Program? Variables such as the scores on the CAGE, MAST, and AUDIT assessment instruments will be examined to determine whether the participant’s scores on these assessments affect the participant’s outcome in successful completion of the program, including the dismissal of criminal charges by the court.

Participant discharge summaries and exit interviews were conducted and may reveal some moderator effect in the design. The data analysis will focus on the proportional percentages of arrest, criminal charge dismissal, and repeat offenses that occur 3 years prior to the program and 3 years while the program was in operation. The comparisons will be on the basis of the first year in the historical comparison to the first year of the diversion programs operation and repeated respectively for the following years. The comparison will be; 2000 to 2003, 2001 to 2004 and 2002 to 2005. This method of comparison provides outcome data as to the impact of the intervention compared to when there was not intervention in place. A final analysis will consist of a comparison of the data outcomes for the 3 years the program was not in existence compared to the 3 years the program was in operation. This latter comparison will modulate the possibility of the “chance” factor in the analysis. A chi square distribution test will be utilized to provide variance for chance outcomes. A chi square test will also be utilized for the assessment instruments, CAGE, MAST and AUDIT. The participants nominal score outcomes, statistical relevance of association between program completers and program non-completers will also be examined. Should other dependent variables emerge; the statistical method will be adjusted. The medium effect size used will be a significance level of 0.05. The sample sizes may vary between 90 and 223 students per year. As this research is conducted, the author anticipates the data analysis methodology
may be influenced by unforeseen circumstances. It may therefore become necessary to consider introducing control variables.
CHAPTER IV
SUMMARY OF THE DATA AND FINDINGS

The use of historical data implies that changes in the city of Nelsonville Mayor's Court's normal handling of alcohol- or drug-related (AOD) offenders would have a significant impact on the overall numbers of arrests, convictions, and repeat offenders. The change -- from paying a fine as if the violation were a traffic ticket to being required to complete an educational intervention, as well as paying a fine and the cost of the intervention -- is causal enough to suggest the positive anecdotal outcomes linked with this study. The data collected is a compilation of recorded information obtained from the Nelsonville Clerk of Courts and data submitted to the Nelsonville Mayor’s Court and City Council by the Nelsonville Diversion Program providers. The analysis begins with descriptive data of the historical sample of AOD-related arrests, rearrests, and convictions, as well as criminal charges, dismissals, or expungements in the years 2000, 2001, and 2002 (before inception of the Diversion Program). These cases were processed in the Nelsonville Mayor's Court and the city of Nelsonville.

All of those arrested had the option of pleading guilty, forfeiting bond, or appearing in Mayor's Court with or without an attorney to pay court costs and a fine. Most of these options left the offender with a misdemeanor criminal record. Starting in 2003, offenders also were given the option of entering the Diversion Program and, if they completed the program successfully, having their charges dismissed upon request. Successful completion was defined as completing ten 1-hour weekly sessions and one 3-hour session on a Saturday, passing a random drug test, returning all completed assignments to the Diversion Program proctor, and writing a letter to the Mayor of
Nelsonville stating the knowledge they gained in the Diversion Program and how it had affected their thinking and behavior. The letter also would request dismissal of their criminal charges.

After inception of the Diversion Program, bond forfeiture for misdemeanor AOD-related offenses was no longer an option. Charges dismissed in the years 2000 through 2002, before inception of the Diversion Program, were noted to be for reasons other than completion of a required program or conveyance of the law by some other means.

Descriptive Data Historic Sample: 2000

In 2000, 169 individuals were arrested in Nelsonville for AOD-related misdemeanor offenses and processed by the Nelsonville Mayor’s Court. These arrests resulted in 162 guilty pleas, bond forfeitures, convictions, and misdemeanor charges processed by the court. In the remaining 7 cases, charges were dismissed for undescribed reasons. Of the 169 individuals arrested in 2000, 17 were rearrested on AOD-related charges within the same year, representing a recidivism rate of approximately 10%. These repeat offenders were charged and fined for their second offenses; however, court records do not indicate what percentage, if any, were incarcerated or to what extent they were held accountable for their second offense beyond the standard fine or forfeiture.

Descriptive Data Historic Sample: 2003

In 2003, 94 individuals were arrested in the city of Nelsonville and charged with AOD-related offenses in the year 2003. Of these cases, 88 were referred to the Diversion Program and six to Athens Municipal Court. Diversion Program records indicate that of the 88 cases referred, 63 individuals successfully completed the program and received certificates of completion.
Seven of the program participants were rearrested for AOD-related charges while still in the program. Each was sentenced to 2 days in jail and mandated to complete 20 weeks in the Diversion Program. Program records indicate that 2 of the repeat offenders eventually completed the program in the following year and their obligation and were successfully discharged. There were 25 individuals who did not complete the program in 2003 and are classified as noncompleters. This represents approximately 28% of the total number of individuals who participated in the program. The 7 individuals who reoffended while in the program represent approximately 8% of the total number of participants. The 63 individuals who completed the program represent approximately 72% of the total number of participants. All 63 completers had their criminal misdemeanor charges dismissed by the court.

Proportional Percentage Comparison of Data: 2000 to 2003

The proportional percentage of arrests for AOD-related offenses *declined* by approximately 44% in the year 2003 compared to the year 2000. These percentages indicate a decline in arrests for AOD-related offenses in the year (2003) the Diversion Program was in operation.

In 2000, 17 of those arrested for AOD-related offenses were rearrested on the same charges that year, for a recidivism rate of approximately 10%. In 2003, there were 7 repeat offenders out of 88 Diversion Programs participants, representing an 8% recidivism rate. Proportionate percentage calculations suggest a 2% decline in repeat offenders with the Diversion Program in operation. This suggests a moderate reduction in the number of individuals re-arrested for alcohol- or drug-related offenses when comparing 2000 to 2003 while the Diversion Program was in operation. While the
substantial decrease in arrests suggests a reduction in the number of repeat offenders, the calculations also suggest that the Diversion Program may have had a positive impact in its first year in reducing AOD-related arrests and repeat offenders (see Table 1).
Table 1

Comparison of AOD-Related Arrests, Dismissed Charges, and Repeat Offenses: 2000 and 2003

<table>
<thead>
<tr>
<th>Court activity</th>
<th>2000</th>
<th>2003</th>
<th>% increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrests for AOD-related</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>misdemeanor violations</td>
<td>169</td>
<td>94</td>
<td>44% decrease</td>
</tr>
<tr>
<td>Dismissed charges</td>
<td>7</td>
<td>63</td>
<td>900% increase</td>
</tr>
<tr>
<td>Repeat offenders</td>
<td>17</td>
<td>7</td>
<td>42% decrease</td>
</tr>
</tbody>
</table>


In 2001, 149 individuals were arrested in the city of Nelsonville for AOD-related misdemeanor offenses and processed by the Nelsonville Mayor’s Court. These arrests resulted in 145 guilty pleas, bond forfeitures, convictions, and misdemeanor charges processed by the court. In the remaining 4 cases, charges were dismissed. Of the 149 individuals arrested in 2001, 14 were rearrested on AOD-related charges within the same year, representing a recidivism rate of approximately 9.5%.

In 2004, 204 individuals were arrested in the city of Nelsonville and charged with AOD-related offenses in the year 2003. All of these cases were referred to the Diversion Program. Diversion Program records indicate that of the 204 cases referred, 147 individuals successfully completed the program and received certificates of completion. Nine of the program participants were rearrested for AOD-related charges while still in the program. Each was sentenced to 2 days in jail and mandated to complete 20 weeks in the Diversion Program. Program records indicate that two of the repeat offenders eventually completed the program obligation and were successfully discharged. There were 57 individuals who did not complete the program in 2004 and are classified as noncompleters. This represents approximately 26% of the total number of individuals who participated in the program. The 9 individuals who reoffended while in the program represent approximately 4% of the total number of participants. The 147 individuals who completed the program represent approximately 74% of the total number of participants. All 147 completers had their criminal misdemeanor charges dismissed by the court.
The proportional percentage of arrests for AOD-related offenses increased by approximately 37% in the year 2004 compared to the year 2001. This suggests a proportional increase in arrests for AOD-related offenses in the second year of the Diversion Program's operation. This suggests that the Diversion Program did not reduce the number of arrest compared to three years before its inception. However, local law enforcement officers reported to the mayor and city council members that with the Diversion Program in place they felt empowered to make more AOD-related arrests because students and local young adult offenders were not simply paying a fine and walking away without consequences. Since the diversion program was now in place, offenders were now being held accountable for the behaviors and the law enforcement officials knew that consequences beyond the fine were now in place. Hence, increased enforcement may have been a particular contributing dynamic to the increase in arrests.

There were 149 arrests in 2001 and 14 repeat offenders, or approximately 9.5% of the individuals arrested. There were 204 arrests in 2004 and 9 repeat offenders, or approximately 4% of the individuals arrested. This indicates a decrease of approximately 65% in repeat-offense arrests from 2001 to 2004. This data suggests that participation in the Diversion Program intervention reduced the percentage of repeat offenders in the city of Nelsonville in 2004.

In 2001, 4 cases were dismissed for reasons other than completion of a required program or conveyance of the law by some other means. In 2004, 147 cases were dismissed, all because the participants successfully completed the Diversion Program (see Table 2).
There is no need to compare the statistical significance of number of cases dismissed in 2001, as the Diversion Program was not in place at that time. However, it is important to note the relevance of dismissed criminal charges in achieving productive and positive outcomes for students and other individuals in transitional and developmental stages of life who cannot afford the potential loss of job opportunities when a background check turns up a criminal record. Dismissal of charges promotes successful transition into productive citizens eligible for hire.
Table 2

*Comparison of AOD-Related Arrests, Dismissed Charges, and Repeat Offenses: 2001 and 2004*

<table>
<thead>
<tr>
<th>Court activity</th>
<th>2001</th>
<th>2004</th>
<th>% increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrests for AOD-related misdemeanor violations</td>
<td>149</td>
<td>204</td>
<td>36% increase</td>
</tr>
<tr>
<td>Dismissed charges</td>
<td>4</td>
<td>147</td>
<td>3,675% increase</td>
</tr>
<tr>
<td>Repeat offenders</td>
<td>14</td>
<td>9</td>
<td>36% decrease</td>
</tr>
</tbody>
</table>
Descriptive Data Sample: 2002

In 2002, there were 138 arrests on AOD-related charges. Eight cases were dismissed by the court for reasons other than completion of a required program or conveyance of the law by some other means. Of the 138 individuals arrested that year, 14 were rearrested on AOD-related charges the same year, for a 10% recidivism rate.

Descriptive Data Sample: 2005

In 2005, 138 individuals arrested for AOD-related offenses were referred to the Diversion Program. Of those, 70 individuals successfully completed the program and had charges dismissed. This represents a completion rate of 51%.

Of those in the program, 11 participants were rearrested on AOD-related charges for an in-program recidivism rate of 8%. Program records indicate that 3 of the repeat offenders eventually completed the program obligation and were successfully discharged.

Proportional Percentage Comparison of Data: 2002 to 2005

Ironically, the number of AOD-related arrests was 138 in both 2002 and 2005. This indicates there was no reduction in arrests in 2002 compared to 2005. In 2002, 14 of those arrested on AOD-related charges were rearrested the same year, for a recidivism rate of approximately 10%. In 2005, there were 11 repeat offenders, or 8% of the number of arrested and who participated in the Diversion Program. This represents approximately a 21% reduction in the proportional percentage of repeat offenders from 2002 to 2005. Although the proportional percentage appears to be low, it represents three fewer individuals who did offend, were repeat offenders (see Table 3).
Table 3

Comparison of AOD-Related Arrests, Dismissed Charges, and Repeat Offenses: 2002 and 2005

<table>
<thead>
<tr>
<th>Court activity</th>
<th>2002</th>
<th>2005</th>
<th>% increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrests for AOD-related misdemeanor violations</td>
<td>138</td>
<td>138</td>
<td>No change</td>
</tr>
<tr>
<td>Dismissed charges</td>
<td>8</td>
<td>70</td>
<td>1,143% increase</td>
</tr>
<tr>
<td>Repeat offenders</td>
<td>14</td>
<td>11</td>
<td>21% decrease</td>
</tr>
</tbody>
</table>
In the years 2000 through 2002, a total of 456 individuals were arrested for AOD-related offenses in the city of Nelsonville. In the years 2003 through 2005, there were 436 such arrests. This represents an overall decrease in arrests by 20 individuals, which is approximately a 5% reduction in arrests from prediversion years to the years of the program's operation. This suggests that the Diversion Program intervention reduced the number of arrests for alcohol- and drug-related offenses in the city of Nelsonville through its operation.

There were a total of 45 repeat AOD offenders for the years 2000 thru 2002; in the years 2003 through 2005, with the Diversion Program in force, there were 27 repeat offenders. This represents a decrease of 18 repeat offenders from the prediversion period, or a 40% reduction in repeat offenders. This represents a marked reduction in recidivism, which can be attributed to the Diversion Program. From 2003 to 2005, 280 individuals successfully completed the Diversion Program and had criminal charges dismissed, out of 438 total participants. This represents a 60% successful completion rate. Because there was no Diversion Program for the years 2000 to 2002, there is no data for comparison.

The efficacy of an intervention cannot necessarily be determined in a 1-, 2-, or even 3-year comparison. However, when the Diversion Program was initiated it was hoped that this intervention would have some positive impact on the drinking and drug use habits of the participants. The expectation of statistical significance as to the effectiveness of the Diversion Program was not necessarily the anticipated outcome. When quantitative analysis was determined to be the research methodology necessary to
identify the statistically significant outcomes, the year to year comparison approach indicated the outcomes were not statistically significant. However, when the compressed comparison of the first three years prior to the Diversion Program was compared to the following three years during the Diversion Program’s existence was made utilizing the chi square comparison process, the Nelsonville Mayor’s Court Diversion Program was proven to be statistically significance (p>.05) in reducing arrests, reducing recidivism, and dismissal of charges in the three years of operation.
Table 4

Comparison of AOD-Related Arrests, Dismissed Charges, and Repeat Offenses: 2000 Through 2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Arrests for AOD-related misdemeanor violations</th>
<th>Dismissed charges</th>
<th>Repeat offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2001</td>
<td>2002</td>
</tr>
<tr>
<td>2000</td>
<td>169</td>
<td>149</td>
<td>138</td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P&gt;.05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Collapsed Years

<table>
<thead>
<tr>
<th>Observed N</th>
<th>Expected N</th>
<th>Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2002</td>
<td>456</td>
<td>446.0</td>
</tr>
<tr>
<td>2003-2005</td>
<td>436</td>
<td>446.0</td>
</tr>
<tr>
<td>Total</td>
<td>892</td>
<td>892</td>
</tr>
</tbody>
</table>

Test Statistics

<table>
<thead>
<tr>
<th>Collapsed Years</th>
<th>Chi-Square</th>
<th>df</th>
<th>Asymp. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.448</td>
<td>1</td>
<td>.503</td>
</tr>
</tbody>
</table>

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 446.0.
Chi-square analysis was used to examine the strength of association of scores, and their relationship to successful completion or non-completion of the program. The data on repeat offenders was not sufficient to determine a significant degree of association on their scores. Chi-square analysis was applied to the nominal variable for the AUDIT, MAST, and CAGE self-report assessment instruments scores over the 3 years the Diversion Program was in operation.

**AUDIT**

The AUDIT self-report assessment instrument was assigned nominal score values for each level of severity established by the instrument designers. If the participant's raw score was 1-7, the nominal score for analysis was A1. This score indicated the individual was “not at risk for health complications due to alcohol consumption.” If the participant's raw score was 8-18, the nominal score for analysis was A2, indicating the individual “may already be experiencing (or is at risk for) health consequences as a result of drinking.” If the participant's score was 19-40, the nominal score for analysis was A3, indicating “possible alcohol dependence.”

The AUDIT was administered 35 times over the 3-year period. Chi-Square analysis was conducted to determine if there was any significant association between nominal score outcomes and the participant's completion or noncompletion of the Diversion Program. Of those Diversion Program participants who took the AUDIT, 25 successfully completed the program. Of those, 11 scored in the A1 nominal variable, 8 in the A2 nominal variable, and 6 in the A3 nominal variable. The remaining 10 participants who took the AUDIT were unsuccessful in completing the program. Of these 10
unsuccessful participants, 4 scored in the A1 nominal variable, 4 scored in the A2 nominal variable, and 2 in the A3 nominal variable.

Based on chi-square analysis, there was no association demonstrated at the 0.05 significance level. Hence we accept that the AUDIT screening instrument did not determine whether the participant would complete or not complete the Diversion Program. See Table 5.
Table 5

Comparison of Diversion Program Completers vs. Noncompleters by AUDIT Score

<table>
<thead>
<tr>
<th>Nominal variable</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completers</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Noncompleters</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Totals</td>
<td>15</td>
<td>12</td>
<td>8</td>
<td>35</td>
</tr>
</tbody>
</table>

p > .05
The MAST self-report assessment instrument was assigned nominal score values for each level of severity established by the instrument designers. If the participant's raw score was 0, the nominal score for analysis was M0; this score indicated the participant had no evidence of alcohol dependency. If the participant's raw score was 1-4, the nominal score for analysis was M1. This score indicated the individual demonstrated "low evidence of risk complications due to alcohol consumption." If the participant’s raw score was 5-6, the nominal score for analysis was M2; this score indicated the individual “may be at some risk for negative consequences as a result of drinking." If the participant's raw score was 15-25, the nominal score for analysis was M3, indicating there was "clear evidence of a potential for alcohol dependence." If the participant’s raw score was 26-39, the nominal score was M4. This score indicated there was “substantial evidence that the individual was alcohol dependent." If the participant’s raw score was 40-53, the nominal score was M5; this indicated the participant “had a severe problem with use of alcohol."

The MAST was administered to 97 participants during the years 2003-2005. Chi-Square analysis was conducted to determine if there was any significant association between nominal score outcomes and the participant's completion or noncompletion of the Diversion Program.

Of those program participants who took the MAST, 57 successfully completed the program. Of those, 4 scored 0 in the M0 nominal variable, 22 in the M1 nominal variable, 6 in the M2 nominal variable, 24 in the M3 nominal variable, and 1 scored M4. Because no participants scored in the M5 category, it was eliminated in the Chi-Square Analysis.
There were 40 participants who were administered the MAST and were unsuccessful in completing the program. Of these 40 unsuccessful participants, 1 scored in the M0 nominal variable, 15 in the M1 nominal variable, 6 in the M2 nominal variable, and 18 in the M3 nominal variable. None of the unsuccessful participants scored in the M4 nominal variable.

Chi-Square analysis showed no association demonstrated at the 0.05 significance level. Hence we accept that the MAST screening instrument did not determine whether the participant would complete or not complete the Diversion Program. See Table 6.
Table 6

Comparison of Diversion Program Completers vs. Noncompleters by MAST Score

<table>
<thead>
<tr>
<th>Nominal variables</th>
<th>M0</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completers</td>
<td>4</td>
<td>22</td>
<td>6</td>
<td>24</td>
<td>1</td>
<td>57</td>
</tr>
<tr>
<td>Noncompleters</td>
<td>1</td>
<td>15</td>
<td>6</td>
<td>18</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>377</td>
<td>12</td>
<td>42</td>
<td>1</td>
<td>97</td>
</tr>
</tbody>
</table>

p > .05
**CAGE**

The CAGE self-report assessment instrument was assigned nominal score values for each level of severity established by the instrument designers. If the participant's raw score was 0, the nominal score for analysis was C1. This score indicated the individual had “no probable alcohol dependency.” If the participant’s raw score was 1, the nominal score for analysis was C2; this score indicated the individual was in need of “further evaluation.” If the participant's raw score was 2, 3, or 4, the nominal score for analysis was C3. This score indicated “probable alcohol dependence.”

The CAGE was administered to 247 Diversion Program participants over the 3-year period. Chi-Square analysis was conducted to determine if there was any significant association between nominal score outcomes and the participant's completion or noncompletion of the Diversion Program.

There were 160 participants who were administered the CAGE and successfully complete the program. Of these, 71 scored in the C1 nominal variable, 43 in the C2 nominal variable, and 46 in the C3 nominal variable.

There were 87 participants who were administered the CAGE and were unsuccessful in completing the program. Of these, 31 scored in the C1 nominal variable, 19 in the C2 nominal variable, and 37 in the C3 nominal variable.

Chi-Square analysis showed no association at the 0.05 significance level. Hence we accept that the CAGE screening instrument did not determine whether the participant would complete or not complete the Diversion Program. See Table 7.
Table 7

Comparison of Diversion Program Completers vs. Noncompleters by CAGE Score

<table>
<thead>
<tr>
<th>Participant status</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completers</td>
<td>71</td>
<td>43</td>
<td>46</td>
<td>160</td>
</tr>
<tr>
<td>Noncompleters</td>
<td>31</td>
<td>19</td>
<td>37</td>
<td>87</td>
</tr>
<tr>
<td>Totals</td>
<td>102</td>
<td>62</td>
<td>83</td>
<td>247</td>
</tr>
</tbody>
</table>

*p > .05*
CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter contains an overview and discussion about the significant and non-significant findings in this study. Implications for improvement, applied practices from further experience, and suggestions for the body of knowledge in the field of alcohol and drug intervention programs in the college and small community environment are also discussed.

Summary of the Study

The Nelsonville Mayor’s Court Diversion Program, instituted in 2002, used evidence-based interventions, including educational techniques such as motivational interviewing and cognitive behavioral education, and harm-reduction techniques such as Lifestyle Management Class (LMC), which is designed to reduce heavy drinking, reduce associated negative consequences of acute intoxication, reduce drinking and driving, and decrease perceived peer-drinking norms (Fromme & Corbin, 2002).

The perceived short- and long-term benefits demonstrated by the implementation and outcome studies demonstrated significant proportional percentage outcomes in reducing arrest, reducing repeat offenses, and reducing the number of AOD-related misdemeanor criminal charges for individuals in the city of Nelsonville in the years 2003-2005 when compared to the same statistics for 2000-2002, before the existence of the Diversion Program. The study also demonstrated several anecdotally reported outcomes noted by the Mayor and other city officials. They indicated that the Diversion Program had a positive impact on the community at large, its citizens, local law enforcement, judicial systems, the local college, and the perceived image of “addressing
the problem of underage consumption and binge drinking” by promoting the “town and gown” approach to providing an active solution (Mayor Stanley and Council Members, 2002).

The Diversion Program as a treatment in lieu of conviction utilized a framework of intervention strategies that were successful in reducing the number of AOD-related offenses, repeat offenses, and permanent criminal records from Hocking College students in the years 2003-2005. Ancillary implications suggested the program had a positive impact on student retention. This program and its framework are consistent with trends and initiatives considered to be effective by the National Institute of Alcohol Abuse and Alcoholism, (NIAAA, 2002)

Purpose of the Diversion Program /Study

The Diversion Program intervention strategy was designed to help students take a conscious look at the negative consequences of their use of alcohol and other drugs at this crucial developmental juncture in their lives and the impact the consequences of that use can have now and in the future. The Diversion Program intervention helps participants understand the difference between use and abuse, dependency, and addiction and assists them to identify their location on the use continuum of alcohol and/or other substances. The Diversion Program provides information and social tools to teach decision-making and life skills that lead to appropriate and healthy choices about alcohol or drug use. The psycho-education teaching process provides cognitive-behavioral skills training tools to help participants identify and recognize the high-risk zone when confronted with AOD use and/or abuse issues.
One of the most important results of the Diversion Program is, those who successfully complete the program can, at their request, have their charges dismissed. Before the Diversion Program was implemented, those students and other individuals who were arrested for AOD related misdemeanor offenses and were found guilty, forfeited their bond or pleaded ‘no contest’ in court and were found guilty; thus incurring criminal records. These consisted of a first-degree misdemeanor charges in most underage alcohol-related offenses and most misdemeanor possession, paraphernalia, and other drug-related charges. The incentive of having their criminal records expunged prompted most students and individuals to participate in the program. Because the Diversion Program did not exist in 2000, no charges were dismissed for participation in the program.

City of Nelsonville court records did not indicate if individuals who were arrested on AOD-related charges were college students. Hocking College would not permit their enrollment records to be used for research purposes due to protections under the CLERY act.

Approximately 70% of Diversion Program participants in the years 2003 through 2005 were college students. The remaining 30% comprised local residents, transients, and referrals from other courts that considered the Diversion Program appropriate for offenders who qualified for this type of intervention. These records were obtained in the intake process each participant had to complete.

Methodology

Proportional percentage calculations were used to determine the percentages of increase or decrease in arrests, repeat offenses, and criminal records of individuals who
were arrested 3 years prior to the existence of the Diversion Program and 3 years
during the program’s operation. This method provided approximate comparative
percentages of participant totals on a year-to-year comparison basis -- 2000 to 2003, 2001
to 2004, and 2002 to 2005 -- to determine if the program had any positive or significant
effect on reducing the number of arrests and the number of repeat offenses. In the final
analysis the total years of the study were collapsed to test for an overall comparison of
the three years that the Diversion Program was not in existence compared to the three
years the program was in operation. The chi square test for comparison was utilized with
the collapsed years of 2000-2002 and 2003-2005 to test the program statistics for
recidivism, number of arrest, and charges dismissed. The Nelsonville Mayor’s Court
Diversion Program was proven to be statistically significance in reducing arrests,
reducing recidivism, and getting participants charges dismissed in the three years of
operation at the p>.05 level. See Table 4.

The calculations of percentages of criminal records incurred are somewhat
disproportionate in comparison to the years the program was not in operation because
there was no in-lieu-of conviction-process provided by the court at that time. However,
the relevance and importance of these calculations are not diminished. One of the major
driving forces behind the Diversion Program was to provide a way to eliminate criminal
records for misdemeanor AOD-related offenses.

The arrest comparisons were affected by several different phenomena. In 2003,
the year the Diversion Program was implemented, students and community young adults
who had been offered the choice to participate in the program in lieu of criminal records
and jail time began to spread the word in their partying and drinking circles that there
were consequences for underage drinking beyond a fine and court proceedings. This had a definitive impact on the number of arrests in the year 2003 as noted by the 44% decrease in arrests that year.

Numbers of AOD-related arrests increased more than 200% between 2003 and 2004. Local law enforcement officers told the mayor that as they became comfortable with the process and proceedings of the Diversion Program, they began to feel that students and young adults in the community would be held accountable for their behavior beyond just paying a fine. They would have to attend a 10-week education program and would be under the scrutiny of the court for accountability for their behaviors. The mayor believed that this had a powerful impact on the level of enforcement.

The proportional percentage process identified a reduction in repeat offenses. Court records were somewhat difficult to interpret in ascertaining the number of college students who were re-offenders, and many times multiple offenders were not necessarily brought into court. Local law enforcement officers reported that before the existence of the Diversion Program, they sometimes would not bother to arrest some local re-offenders because they could not pay fines and there was no space in the local jail to house them. However, the proportional percentage over the 3 years the program was in operation showed a substantial reduction in repeat offenders (See Table 4). This outcome was another of the program’s main objectives.

Assessment Instrument Methodology

The participant’s scores on the, MAST, AUDIT and CAGE assessment instruments were used as indicators of the participant’s level of use or abuse of alcohol and other substances. These instruments are designed as self-report assessments to allow
the participant to self-identify their perceived level of involvement with alcohol and associated biological, psychological, emotional, legal, and career issues. These instruments have been used in clinical and college environments as indicators of alcohol use and abuse, and have respectable validity and reliability scores.

The Diversion Program used these instruments in several capacities. First, they were used in the intake process to determine if the participant would be truthful about his or her perceived level of AOD use. In conjunction with the assessment, there were questions about the participant’s use habits that were not included in the assessment that would help the interviewer corroborate the individual’s responses to the questionnaires. Second, the participant’s assessment score and verbal responses or nonresponses to other intake questions helped clarify the participant’s perceived problem with his or her drinking habits. Third, responses to the questionnaires were used to build the curriculum for intervention. The concept of using the scores on the questionnaires to predict whether the participant would complete the Diversion Program or re-offend was an afterthought that prompted use of the instruments in this capacity.

The outcomes measures, utilizing chi-square analysis for association, clearly demonstrated that these instruments were not predictors of whether a participant would complete the program or re-offend while they participated in the program. However, individuals who scored in the C1 (no probable alcoholism or dependency) category on the CAGE assessment seemed to be more likely to successfully complete the program and not re-offend. This trend continued with the MAST and AUDIT, although not as strongly indicated as in the CAGE. Chi-square analysis performed on all assessment scores for each individual questionnaire over the 3-year period the program was in
operation failed to meet the critical value for the degrees of freedom necessary to
demonstrate any significance of association. Neither the program study nor the
instruments were designed for this type of prediction; hence, the null hypothesis was not
rejected. However, it was interesting to note the trends that were presented and observe
that most repeat offenders scored at the higher levels of severity of alcohol use and abuse.

Conclusions

Proportional percentages indicate there were 20 fewer AOD-related arrests, a
decrease by 5% of the total arrests within the historical comparison years. This outcome
suggests there was a decrease in arrests for AOD-related offenses while the Diversion Program was in operation. The null hypothesis failed to reject.

Proportional percentages indicate there were 18 fewer individuals arrested for
repeat AOD-related offenses, or a decrease by 40% within the historical comparison years. This outcome suggests there was a decrease in repeat offenders while the Diversion Program was in operation. The null hypothesis was rejected.

Proportional percentages indicate that 280 individuals, or 60% of the participants,
successfully completed the Diversion Program and had their criminal charges dismissed. This suggests a 93% increase in the number of dismissed cases or criminal charges dismissed within the historical comparison years. The null hypothesis was rejected.

The impact on utilizing the AUDIT, MAST, and CAGE questionnaires is self-
evident. These instruments were not designed to predict program completion or repeat offender rates; therefore, they did not prove successful in predicting these outcomes. However, the importance of assessment of in working with alcohol and other drug intervention programs is well documented. Hence, we fail to reject the null hypothesis as
to their ability to predict completion and recidivism outcomes in the Diversion Program intervention.

Unequivocally, the most rewarding results were to experience and witness the changes that occurred in participants who completed the program. Participants are required to write a letter to the mayor requesting that their charges be dismissed and describing the program’s impact on their lives. These letters, along with the visible physical, cognitive-behavioral, and spiritual metamorphosis that participants experience, are truly rewarding. This program and its framework are consistent with trends and initiatives considered to be effective by the National Institute of Alcohol Abuse and Alcoholism.

Recommendations

To eradicate the abuse of alcohol on college campuses is not realistic. However, a continuous process of redefining, bio-psycho- social- and cultural prevention and intervention approaches through research and pragmatic application of proven strategies must be ongoing. Observations based on the post study period of the Diversion Program suggest several internal program recommendations, as well as a number of general recommendations and strategies for addressing effective alcohol and drug prevention and mandated intervention approaches, as follows:

1. Bosari (2004) suggests that alcohol education groups that demonstrate an environment in which interventions occur is paramount in successful outcomes. The initial group approach was based on a moderately large lecture education class comprised of 30 to 50 participants. In 2006, the group size was reduced to fewer than 15 participants to encourage greater opportunity for peer interaction.
Alcohol information was shared with a combination of peer on peer harm reduction, and Motivational Interviewing approaches were facilitated by experienced alcohol and drug counselors. Hence, recommendations on using a group size of 15 or fewer participants utilizing these approaches appears to produce more effective outcomes for reducing alcohol related problems in emerging adult populations.

2. The diversion program curriculum provides substance abuse prevention based on lifestyle management approaches with peer and professional leaders. This has proven effective in influencing participant’s sensitivity and awareness of the negative consequences of heavy drinking. It is recommended that an orientation curriculum be developed. This program should begin in the recruitment and admission stages of admissions departments of colleges and universities. Students who are accepted into the college should be required to participate in this lifestyle management orientation course. It is recommended the course is a requirement for all students, and be approved for course credit.

3. It is recommended that alcohol use questionnaires be administered as part of the Lifestyle Management curriculum. The use of the results of the severity of use scores on these instruments were advantageous in developing a curriculum and identifying individuals who were at a higher risk for alcohol related problems.

4. It is recommended that counselors, residence hall staff, coaches, advisors, peers and faculty are trained in a culturally sensitive, non-judgmental harm reduction approach when interacting with students. This may enhance their ability to develop trusting relationships. When this occurs, students with potential problems
may self-identify and provide an opportunity for staff to connect with the student and assist them in accessing the necessary resources that will provide effective interventions.

5. It is recommended that college administrators focus on ‘town and gown’ relationships in their community by engaging all stakeholders to organize effective measures that directly influence the culture of drinking within the college and host community.

6. It is recommended that 10- to 20-week intervention programs be implemented and provided for individuals arrested for alcohol or drug related charges that address not only the presenting problems of alcohol and drug abuse, but can effectively help students process and navigate emotional developmental issues that have influenced their thinking and behaviors pertaining to the use or abuse of substances.

7. It is recommended that successful institutions, communities, programs and individuals who focus on the problem of underage consumption and substance abuse be encouraged through recognition and reward to continue their work in providing services for this population.
REFERENCES


Barnett, N. P., Colby, S. M., & Monti, P.M. (2004). Brief motivational intervention with college students following medical treatment or


Presidents Leadership Group (1997). Be vocal, be visible, be visionary:


APPENDIX

The Drug Free Schools and Community Act of 1986

Presented below is a brief outline of the Drug Free Schools and Community Act of 1986 placed into policy by the US Congress to direct educational institutions in prioritizing and establishing relevant policy to deal with the emerging problems of drugs and alcohol use and abuse in our society. This public health problem has been and is now negatively impacting the educational systems throughout the United States.

**Originating Statute**

The Drug-Free Schools and Community Act Amendments of 1989, P. L. 101-226, are the basis for the regulations.

**Background**

President Bush's National Drug Control Strategy, issued in September 1989, proposed that Congress pass legislation to require schools, colleges and universities to implement and enforce firm drug prevention programs and policies as a condition of eligibility to receive federal financial assistance. The Act was signed into law on December 12, 1989. Section 22 amends provisions of the Drug-Free Schools and Communities Act of 1986 and the Higher Education Act of 1965 to include these requirements. Final regulations were issued in the Federal Register on August 16, 1990 (55 FR 33580).
Applicability

The requirements of the Act were effective October 1, 1990 and are applicable to all programs administered by any federal agency under which an institution may receive funds or any other form of federal financial assistance.

An institution must adopt and implement a drug prevention program to prevent the unlawful possession, use or distribution of illicit drugs and alcohol by all students and employees on institutional premises or as part of any of its activities. A certification of adoption of such a program should have been submitted to the Secretary of the Department of Education by October 1, 1990 in order to receive funds or any other form of financial assistance from the federal government.

The drug prevention program must, at a minimum include the following:

a. the annual distribution in writing to each employee and student, except for students enrolled exclusively in continuing education units, of:

   i. standards of conduct that clearly prohibit the unlawful possession, use or distribution of illicit drugs and alcohol by students and employees on its property or as a part of any of its activities

   ii. a description of the applicable legal sanctions under local, state, or federal law for the unlawful possession or distribution of illicit drugs and alcohol

   iii. a description of the health risks associated with the use of illicit drugs and the abuse of alcohol

   iv. a description of any drug or alcohol counseling, treatment or rehabilitation or re-entry programs that are available to employees or students
v. clear statement that the institution will impose disciplinary sanctions on students and employees, and a description of those sanctions, up to and including expulsion or termination of employment and referral for prosecution, for violations of the standards of conduct adopted by the institution.

b. A biennial review of its program to:

i. determine its effectiveness and implement changes to the program if needed

ii. ensure that the disciplinary sanctions are consistently enforced

**Sanctions for Non-Compliance**

A violation exists when an institution accepts funds when it has not submitted its certification or when it violates its submitted certification by not adopting or implementing its drug prevention program or fails to enforce its sanctions for violation by students and employees, consistently.

*The Secretary may:*

A. issue a response to the institution providing information and technical assistance and formulating a compliance agreement designed to bring the institution into full compliance; or

B. imposes sanctions, including, but not limited to, the following:

I. repayment of any or all forms of federal financial assistance received while in violation;

II. Termination of any or all forms of financial assistance: or

III. suspension from receipt of federal funds for a period of up to 18 months.
Minimum Compliance Action

There does not appear to be a “Minimum Compliance” action. The requirements of the Act and the regulations enforcing the Act are explicit and detailed. Institutions must develop and implement a policy that complies with the regulations, distribute the policy, provide descriptions of health risks and sanctions every year to every employee and student.