

DRUG AND ALCOHOL OFFENDERS IN A COLLEGE TOWN: EXPLORING MULTIPLE-
AGENCY OFFICIAL DATA TO ASSESS THE IMPACT OF OFFICIAL PROCESSING AND
SANCTIONING ON FUTURE DELINQUENCY AND ACADEMIC CAREERS

By

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To all the folks that kept me strong in my years of study, this dissertation is dedicated to you.

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Abstract of Dissertation Presented to the Graduate School
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The purpose of this dissertation is to learn more about the role of official processing for drug- and alcohol- related offenses in impacting academic careers and future offending of university students. Of particular interest is the effect of sanctions on these outcomes. The study is conducted using two subpopulations entering the University of Florida in the summer or fall of 2004 as first-year students. The first subpopulation consists of those who were arrested in Alachua County, Florida between 2004 and December 2007 for drug and/or alcohol offenses (N = 292). The second subpopulation consists of those who were officially referred to the university for drug or alcohol violations during that time frame (N = 351). Various comparisons are made. The pattern of arrests for those in the first subpopulation is generally compared with the arrests of similarly aged persons in the county. Each of the two subpopulations of students is compared with students who have not been referred or arrested. The two subpopulations are also compared with each other to see if those referred differ from those arrested and to examine how university or criminal justice processing/sanctioning affect academic performance (e.g., grades, change in academic performance, completion, dropout) and subsequent trouble with the university and criminal justice authorities (e.g., additional referral or arrest). Several risk factors are examined

in order unveil the importance of each in predicting negative changes in academic achievement and participation in future offending. Overall, this study revealed that in conjunction with lower levels of sanctioning, students processed solely by the university system for drug and alcohol offenses express an increase in odds of completing their undergraduate degrees on-time. Yet the same process regardless of the level of sanctioning increased levels of recidivism. This study also revealed that criminal justice processing and sanctioning may offer advantages over the university sanctioning system in improving academic performance after a student's first officially recognized offense. The results of this analysis suggest that university administrators should take a closer look at how alcohol and drug offenders are processed by their internal judicial affairs system and by the criminal justice system.

CHAPTER 1 THE IMPACT OF ARREST AND SANCTIONS ON COLLEGE STUDENTS

Introduction

Several criminological investigations have elaborated on the impact of arrest and of sanctions on outcomes in later life (Esbensen, Thornberry, & Huizinga, 1991; Huizinga & Esbensen, 1992; Huizinga, Esbensen, & Weiher, 1996; Klein, 1986; Sherman, Gottfredson, MacKenzie, Eck, Reuter, & Bushway, 1997). One important effort derived its data from the Denver Youth Survey led by David Huizinga at the University of Colorado. Beginning in 1986, the Denver Youth Survey researchers sampled households in high-risk areas in and around the Denver area as a part of a larger study sponsored by the Office of Juvenile Justice and Delinquency Prevention. Overall, 806 boys and 721 girls responded to the researchers requests, many continued to report annually from 1988 to 1992 and again from 1995 to 1999.

In several offshoots from this major project, Huizinga and his colleagues have consistently determined that arrest has little impact on future delinquency (Esbensen, Thornberry, & Huizinga, 1991; Huizinga & Esbensen, 1992; Huizinga, Esbensen, & Weiher, 1996). Additionally, these researchers suggest that when arrest does have an impact, it seems to act as an aggravating factor in that it may *increase* subsequent offending and delinquency. This is in accord with research projects external to the Denver Youth Survey as well. In a classic study by Malcolm Klein on labeling theory, this amplifying effect was determined to be linked to the official delinquent label being imposed on youths, an increase in the amount of formal processing by the criminal justice system, and a subsequent self-fulfilling prophecy being played out to conform to the label of “delinquent” (Klein, 1986).

Perhaps more compelling were the findings of Lawrence Sherman and his colleagues in a report given to the United States Congress in 1997 (Sherman, Gottfredson, MacKenzie, Eck,

Reuter, & Bushway, 1997). Harnessing the collective intelligence of social scientists and examining the extant research available at the time, Sherman and his colleagues delivered the same message: overall, many of our reactions to crime overwhelmingly have little to no effect on subsequent offending or may actually increase offending. Here are a few examples: increased arrests for domestic violence was found to increase the incidence of similar offenses in areas with relatively high unemployment rates and low marriage rates (see Marciniak, 1994); despite the dedicated work of the Chicago Youth Development Project, arrest rates of the juveniles in the experimental program increased with time (see Gold & Mattick, 1974); many youths that have been arrested tend to offend more after arrest than delinquent youths not arrested (Farrington, 1977; Gold & Williams, 1970). In the section of the report Sherman authored, he remarks: "...the effects of police on crime are complex, and often surprising" (Sherman et al., 1997: 8-39). This runs counterintuitive to the tenets of specific deterrence and common thinking: punishment for an individual criminal act(s) will deter them from future offending. This intuition and cornerstone of many criminal justice systems across the globe is not lacking convincing empirical support, either. For example, Smith and Gartin (1989) find evidence supporting this perspective rather than an arrest event serving as an aggravating factor for future offending in a sample of males born in 1949 followed through age twenty five. By and large, there does not seem to be a clear answer as to when and in what context arrest and punishment can have a therapeutic or toxic impact on offenders. The multidimensionality and complexity of this phenomenon is self-apparent when reviewing the literature on these two broad, yet conflicting, areas of research in criminology.

To date, research has not yet been extrapolated to college students. More specifically, little is known about the effects of arrest and punishment on future offending or on students' academic

performance. While a wealth of criminological research guides this dissertation and its hypotheses regarding the reactions to arrest and punishment and its effects on future offending (or lack thereof), this project extends this previous research into a population that is yet to be studied in this light. Does student offending shift if handled through the criminal justice system? Likewise, are there different rates of offending when students are disciplined by means outside of the criminal justice system such as a university's judicial affairs system? Since alcohol and drug offenses are consistently the most prominent on college campuses across the nation (U.S Department of Education, 2008), this dissertation concentrates on these violations in effort to begin to resolve some of these questions.

Narrowing the scope to include drug and alcohol offenses also serves to directly address trends that are encroaching on our college students' welfare in the United States. College campuses are a notable microcosm of a culture that vastly accepts alcohol consumption, and to a lesser extent, drug use, and students have reported vast unintended consequences as a result – including having a hangover, poor performance on exams and projects, damaging property, involvement in arguments or physical confrontations, becoming nauseous and/or vomiting, missing class, and contact with law enforcement or other authorities which may lead to arrest (Core Institute, 2008; Dowdall, 2006). The aggregate problems of this population have been worsening in recent years and the emerging patterns of alcohol and illicit substances consumption have alarmed administrators, researchers, and the public (Wechsler & Wuethrich, 2002). In terms of alcohol consumption, a nationally representative study of college students suggests the percentage of this population that binge drink – as defined by having five or more alcoholic drinks in one occasion for men or four or more alcoholic drinks in one occasion for women at least once in the previous two weeks – has significantly increased from 1993 to 2001

(Weschler, Kuo, Nelson, & Lee, 2002). According to different indicators of illicit drug use among this population (e.g., the National Survey of Drug Use and Health, Monitoring the Future, the Core Institute, et cetera – elaborated in Chapter 3), modest increases in drug use have also been seen over the same time frame. Paradoxically, these increases also run parallel with increases of potential punitive responses that may result from arrest of a drug and/or alcohol offense for college students.

When considering the potential physical, mental, and social harms that substance use (immoderate use particularly) may have on developing teenagers or inexperienced young adults (see Kinney, 2006), the involvement of law enforcement and the courts can be viewed from a *parens patriae / loco parentis* perspective. Several things remain unclear. Do punitive responses make positive impacts on youths' lives within the context of American youth culture? Are punitive actions in the best interest of the arrestee? If the goal is to act within the best interest of the student, the overall outcome should be positive and reintegrative rather than disruptive to a student's academic career. According to criminological literature on the life course, significant life events can have an influential impact on one's life trajectory (Laub & Sampson, 2003; Sampson & Laub, 2005), and events such as an arrest and criminal justice processing are likely to have long-lasting impacts on one's life. This dissertation investigates these impacts for drug- and alcohol-related offenses on student academic performance and future offending.

Drug and Alcohol Use by the Youth of America: A Historical Brief

As far back as public health officials and governmental agencies have been collecting data on substance use and abuse, the scale of use by the youth population has ebbed and flowed. The current cycle seems to span back to the 1970s and continues through current times. For the most part, the relative amount of current use by the youthful population is drastically less than the latter half of the 1970s – this point in time demarcates the highest contemporary rates of use and

abuse in America (Johnston, O'Malley, Bachman, & Schulenberg, 2007). As use continued to decline into the 1980s through the early 1990s, major shifts in the country's drug policy took effect doling out more punitive and aggressive responses to trafficking, use, and possession of various substances, new approaches to drug education (just say no), and new controls for use in the workplace. This so-called "war on drugs" was catalyzed by the Reagan administration with continuity in the George H.W. Bush and Clinton administrations. Accordingly, the 1980-2000 timeframe has seen much notable landmark legislation in the realm of drug law at local, state, and federal levels (see Table 1-1 at the end of this chapter). These policies have vastly impacted the youth of America – and college students were not immune from the increasing punitive legislation as the drug war years progressed. For example, an amendment to the Higher Education Act (passed during the Clinton administration in 1998, went into effect in 2000) restricts student loans, grants, and work study positions from college students with drug possession or sale convictions unless certain criteria are met. This policy was further refined in 2006 to only include drug convictions during the periods in which students are receiving Title IV (federal) financial aid. While the position of the George W. Bush administration aligns with the previous three regimes, the concentration on terrorism as a platform has over shadowed and usurped the war on drugs effort.¹

Remarkably since the early quarter of the 1990s, levels of use and abuse have been generally shifting back to higher prevalence across a spectrum of psychoactive substances (Johnston, O'Malley, Bachman, & Schulenberg, 2007). These increases occur in spite of increased sanctions and anti-drug efforts, economic booms and federal budget surpluses, and the largest amount of incarcerated drug offenders in contemporary history. If the country has

¹ Note that the softening of the drug conviction restrictions of the Higher Education Act occurred during the years of the George W. Bush administration.

prospered, has identified chronic drug offenders and took them off the streets, and has budgeted a multi-faceted war on drugs program at several institutional levels, then why is substance use and abuse flourishing in current times? While this is a tangential question to the current work, it leads us to ask whether our reactions to drug and alcohol offenses are effective or not, or are they perhaps making matters worse.

Present Study

This dissertation derives its data from a collaborative effort between the Department of Criminology, Law, and Society (currently the Division of Criminology & Law, a part of the Department of Sociology and Criminology & Law) and Student Legal Services at the University of Florida, dubbed the UF Student Crime Project. The resulting dataset, the University of Florida Comprehensive Student Crime Study, 2003 – 2007 (Khey, Fox, & Lanza-Kaduce, 2008), combines official arrest data from local law enforcement agencies,² student data derived from the Office of the Registrar, information about social greek affiliation from the Office of Sorority and Fraternity Affairs, and adjudication data from the Dean of Students Office and the State of Florida District Eight Circuit Court.

This current project seeks to extend the existing literature in three ways. Volumes of self-report data on the differences of the college student population relative to the same age group not attending an institution of higher education on the levels of substance use and abuse exist (see Kinney, 2006), but it is rare to find official data on college students. The first task of the present study is to formulate a thorough description and assessment of the patterns of student alcohol- and drug-related arrest versus that of the wider community (as a reference group) over the age of

² At the time of this writing, the following agencies released data to the UF Student Crime Project: Gainesville Police Department, University of Florida Police Department, Alachua County Sheriff's Office, and the Florida Division of Alcoholic Beverages and Tobacco. Pending requests exist for Florida Highway Patrol (FHP), the Drug Enforcement Administration (DEA), and Santa Fe Community College Police (SFCCP). In verbal communication with the latter agencies' officials, very few University of Florida students are included in their annual arrest data.

18. This will yield information about the differences between these groups on a basic level by utilizing official data and will serve to fill this gap in current literature. Second, many researchers have argued that the environment of higher education contains certain risk factors for deviance and criminality, such as belonging to social greek organizations (McCabe, Schulenberg, Johnston, O'Malley, Bachman, & Kloska, 2005) and involvement with athletics (Kinney, 2006). Accordingly, the present study will isolate the risk factors of arrest associated with these crimes for university students with the added ability to observe participation in other official criminal activity across students' academic career. Lastly, and most importantly for the present study, this research will estimate the effect of arrest and of punishment by the criminal justice system and/or by university sanctions on student academic performance and re-arrest to extend the work of the Denver Youth Survey. This will assist policy-makers in better understanding the impact of official sanctions on future offending and educational attainment.

The Impact of Arrest and Court Sanctions on High School Students

Two notable studies offer guidance to this dissertation by observing the effect of arrest and sanctions on a different subset of students – high school students. First, Bernburg and Krohn (2003) examine labeling theory as a developmental theory of structural disadvantage by noting that arrest and sanctions have a tendency to block access to conventional individuals and opportunities. These disadvantages, in turn, accumulate over time to result in a larger and more difficult barrier to conventional life. Bernberg and Krohn concentrate on conventional opportunities, in the form of educational attainment and employment, as mediating events which can predict further participation in crime in early adulthood. After analyses, they do in fact find that arrest and court sanctions increase the probability of future criminal activity as partly mediated by lower educational attainment and employment rates among the disadvantaged youth in their sample. Second, Sweeten (2006) refines the work of Bernburg and Krohn by broadening

to a nationally representative sample and including additional control variables to address selection bias issues. In his analysis, Sweeten replicates the work of Bernburg and Krohn and concludes that court appearance increases the chances of high school dropout, regardless of the actual levels of delinquency reported by each respondent. In both circumstances, arrest and official sanctions have a detrimental impact on 1) future offending, and 2) educational attainment. The present study will return back to these two foundational works to see if these effects remain consistent for college students.

Dissertation Roadmap

Chapter 2 will proceed to review extant research in substance use and abuse will be proffered to obtain a snapshot of the current issues facing college administrators, parents, and the students themselves and to explore the current explanations for differences that exist between the college population and those not at institutions of higher education. Efforts will be concentrated on examining substance use and abuse over an important phase of the life-course - the transition and socialization into the college years – to gain a better understanding on how the etiologies of criminal activity and substance use and abuse run roughly parallel. With this literature as a foundation, Chapter 2 continues by exploring the theoretical relevance of two perspectives to the study of the impact of sanctions. The labeling perspective, including the revitalized specifications its renaissance in recent years, will be juxtaposed with the deterrence perspective. This chapter will conclude with an expanded discussion of the impacts of criminal justice sanctions on offenders, with a narrowed focus on Braithwaite’s process of reintegrative shaming. Chapter 3 presents an analysis of arrested students in context of a wider population of arrestees in a college town. This analysis guides the following two chapters that seek to analyze the student population of arrestees and contrast this group with students who offend but were never arrested or punished by the criminal justice system. This comparison will assist in determining

whether arrest and sanctions for drug and alcohol offenses make a difference in students' lives. Policy implications of the findings are offered in Chapter 5 to assist decision-makers in their efforts to ameliorate problems among university-student populations. This chapter also gives overall summary of the findings, suggests future research endeavors, and concludes the current work.

Table 1-1: Selected drug law and reform since 1970

Year	Title	Summary
1965	Drug Abuse Control Amendments	Define and control “depressant and stimulant” drugs. This included barbiturates, amphetamines, and the ability to add others after investigation. LSD was one of these extraneous drugs. Also restricted manufacture and made possession of these drugs illegal, and defined penalties for law-breakers.
1970	Comprehensive Drug Abuse Prevention and Control Act	Landmark legislation that has governed drug control in contemporary times. Specifically, Title II of this Act, the Controlled Substances Act, spells out the current control regime used by the United States federal government and serves as the model for state legislation. Sets forward the “scheduling” of all “controlled substances” from Schedule I – meaning illicit status except under tightly controlled medical studies – to Schedule V – making a drug available by prescription from a doctor with few restrictions.
	Organized Crime Control Act (RICO and CCE)	Two powerful prosecutorial tools that define the coordinated acts of individuals who may be considered drug traffickers or organized crime syndicate members. This allows their collective actions to be scrutinized in court hearings and increases the penalties for participation in certain crimes.
1972	Drug Abuse Office and Treatment Act	Established the Special Action Office for Drug Abuse Prevention (SAODAP) within the executive branch and the National Institute of Drug Abuse (NIDA) as a subsidiary of the National Institute of Mental Health (NIMH). SAODAP was to coordinate federal efforts regarding prevention, education, treatment, rehabilitation, training, and research of drug abuse. NIDA was charged with (re-)creating a national community-based treatment system. Research funding was also allocated for such development. This Act also legitimized maintenance for treatment of narcotic dependence under strict conditions and required any hospital that received federal funding not to refuse treating patients’ conditions directly or indirectly due to drug abuse or dependence.

Table 1-1: Continued.

	<i>Alcohol, Drug Abuse, and Mental Health Administration</i>	The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) was charged to reside over the development of research in a wide area of mental health and substance use areas.
	<i>Drug Enforcement Administration</i>	By executive order of President Nixon, the Bureau of Narcotics and Dangerous Drugs (BNDD), the Office for Drug Abuse Law Enforcement, and the Office of National Narcotics Intelligence were disbanded and the Drug Enforcement Administration was formed to merge these agencies under the Department of Justice. Essentially, the latter Offices were merged into the BNDD to form the new agency.
1974/1978	Drug Abuse Treatment and Control Amendments	Expands the 1972 Act (funding in particular).
1978	Alcohol and Drug Abuse Education Amendments	Expands the Department of Education's role in drug education efforts.
1980	Drug Abuse Prevention, Treatment, and Rehabilitation Amendments	Additional expansion of drug education and treatment programs (and funding).
1984	Uniform Drinking Age Act	Encouraged states to set the drinking age to 21, which was now required to receive federal funding for highways and roads.
	Drug Offenders' Act	Expanded programming and treatment for drug offenders.
	Comprehensive Crime Control Act	A major overhaul of bail and asset forfeiture procedures at the federal level. Most importantly, this Act abolished parole at the federal level and created stiff, often mandatory, sentences for drug offenders which on average lengthened the sentence for an individual convicted of a drug crime.

Table 1-1: Continued.

1986	Analogue Act	Brings uncontrolled synthetic substances that pharmacologically mirror the effects of a particular controlled substance under regulation. This is to prevent illicit chemists from creating psychoactive substances that can be sold as a drug of abuse but technically are not illegal because of chemical structural changes.
	Anti-Drug Abuse Act (1986)	Addressed the foreign drug trafficking threat by creating avenues to encourage partner governments to eradicate illicit crops and substance production. This Act also sought to encourage stronger federal coordination of prevention and education programs, increased block grant funding for NIDA research with particular focus on Acquired Immuno-Deficiency Syndrome (AIDS), and imposed mandatory minimum sentences (at the federal level) for heroin and cocaine. Created a powerful law enforcement tool in the form of asset forfeiture and generally granted law enforcement, prosecutors, and the courts increased power to process drug offenders.
1988	Anti-Drug Abuse Act (1988)	Extended the Anti-Drug Abuse Act of 1986 by encouraging private employers to maintain a drug-free workplace. Workplace drug testing to accept and maintain employment would become a popular choice for many national chains across the nation. Also establishes the Office of National Drug Control Policy (ONDCP - and the so-called American drug czar) under the executive branch.
	Crime Control Act	In regards to drug regulation and enforcement, this act created drug-free school zones, aided rural drug enforcement efforts, increased efforts at controlling money laundering, refined asset forfeiture, defined chemical diversion and trafficking, and generally increased drug enforcement funding. This Act also began efforts in increasing sanctions for methamphetamine.

Table 1-1: Continued.

	Crime Control Act	In regards to drug regulation and enforcement, this act created drug-free school zones, aided rural drug enforcement efforts, increased efforts at controlling money laundering, refined asset forfeiture, defined chemical diversion and trafficking, and generally increased drug enforcement funding. This Act also began efforts in increasing sanctions for methamphetamine.
1992	<i>ADAMHA Reorganization</i>	Organizes the Alcohol, Drug Abuse, and Mental Health Administration under the Department of Health and Human Services (HHS) and integrates the National Institute of Alcohol Abuse (NIAA), the National Institute of Drug Abuse (NIDA), and the National Institute of Mental Health (NIMH) under the National Institutes of Health (NIH). The revised agency name becomes the Substance Abuse and Mental Health Services Administration (SAMHSA). Increased funding efforts directed towards drug abuse research and treatment, except for needle exchange programs.
1998	Higher Education Act (Amendment)	<p>Disqualifies college students from Title IV (federal) financial aid – which includes Stafford, Perkins, and PLUS loans, Pell grants, and work study programs – if one is convicted of drug possession or sale. This restriction may be lifted if the student completes an acceptable drug rehabilitation program. An acceptable program is one that includes at least two unannounced drug tests and is either qualified to receive funds from federal, state, or local governments or from a federal- or state-licensed insurance company or is administered or accepted by a federal, state, or local agency or court, or a federal- or state-licensed hospital, clinic, or doctor.</p> <p>This Act was later amended to include convictions during periods of which Title IV funding was being received by the student.</p>

Table 1-1: Continued.

2005	Combat Methamphetamine Epidemic Act*	Restricts the sale of precursor substances previously found over-the-counter into a class onto its own. While not scheduled substances, ephedrine and pseudoephedrine were required to be behind a merchants' counter and out of direct reach of customers. Merchants would have to monitor sales to help prevent these substances from being converted to illicit methamphetamine products.
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* Part of the Patriot Act

CHAPTER 2 REVIEW OF THE LITERATURE AND THEORETICAL PERSPECTIVES

Drug and Alcohol Use and our College Students

In a comprehensive history of alcohol in America, historians Mark Lender and James Martin (1982) noted that Americans were ambivalent about alcohol and how to handle alcohol problems. In the microcosm of the college campus, conflicts can readily be seen among the administration, students, and alumni over the best ways to handle alcohol-related problems. As Lender and Martin remark:

These controversies reflect, at least to some extent, the lack of consistent public attitudes toward drinking. American ambivalence toward the subject is undeniable. Perhaps 30 percent of the nation's citizens do not drink at all, yet others tolerate considerable latitude in drinking behavior. 'Getting loaded' at a college fraternity party, for example, more often than not is simply shrugged off as an instance of adolescent conduct. Hard-drinking, even to the point of drunkenness, is still accepted as the sign of 'being a real man' in some social circles. In other cases, drinkers who see nothing wrong with their own imbibing have doubts about it in others...and although the nation spends huge sums annually in consumer purchases of beverage alcohol, and generally accepts the idea that alcoholism is a disease, Americans still place a severe social stigma on alcoholism. Thus, there is no clear sense of what the public really thinks or wants in regard to alcoholism prevention and control (1982: 191).

Although this was written in the early 1980s, similar attitudes resound in current times on college campuses for both alcohol and soft drugs, particularly marijuana. Of the large literature that exists to help assess the reality and myths of substance use and abuse on college campus, three sources are especially helpful in monitoring the pulse of use and problem use for college students: (1) Monitoring the Future (National Institute of Drug Abuse), (2) the Core Survey (Core Institute – Southern Illinois University at Carbondale), and (3) College Alcohol Study (Robert Wood Johnson Foundation). The results are undeniable. In a report given to college presidents in 2004, the Core Institute found that respondents in their sample – consisting of over 141,121 students from about 300 institutions of higher education – reported that they perceived that drinking was a central part of the student social life, for both male and female students

(Presley, Cheng, & Pimentel, 2004). Additionally, Monitoring the Future (Johnston, O'Malley, Bachman, & Schulenberg, 2007) reports that recent graduating seniors from high school have more liberal attitudes towards drug and alcohol use relative to cohorts of the past. Thus, these two very comprehensive and large-scale studies suggest the ambivalence noted by Lender and Martin historically is alive and well on college campuses across the States.

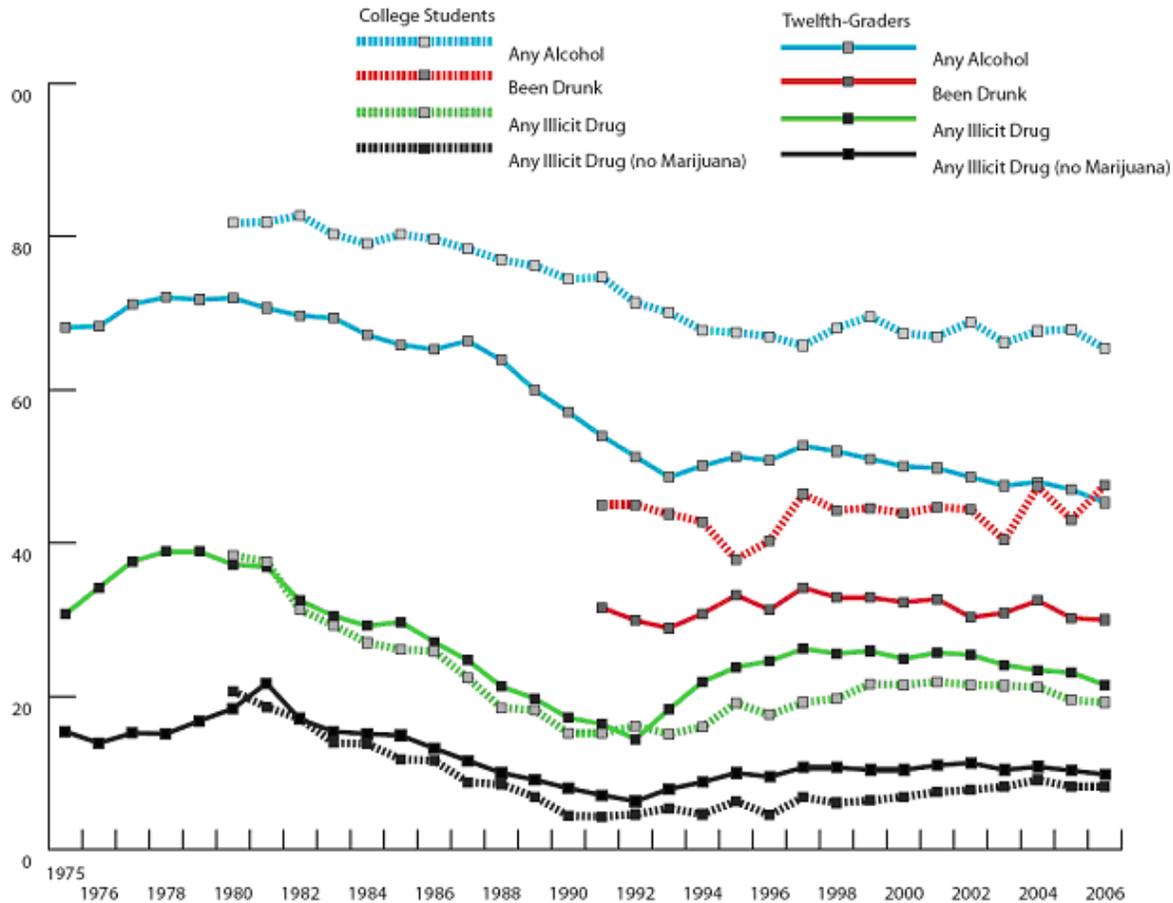


Figure 2-1: Monitoring the Future: Percentage of College Students and Twelfth-Graders that Used Illicit Drugs, Alcohol, and Been Drunk Within the Past 30 Days

The most recent estimates show that college students have, for a long time, been more likely to drink and get drunk than are high school seniors. As a reference before further evaluation, Figure 2-1 shows the results of the latest Monitoring the Future study for the prevalence of use of various substances within the past 30 days from 1975 – 2006. Generally,

these data also show that college students share similar patterns of use and abuse of psychoactive substances when compared with individuals of the same age that do not attend an institution of higher education with a few exceptions.

In a more complete comparison, high school seniors are contrasted with both college students and others who are up to four years past high school. College students are much more likely than similarly-aged non-students and high school seniors to drink overall and also to engage in binge drinking¹ (see Figures 2-2 and 2-3).

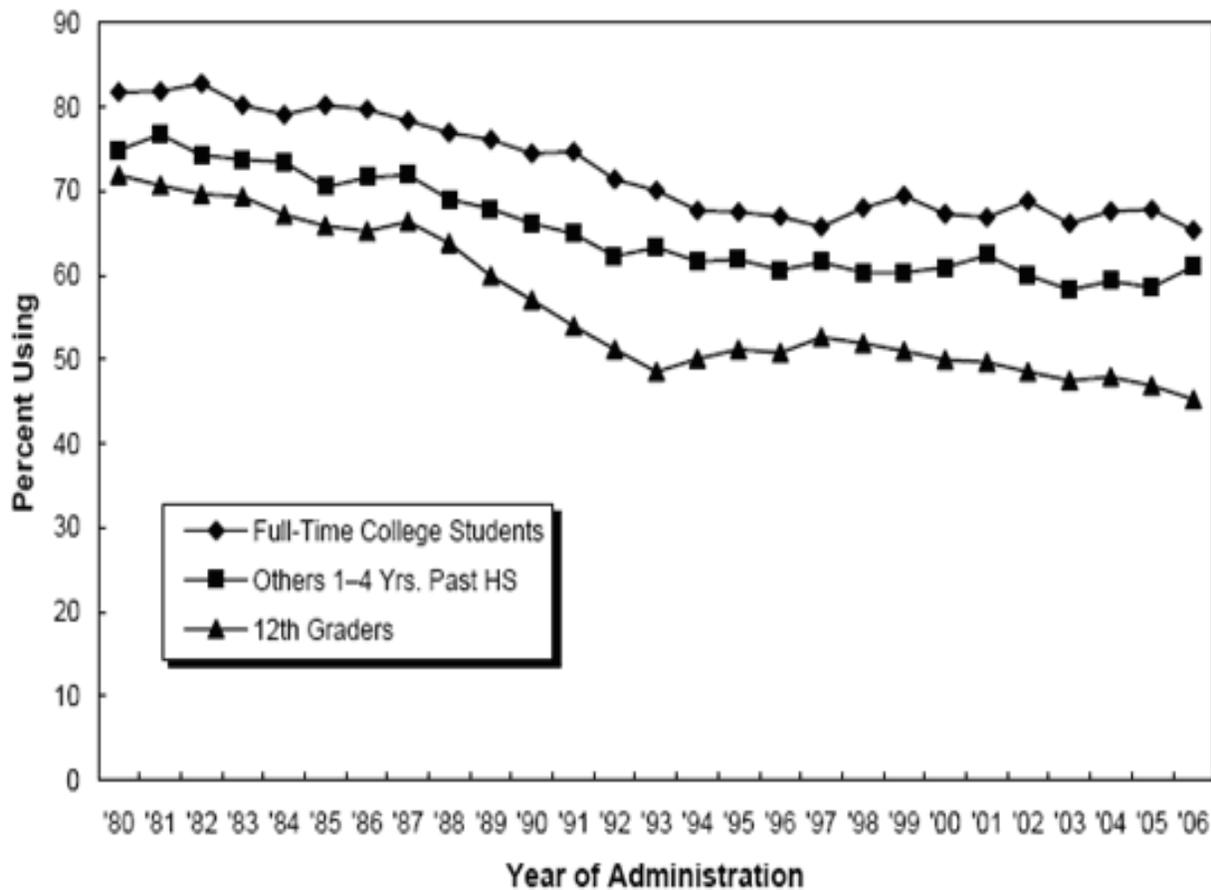


Figure 2-2: Monitoring the Future: Percentage of College Students versus Others One to Four Years Beyond High School that Drank Alcohol in the Past 30 Days

¹ Binge drinking for this figure is defined as having five or more drinks on one occasion within the last two weeks, regardless if male or female.

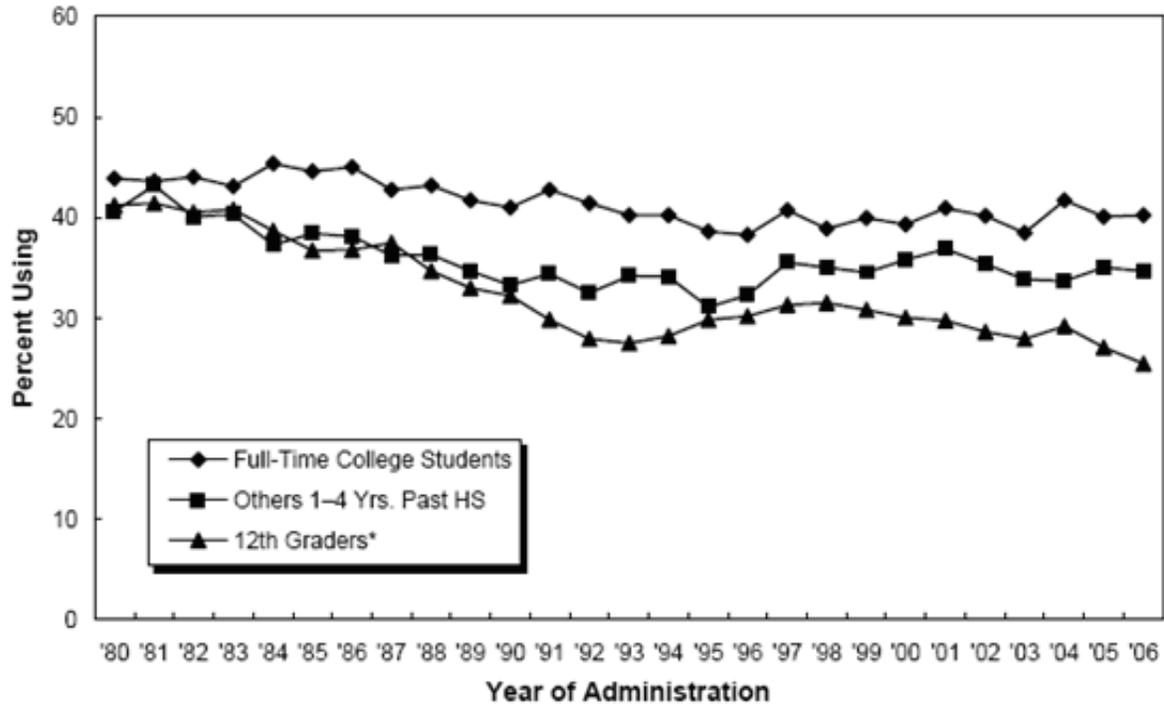


Figure 2-3: Monitoring the Future: Percentage of College Students versus Others One to Four Years Beyond High School that Drank Five or More Drinks in a Row within the Last Two Weeks

Remarkable stability exists in the overall amount of college student binge drinking since the inception of these data sources. The only appreciable trend in Figure 2-3 seems to suggest a slight decrease in college student binge drinking from the 1980s to the 1990s, but persisting rates from that time forward. Yet recently popular media outlets have reported an alarming trend in binge drinking and prescription drug use in this population (see Critcher, 2008; Weschler, Lee, Kuo, and Lee, 2000). These reports are not without merit – one just has to examine the nuances underneath the overall rates of binge drinking to realize what warrants such alarm to see competing trends. The rates of *frequent* binge drinking increased, but the rates of abstention have increased as well (Weschler, Kuo, Nelson, and Lee, 2002). The Harvard Alcohol Study

finds that about 19.7% of students surveyed frequently binge drank² in 1993 compared with 22.8% in 2001 (odds ratio of 1.21); 16.4% abstained from drinking in 1993 compared with 19.3% in 2001 (odds ratio of 1.22). This suggests movement of some of those who used alcohol moderately to two polar extremes – frequent binge drinking and abstinence (Wechsler et al., 2002). Overall, Wechsler et al. (2002) report an increase in the harm among collegiate drinkers in spite of reform to address binge drinking on campus – something that is consistent with the increase in frequent binge drinking (see also Kinney, 2006). Such harms may include missing class, blackouts, altercations, and actions students subsequently regret – particularly sexual activity that may put one’s health at risk or lead to unplanned pregnancy.

One of the problems associated with alcohol, especially heavy use of alcohol, is arrest. The official arrest data reported by institutions of higher education since 1992 show a slight annual increase in liquor-law violations/arrests reported by these institutions (U.S. Department of Education, 2008). In 2003, 31,234 on-campus criminal violations of alcohol laws were reported – a 1.3% increase from the previous year.³ The increase seen in 2004 is roughly 4.8% (34,394 violations). Some media and government reports reference steep long-term increases since 1992/1993, the years with the lowest contemporary prevalence of drug and alcohol use/misuse among student populations (see Johnston et al., 2007).

The total number of on-campus drug-law violations reported by institutions of higher education in 2002, 2003, and 2004 show similar increases as alcohol-law violations: 12,393,

² Binge drinking in this study is defined by five or more alcoholic drinks on one occasion within the past two weeks for men or having four or more alcoholic drinks on one occasion within the past two weeks for women.

³ These numbers include on campus violations for all reporting institutions, including less than 2-year institutions. The total number of violations for all reporting institutions for on-campus and off-campus violations was 48,807 in 2002, 47,904 in 2003, and 50,642 in 2004. Even with the slight decrease in 2003, the overall trend shows an increase when one examines the data from 1992 to the most recent available (Chronicle of Higher Education, 2007; US Department of Education, 2007).

12,854, and 13,235 respectively (US Department of Education, 2008).⁴ Results from the National Household Survey on Drug Use and Health (SAMHSA, 2008) as well as Monitoring the Future (Johnston et al., 2008) indicate that use and abuse trends have remained stable within college student populations. It is important to note that the official statistics on drug and alcohol violations seem to greatly underestimate the amount of alcohol and drug problems in higher education. A quick comparison of these rates versus that of the aforementioned self-report sources of data suggest problems are more widespread than what is required to be reported. One reason for the discrepancy is that students tend to move off-campus to consume alcohol and the institutions of higher education remain blind to the amount of offenses committed away from campus. Many factors explain this behavior, including alcohol availability, local economics, and university policies mandating a dry campus or areas. As students move off-campus to drink and use drugs, it is also important to remember that both their offending and victimization patterns may be altered.

Substance Use over the Life-Course

While college students are not immune from substance addiction or dependence, students generally fare better than others due to protective factors that either ameliorate the levels of use or prevent future use and relapse. These protective factors include general higher educational attainment, socio-economic status, social capital, greater bonds to conventional society, among many others. The differences in the prevalence and quantities generally consumed between college students and high school graduates that do not go to college (thus excluding drop outs, who are differentially at a higher risk for heavy drug use and abuse) support this notion

⁴ The total number of violations for all reporting institutions for on-campus and off-campus violations was 25,058 in 2002, 21,699 in 2003, and 21,859 in 2004. Caution should be taken when assessing trends using these overall data as not every institution has jurisdictional outreach beyond their campus perimeters.

(Johnston, O'Malley, Bachman, & Schulenberg, 2007). Alcohol use is a notable exception. Students seem to matriculate into a culture that readily promotes alcohol use and abuse as measured by drinking and bingeing rates.⁵ While the protective factors listed above often remain intact into the transition of higher education, substantial weakening of these factors may occur when students arrive at college. For example, leaving home may weaken one's ties to conventional society in that a student's bonds with his/her parents may change given the distance and newfound independence (Hirschi, 1969; Hirschi and Gottfredson, 1995). Alternately (or in tandem), students may differentially associate with other students that favor alcohol use and drinking heavily while distancing themselves from a wholesome home environment that frowned on alcohol (see Akers, 1998). While these protective factors typically remain intact, the joint weakening of this shielding combined with a culture ambivalent to alcohol use seems to create the perfect storm for exasperated alcohol problems on college campuses.

However, current research notes an anomaly in the alcohol abuse literature pertaining to college students. In a recent journal article, Donald Misch (Misch, 2007) examines the phenomenon of "natural recovery" from alcohol abuse displayed by a substantial amount of college students as they progress through school and after they matriculate. Thus, while the culture of higher education itself may be a risk factor for excessive and dangerous drinking, Misch notes that researchers have been glossing over the potential protective factors that exist in that same environment that may help students naturally reduce their levels of drinking. He was not only concerned with the factors that aid and abet college students into drinking habits, but highlighting the "aging out" of dangerous drinking behaviors. Accordingly, the substance use

⁵ See Appendix A.

careers of college students – and in particular, the desistance/cessation aspect of the life-course perspective – is sorely understudied and lacks development in current literature.

A notable exception is the research done at the University of Washington on the natural history of alcohol use of college students (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; see also Schulenberg, Maggs, Long, Sher, Gotham, Baer, Kivlahan, Marlatt, & Zucker 2001). These researchers began their study by sending out a questionnaire to all incoming freshmen, class of 1990. Freshmen respondents who committed to the study were then screened for high-risk drinking patterns across the previous three years by using the Rutgers Alcohol Problem Index (White & Labouvie, 2008). Those determined high-risk were divided among a treatment group which would receive a one-time, individualized prevention-based intervention and a control group.

The results coincide with what Misch (2007) predicted. Globally, students tend to drink more when beginning their college career relative to one's high school years. Yet, after freshmen year, students tend to drink less often – that is, until they reach their 21st birthday when the *frequency* of drinking occasions suddenly increases. However, Baer and his colleagues discover that generally those in their advanced college years tend to drink *less* (in quantity) on each drinking occasion but drink more often so that the overall quantity increases over the freshmen and sophomore years.

The high-risk students who received the intervention, however, drastically differed on their drinking habits relative to the general sample and the controls. Those in the control group, for example, consistently drank more often and with greater quantities than did their global student body counterparts. But, more importantly, a difference in the *pattern* of use was noted between the experimental group and the control group. The control group's frequency of drinking

occasions remained relatively stable, but the quantity of use slowly diminished over time. The treatment group evidenced the same patterns with regard to drinking occasions, but the intervention had a significant impact in yielding additional reductions in the quantity of drinking beyond that displayed among the controls. Additionally, Baer and his colleagues measured the self-reported unintentional consequences from alcohol use, and those in the treatment group showed considerable reductions in these negative outcomes relative to the controls.

A final note on the life-course perspective on substance use and abuse as it relates to college students: just like developmental criminology predicts a chronic offending, high-risk group and another that is noted by brief, often episodic delinquency, extant research on collegiate substance use and abuse aligns with this framework. The only exception to this analogy is the timing in which these events (crime versus problematic/delinquent alcohol consumption) generally occur in the lifespan. As alluded to in the University of Washington study on alcohol use over the course of the academic career, a small amount of substance users consistently consume the vast majority of intoxicating substances as a group relative to the wider population. For example, results from the most recent nationally representative College Alcohol Study find that 22.7% of the students in their study consumed over two-thirds of the alcohol consumed by the entire sample (Weschler et al., 2002). The remaining students that do drink tend to do so moderately, but do experience episodic problems directly related to their alcohol consumption.

The present study will examine various renditions of labeling theory to begin to frame why some students may continue to experience drug- and alcohol- related problems (measured by recidivism) after being processed and or sanctioned by an authority while other students may fare better depending on which authority (formal or informal) processes them. These perspectives

will be juxtaposed with deterrence theory as this perspective offers different solutions as to why students may continue to have problems.

Reintegrative Shaming and Labeling

Classic labeling theory suggests that efforts of social control can backfire. These efforts can produce institutional processes that push some vulnerable individuals, especially novices, toward a criminal lifestyle. Official reactions can alter concepts and identities, in part because they engender informal reactions from others and because they entrench those labeled within a formal process that increases exposures to dense criminal elements (jails, prisons, etc.) rich with learning opportunities (Tannenbaum, 1938). The societal reaction itself may produce what Lemert (1951; 1972) called secondary deviance. Quite simply, when individuals are treated as “drunks,” as “criminals,” or as “deviants,” at some point, the labeled individuals will gradually accept these labels and align their lifestyles to better suit what has become their newfound primary status through what is termed a self-fulfilling prophesy. Labeling theorists argue that the deviant self-concept materializes in youth and this will in turn trigger deviant behavior. While many well-known criminologists have contributed to in this tradition (Becker, 1963; Erikson, 1966; Kitsuse, 1964; Schur, 1969), classical labeling theory’s prominence has waned due to the lack empirical support and the internal complexities of researching its primary tenets, which critics argue remain too ambiguous (see Patternoster & Iovanni, 1996; Cullen & Agnew, 2006).

A contemporary resurgence of the labeling perspective has taken place in the form of novel applications of these classic theories with innovative specifications that have the rigor to withstand empirical investigation. Both Bernburg and Krohn (2003) and Sweeten (2006) point out that this renaissance holds particular import when examining the impact of arrest and sanctions on youths and young adults. These researchers draw attention to the process of

cumulative continuity and couch it in a labeling perspective. That is, these researchers argue that the actions of the police and of the criminal justice system spur a chain reaction which creates barriers to legitimate opportunities and processes (e.g., employment and educational attainment). Furthermore, this process is mediated by one's location in the social structure – those from disadvantaged backgrounds will have a more difficult time at overcoming these hurdles (see Sampson & Laub, 1997). In this case, future deviant behavior arises from the restricted access to legitimate opportunities, not from a deviant self-concept. Bernburg and Krohn (2003) and Sweeten (2006) find support for this in high school students: students that were arrested and processed by the criminal justice system were more likely to drop out of high school and to be unemployed in early adulthood, particularly if these individuals lack the shielding provided by a higher position in our social structure. Figure 2-4 presents a depiction of Bernburg and Krohn's theorized process of events that leads to further offending for ensnared youth.

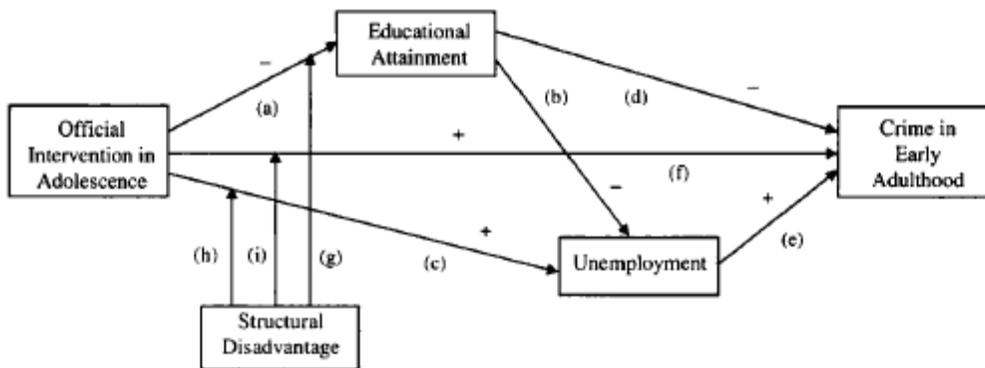


Figure 2-4: Bernburg and Krohn's Hypothesized Effects of Official Intervention in Adolescence on Crime in Early Adulthood

A careful look at the processes proffered by Bernburg and Krohn in Figure 2-4 suggests that extrapolating this model to college students is possible with a shift in thinking when defining structural disadvantage. Expanding structural disadvantage to include concepts broader than economic disadvantage makes this possible. For example, college students experience a

spectrum of changes when transitioning to higher education which can yield structural disadvantage broadly defined: loss/alteration of social support network, loss of rights to privacy due to the demands of communal (dorm) living, and an unfamiliarity with available resources such as extracurricular activities, cultural events/venues, and volunteering opportunities. While many students are able to reintegrate into the social structure with a smooth transition to higher education, others are less adept in accomplishing this. Thus, the missing factor from Bernburg and Krohn's model is the life-course transition that shapes differential structural disadvantage across college students. This type of disadvantage should work in the same manner in that it has an interactive influence on the effect an official intervention has on educational attainment and recidivism. While the model provides an excellent resource in the aid of explaining the effect of official interaction on these two outcomes, it does not offer a clear understanding of how different *types* of official intervention factor in to alter the process.

Some alternative solutions are found with Braithwaite's reintegrative shaming approach (1989; 1992) which also leads the labeling renaissance into the new era. Spring-boarding from the concept of classical labeling, Braithwaite holds that the societal reaction to crime and deviance may paradoxically impact offenders negatively and make matters worse. He contends that reacting to crime and deviance entails shaming. If shaming is done in a stigmatizing manner, crime and deviance will be amplified.

Shaming is a natural reaction, whether formal (e.g., the courts) or informal (e.g., a disapproving mother), to behaviors which are not condoned. These reactions are designed both to elicit feelings of remorse from the targeted offender and to generate condemnation from those affected by with the incident or even from the surrounding community at large. For example, a juvenile who is caught vandalizing school property may be sternly disciplined by school

officials, generating a phone call to the child's family. In turn, child's teacher and parents both communicate their disapproval of the vandalism, thus reinforcing the administration's initial act of shaming. As others in the school and community learn of the incident, they, too, may condemn the vandalism.

Braithwaite (1989) argues, along with classic labeling theorists, that shaming which occurs in a stigmatizing manner has the potential to amplify deviance and/or criminal behavior. On the other hand, if the shame were to occur in a *reintegrative* manner, the offender would be guided back to conventionality and respectability while steered away from the criminal models and opportunities that may await him or her if handled in the traditional, retributive model of justice. Ideally, criminal justice with recompense jointly combined with a truly penitent offender will lead to the best outcome – one in which the offender is reintegrated with conventional society and the parties negatively affected by the offender's actions are satisfied with the judicial outcome. This functional possibility of shaming was the missing link previous renditions of the labeling theory lacked. Could it be that some college students are more likely to receive functional reintegrative shaming than others, which would then predict that a portion of students will likely re-offend at a lesser rate than others?

What if labeling theory is wrong? According to labeling theory, the hypothesized impacts of official reactions like arrest and court sanctions contrasts with the expectations from proponents of deterrence. Deterrence theory, on the other hand, predicts that the risk of criminal justice processing and punishment should serve to secure compliance (Becker, 1969; Cornish and Clark, 1986; Tunnel, 1992). For those who have already been caught and punished, the sanction serves as a deterrent so they will know the costs of engage in the proscribed behavior and refrain from doing it again (specific deterrence). Punishing offenders serves as a model to

others as well; other learn of the threat of punishment so they, too, will not want to take the risk (general deterrence). Taking this one step further, Stafford and Warr (2006) suggest a re-conceptualization of the terms specific and general deterrence and shift their thinking to examine the impact of the deterrent effect of direct and indirect experience with punishment and *punishment avoidance*. Either way, this perspective suggests offenders make a rational choice to commit deviant and criminal acts with consideration to a cost-benefit analysis of sorts. These tenets are at odds with the labeling perspective – if the very processes that are supposed to deter individuals from the commission of deviant and criminal acts actually backfire and enhance criminality, specific deterrence is a complete failure. The great criminological debate that surrounds these two conflicting perspectives is that there is robust evidence that supports the claims made by each (see Bernburg & Krohn, 2003; Piquero & Paternoster, 1998; Piquero & Pogarsky, 2002; Pratt, Cullen, Blevins, Daigle, & Madensen, 2006; Sweeten, 2006), particularly the revitalized versions of each perspective (e.g., Braithwaite, 1989; Braithwaite, 1992; Stafford & Warr, 2006).

Shaming in a Culture of Ambivalence

Leading one of the most expansive research inquiries on alcohol on college campuses, Henry Weschler and his colleagues have described a culture of alcohol that exists on campuses across the nation. In a 2002 book called *Dying to Drink*, Weschler and Wuethrich tap into some of the traditions at institutions of higher education that speak volumes on this subject. Several examples illustrate the ambivalence that exists about college drinking; some tradition are seemingly harmless (and may even be tied to worthwhile goals), but may also hold the potential for harmful and negative consequences. Cupid Week, a fraternity fundraising event in which the most timid fraternity brother is chosen to drink until intoxicated and dress up as Cupid. Cupid is then taken across campus to kiss willing girls, for each, he earns a donation for the American

Heart Association. The tradition of “drinking your age” occurs when one reaches the legal age to drink alcohol (or the night before) and attempts to drink 21 shots is a particularly harmful tradition because of the very heavy drinking it involves (Weschler and Wuethrich, 2002).

Substances other than alcohol are celebrated on college campuses and illustrate ambivalence about how to react to college student use. For example, at the University of Colorado at Boulder, students have held an annual pot smoking festival on April, 20th to celebrate the cult-phenomenon of “420”⁶ at Ferrand Field, a centralized public field on campus. The festivities are peppered with students openly consuming marijuana from joints, pipes, one-hitters,⁷ and laced-foods while assembled to listen to live music, promote the legalization of marijuana, and socialize. On April 20th, 2006, campus police posted several signs along the perimeter warning students that anyone using marijuana would be photographed and prosecuted. Not heeding the warning, a crowd of 2,500 crossed the field’s boundary and participated in the festival. The following day, the police website contained the images of 150 individuals (primarily students) actively smoking, offering a \$50 award for the identification of each student. The mixed public reaction was telling – some argued that the police over-extended their boundaries when they posted these images on their website (with bold IDENTIFIED stamps on each identified offender) while others commended the police for seeking out blatant law violators, heating up the debate in the local newspapers.

⁶ The story of 420 is that of contemporary marijuana-user folklore. Karen Halnon (Halnon, 2005) has described it as a universal code that all marijuana-users relate to without even knowing the true basis for it. 420 can mean the time of day users toke up, a symbol between two or more users that they are pot “friendly,” and actually gives users an identity. It’s imbedded in marijuana-using rituals, written on a milieu of products (t-shirts, cups, stickers, posters, and much more), can be a hip apartment number or address at college, and all people turned-on to the culture knows the power of 420. Halnon’s article itself, originally printed in High Times, has become part of the phenomenon: it has been reprinted or referred to on many pro-marijuana blogs and websites.

⁷ A one-hitter can be described as a compact, often covert, marijuana smoking device. It typically holds a very small amount of marijuana, which gives rise to its name. A specific example of this type of device is called a ‘bat,’ which is often made out aluminum, and is stored in its ‘dug out.’ The dug out is an inconspicuous storage box that both holds small quantities of marijuana and its paired bat.



Figure 2-5: University of Colorado at Boulder – 420 at Farrand Field Police Surveillance.
 Source: University of Colorado at Boulder Police website (no longer available):
<http://www.colorado.edu/police/>

Two years later, the event expanded to a larger field on campus and the crowds swelled to over 10,000 while the police resigned to take a safety monitoring approach instead of aggressively enforcing drug laws. The Public Information Officer was quoted in a local newspaper, explaining his reasoning: “We can’t do the same thing year after year,’ [Commander Brad] Wiesley said hours before Sunday’s smoking began. ‘So I doubt we’ll do anything like the pictures.... There’s no way our 12 to 15 officers are going to be able to deal with a crowd of 10,000. We just can’t do strong enforcement when we’re outnumbered 700 or 800 to one”

(Miller, 2008). Thus, after turning on the sprinklers in one field during one year, and actively sanctioning students in another, the police deferred to the students and the community's ambivalence.

If the current climate of the campus *culture* is characterized by ambivalence, then it is important to note that the shaming component of formal or informal sanctions as predicted by Braithwaite's theory of Reintegrative Shaming may be nullified, regardless of how the administration or the local criminal justice system process the majority student offenders. If the underlying assumptions of shaming require 1) invoking remorse within the offender, and possibly, but not absolutely 2) garnering condemnation from others who learn of the offenders actions, the underlying sanctioning process may become broken if the offender is not remorseful (except, perhaps, of being caught) and/or if he or she *perceives* little to no condemnation for the delinquent act(s) committed that provoked official attention. One may contend that the process of arrest itself arguably has the potential to elicit stigmatization due to the nature of this reaction; however, the typical police response with minor criminal infractions such as misdemeanor marijuana possession⁸ is to issue a written citation of arrest (known as a notice to appear). This process lacks handcuffs, being placed in the backseat of a police cruiser, and the subsequent transport to the local jail. Stigmatization in these circumstances seems to be as minimal as possible, which seems to be in line with Braithwaite. Yet, without any shame, specifically *reintegrative* shame, the culture of ambivalence will flourish. The reaction may make a difference—discretion over how to handle drinking, underage drinking, marijuana consumption, et cetera – may mean very different social reactions in a university town where much of the activity is in the city or county.

⁸ Defined by possessing less than 20 grams of cannabis in the State of Florida.

This phenomenon may not hold for all offenses, however. As mentioned previously, drunk driving is considerably stigmatized (see Grasmick, Bursik, and Arneklev, 1993) despite the largely accepted patterns of drinking that enable drivers to slip into that state. In that vein, any acts or crimes considered “serious” or being caught with substances considered dangerous or dealing drugs may have different *quantities* of shame for which the *quality* of shame, whether reintegrative or stigmatizing, can take shape. This added component to Braithwaite’s model of reintegrative shaming may be key in adapting his theory to college students, and especially collegiate alcohol and drug use.

On the other hand, Piquero and Paternoster (1998) found Stafford and Warr’s reconceptualization of deterrence theory helpful in explaining driver’s intentions of driving while intoxicated. Using a sample of over 1,600 randomly selected drivers from across the United States, these researchers found that both personal and vicarious experiences affected these intentions. Additionally, being punished for a DUI and having successfully avoided capture and punishment for this crime in the past altered driver’s intentions to drive drunk. Two concepts were found to be of particular import to this study: substantial reductions in the intentions of driving drunk among both those who reported high levels of the certainty of punishment and those who had strong moral beliefs that prohibit this behavior. That is, respondents in the study that have acknowledge a certainty in punishment for drunk driving tended to express reduced intentions to drink and drive while those that acknowledge a good chance of avoiding punishment tended to express increased intentions to drink and drive. These intentions were found to be more resolute for respondents with personal experience with punishment or avoiding punishment for driving drunk. For example, if someone drove intoxicated 100 times and was caught once, this individual may perceive a high chance of avoiding punishment for his behavior

and tended to report increased intentions to drink and drive relative to someone who drove intoxicated 10 times and was caught two of those times. Vicarious experiences, knowing of people that were punished or avoided punished for drunk driving, has the same impact but to a lesser degree. If “petty” offenses beneath this level (underage drinking, public intoxication, open beverage container violations) are not taken seriously by a large segment of the population or the stigma attached to these offenses is weak, nonexistent, or non-reintegrative, the “lesser” types of drug and alcohol offenses may flourish and thrive.

One Journalist’s Perspective at the Study Institution

In the fall of 2008, *New York Times* reporter Kevin Sack visited Gainesville, Florida on the weekend the University of Florida Gators football team were slated to face the Ole Miss (University of Mississippi) Rebels at Ben Hill Griffin Stadium. At the behest of his editors, Sack came to the college town to investigate what has been declared the number one party school by the Princeton Review (Princeton Review, 2008; Sack, 2008a). His article (2008b) begins with an interview with a fraternity brother that is noticeably drunk at 10:30 in the morning of the football game – a signal (“eye opener” alcohol consumption) to health practitioners of an underlying substance abuse or dependence pathology when in consideration with other factors (APA, 2000). This sets the reader up for the shocking state of the alcohol problem in Gainesville. In the lengthy piece, Sack interviews various undergraduates, local officials, and university administrators to support the claim that “...in Gainesville, binge drinking remains ritualized behavior for many of the 51,000 students, even as admission to the university has become increasingly selective” (2008b). This immersion in a “sea of alcohol” is in spite of a multidimensional affront on underage and binge drinking in the community and on campus in recent years. In this time frame, key university and community decision-makers took various strides such as stricter enforcement of the local liquor laws, an aggressive social marketing

campaign (see Kotler & Roberto, 1989; Wechsler, Nelson, Lee, Seibring, Lewis, & Keeling, 2003; Zimmerman, 1997), offering alternative activities on Friday nights, and enhanced late night transportation that targeted areas with a high density of bars and clubs and high density student living areas (Glassman, 2008).

Binge Drinking (%)							
<i>"Think back over the LAST TWO WEEKS, how many times have you had 5 or more drinks at a sitting?"</i>							
	1991	1993	1994	1995	1997	1999	2002
One or more times	*	49	53.8	46.3	50.8	46.3	44

Binge Drinking (%)				
<i>"Think back over the LAST TWO WEEKS, how many times have you had 5 or more drinks at a sitting?"</i>				
	2004	2005	2006	2007
One or more times	56.5	51.1	45.4	44.4

Figure 2-6: Binge Drinking Rates. Source: University of Florida Gatorwell website: <http://www.shcc.ufl.edu/gatorwell/>

The aggressive approach may seem to be paying off by some metrics: the rate of binge drinking measured with an annual survey (using the Core Alcohol and Drug Survey) administered by the Student Health Care Center has fallen since 2004, most noticeably between years 2004 and 2005 (Gatorwell, 2008; see Figure 2-6). Using a more robust methodology and capturing a better response rate, a survey supported by a large grant uncovered that the percentage of undergraduates that reported binge drinking in the past two weeks was estimated to be 35.9% in the spring of 2007. This compares with the Student Health Care Center’s estimate of 44.4% for the fall of 2007 and its consistently over 40 percent rates that span over a decade prior. Sack’s qualitative assessment suggests, however, that the culture of ambivalence seems to be thriving as discussed earlier despite any response from the university or the local community. It seems that the campus self-report surveys may be missing the mark – especially when considering the fallacies of comparing cross-sectional data over time. The lull in the rate of

binge drinking during the 2004-2005 academic year may be largely contributed to measurement artifact. Triangulation is key to reduce this potential noise and to increase the reliability of problem assessment.

Summary

Over twenty six years have passed since Lender and Martin (1982) published their historical analysis on alcohol which noted a marked ambivalence about alcohol and how to handle alcohol problems. “Getting loaded” as a college experience seems to be normalized, as evidenced by the volumes of research on the topic. To date, the vast majority of this research is based on self-report students performed on a cross-sectional basis. The present study proposes to extend the available literature with official data collected longitudinally. In regards to timing, what seems to be operating in the lives of students upon matriculation is a change in the level of protection inherent in their social capital, socio-economic status, and bonds to conventional society while simultaneously entering an atmosphere that promotes alcohol use. Students’ bonds with their conventional families may weaken, social networks inevitably change, and many witness substantial freedom and independence formally unknown to them. However, for the present study, the exact mechanism of pathology during this sensitive transition period is secondary to the raw impact of official processing and sanctioning during this time.

Specifically, this research seeks to understand the role of official processing and subsequent sanctioning (or lack thereof) in affecting the likelihood of reoffending and altering the academic performance of college students. These effects have been framed in two primary, and conflicting, ways. Labeling theory predicts an increase in the likelihood of reoffending and a decrease in academic performance as students are handled through a process which is stigmatizing. Deterrence theory, on the other hand, would predict an increase in the likelihood of offending when students perceive low levels of certainty and severity of punishment. These

classical theories have been revitalized in recent years that offer substantial advantages. In particular, Braithwaite's (1989) theory of reintegrative shaming offers a framework that is more adaptable to studying the cultural ambivalence of alcohol.

Fundamentally, Braithwaite acknowledges that when shame occurs in a stigmatizing manner, there is an increased likelihood of an amplification of deviance and/or criminal behavior. The extension to classical labeling is that Braithwaite also proposes that if this shame were to occur in a manner that is reintegrative, offenders will reduce their levels of offending. The working hypothesis is that if college students were processed and sanctioned through a system that is inherently less stigmatizing by nature (e.g., the university system), there should be marked reduction in the levels of reoffending and an increase in academic performance. Yet, when this shame occurs in a culture of ambivalence, this may nullify the shaming component tied with processing and sanctioning offenders. This alternate hypothesis predicts that offenders processed/sanctioned by either system will share similar outcomes regardless of any qualitative differences in the procedural experience.

On the other hand, the reformulation of deterrence theory (Stafford and War, 2006) predicts that students who are punished by either the criminal justice or university system for drug and alcohol offenses will have an increased likelihood of reoffending relative to students who avoid sanctions. As specified, this theory predicts no differences in outcomes across differential processing – only differential sanctioning. Extending the alternate hypothesis listed in the previous paragraph, the working hypothesis in this scenario is that level of sanctioning (e.g., none, mild, severe) will explain the differences in outcomes for college students. While students may be embedded in a culture that encourages alcohol use and abuse, they should not be impervious to the effects of punishment. Yet, if students avoid punishment, the culture of

ambivalence may continue to exasperate problems in their college experience. As Piquero and Paternoster (1998) find with their respondents of drivers, personal experience with punishment and punishment avoidance is the strongest predictor of future intentions of wrongdoing when taking moral beliefs out of the equation. Since all of these students were caught for drug- and alcohol- related offenses, eliminating this concept does not produce theoretical problems.

What happens if an arrest and its subsequent sanctioning for alcohol and drug offenses fail to have an impact on future offending? Will these events trigger a decrement in student academic performance or no change at all? Would going through the motions of traditional law enforcement and judicial process be beneficial to the university and to the surrounding community? If there were an alternative, less punitive and stigmatizing process available through the university, would that work better? Do any sanctions matter for these crimes, or will the culture predict the outcome as many are suggesting? The present study will now turn to assess these questions in its subsequent chapters.

CHAPTER 3
PRELIMINARY ANALYSIS: STUDENTS A NON-STUDENTS IN A COLLEGE TOWN

Introduction

The purpose of this dissertation is to learn more about the role of alcohol and drug arrests on the academic performance and potential of re-arrest or re-referral of university students. The study is conducted in two parts. In the first phase, college student arrests are examined in context of the wider community arrest patterns in which a large public university resides. To achieve this goal, the present chapter analyzes a population of individuals arrested in Alachua County, Florida between 2003 and 2007 subdivided into college students and community members. These results will be used to inform the second phase of this dissertation which focuses on the impact of sanctions on academic performance and recidivism.

Study Population

The study population was derived in part of from a wider University research project initiated by Student Legal Services. Its interest was in learning more about students who are arrested to see how that population was similar to or different from the students Student Legal Services actually serves. Toward this aim, each law enforcement agency that has jurisdiction in Alachua County was approached by the principle investigator to provide information of all arrests, notice to appear citations, and sworn complaints for the years 2003-2007 excluding minors. Of these agencies, the Alachua County Sheriff's Office (ASO), Gainesville Police Department (GPD), University of Florida Police Department (UFPD), and the Division of Alcoholic Beverages and Tobacco (ABT) responded. According to the Florida Department of Law Enforcement, these agencies are responsible for greater than 90% of the arrests in the

county each year (2008).¹¹ This police data contained the date of arrest, time of arrest, location of offense(s) and arrest, list of offenses/charges, name of arrestee, police identified race and gender, and date of birth. Included in these police logs are all students and local residents arrested in Alachua County that are 18 years of age and older. Arrested visitors are also included in these logs, but criminological wisdom suggests that their participation in the local arrest rates is negligible.¹² University students were isolated from non-student community members by cross-referencing names and dates of birth of arrestees with the Office of the Registrar's and the Dean of Students Office databases. An analysis of student arrestees versus arrested community members is presented in this chapter which will examine the differences in these subpopulations (if any) in the 18-24 age range in Alachua County. It will also provide information about how this study population compares with other studies.

Descriptive Analysis: Comparing Student versus Non-Student Populations

To date, no criminological study has examined arrest data in which nested college students were identified to explore the possibility of any differences in criminal activity relative to the wider (non-student) community. Since the county-wide population of arrestees¹³ was obtained from the primary local law enforcement agencies, and the university student subset was identified, it is possible to look for different patterns of offending between university students

¹¹ All arresting agencies in the county include the Gainesville Police Department (6,917/53.2%), Alachua County Sheriff's Office (4,853 / 37.3%), University of Florida Police Department (562 / 4.3%), Alachua Police Department (480 / 3.7%), High Springs Police Department (126/ 1%), Santa Fe Police Department (67/ <1%), Alachua Division of Law Enforcement (5 / <1%), Florida Highway Patrol Gainesville (1 / <1%), Waldo Police Department, and Alachua Florida Game Commission (Number of Uniform Crime Report Index crimes for 2007 / % out of total Index crimes for 2007. Thus, the reporting agencies were responsible for about 94.8% of all Index crimes for 2007.)

¹² A common thread in criminal justice education, theoretical criminology, and law enforcement practice is the general acceptance of the tenets of "routine activities" (see Cohen & Felson, 2006). A main idea of the perspective is that offenders will commit the majority of their crimes in the areas in and around the places they live, work, and frequent if given the opportunity.

¹³ Excluding Florida Highway Patrol, Santa Fe Community College Police Department, High Springs Police Department, Waldo Police Department, Alachua Division of Law Enforcement, and the Alachua Florida Game Commission.

and college-aged non-students in the county. Above and beyond examining raw occurrences and general differences, an overall assessment of the types of crimes these groups commit – violent, non-violent, drug, and alcohol offenses – would be helpful to examine whether the groups share similar patterns of behavior or present a need for separate strategies of law enforcement due to significant differences. To accomplish this, the arrestees’ primary offense – e.g., their most serious offense as guided by the FBI Crime Index’s hierarchy rule – is recoded into one of these four categories—alcohol, drug, violent, or nonviolent. See Table 3-1 for list of example crimes included in these mutually exclusive categories.

In this exercise, the focus is on the differences in the patterns of drug and alcohol offending between students and the wider community. By and large, the literature suggests an overabundance of alcohol-related arrests of college students for the following reasons: 1) college students have consistently self-reported higher rates of active drinking (consuming alcohol within the last 30 days) as well as higher *amounts* of drinking relative to their peers who do not matriculate into higher education over the span of several decades and by different (large, well-funded) studies (Johnston et al., 2007), 2) students have increasingly reported negative consequences directly due to their consumption of alcohol in recent years (Dowdall, 2007; Kinney, 2006; Mustaine & Tewksbury, 2007), and 3) many students are embedded in a culture that promotes problem drinking regardless of the known dangers of alcohol abuse (Weschler & Wuethrich, 2002). Furthermore, public attention has focused on problematic drinking (e.g., binge and underage drinking) by college students in recent years, which forced many administrators and local law enforcement agencies to take action. Since students exhibit some of the highest levels of drinking (problem drinking in particular) – relative to other social statuses and they have been targeted for interventions, students may be expected to have higher rates of

arrest relative to the wider community. To make the comparison, raw occurrences must be computed into rates by taking the total number of each type of offense and adjust it per 1,000 students and non-students for the study period.¹⁴

$$\text{Arrest rate} = (\text{number of arrests} / (\text{average population for years 2003-2007})) * 1000$$

In addition, an alternative aged-censored version of the general population's rates of offending will be included to hone in on the differences between university student participation in criminal behavior from that of a matched group of the non-student population based on age. Obviously the university student population's age is mean-centered in early adulthood while the wider population's mean will inevitably be greater. This alternative focus will assist in determining whether or not young adults at a state university share similar criminal patterns to those in the same age group who are not attending this institution in the surrounding area.^{15 16}

¹⁴ The population estimates for Alachua County during the years of the present study were provided to the primary investigator by the Bureau of Economic and Business Research (BEBR) at the University of Florida. The student body population facts and demographics for these years were gathered from the University's Office of Institutional and Planning website (<http://www.ir.ufl.edu>) as determined by the total number of enrolled students per fall of each academic year. Student population figures by race and age (jointly) were not readily accessible, but were provided by special request of the principle investigator.

¹⁵ In the case of the age censored models, the Bureau of Economic and Business Research provided population estimates for all 18-24 year olds as well as estimates of gender and race for this age range. Upon consultation with BEBR, creating an average of the population estimates for 2003-2007 would provide solid estimates of the population in the county for this time frame. The University's Office of Institutional Research and Planning also provides total numbers of enrollment by age stratified by gender on their website, however a special data request was made to this office to provide figures by race specifically for students aged 18-24 during the study period.

¹⁶ A layer of complexity was added to this comparison to determine the levels of which violent and non-violent offenses have co-morbidities with drug- and alcohol- related offenses. This exercise examined any mention of drug- and alcohol- related offenses in the list of charges available for each arrestee. A duly noted limitation of this analysis, then, was the issue of unreported illicit drug- and alcohol- related activity if the arrestee was not charged with this type of offense. For example, a student that gets into an altercation at a local bar and is subsequently arrested for battery may not have charged with public intoxication or a similar alcohol-related offense. The same reporting problem may occur with disorderly conduct offenses. However, the analysis does retain the ability to compare across groups in the aggregate as the manner of which law enforcement applies charges to arrestees is congruent between non-students and university students. After examination, it was determined that the differences between the rates of drug- and alcohol-related arrests as determined by primary charge alone versus any mention of drug- and alcohol-related charges in either primary charge or secondary charges were negligible. For example, among the student population, 97 additional cases would be included if any mentions of drug- or alcohol-related offense appear in either primary or secondary charges. This results in an overall rate increase of two per thousand. The rate differences among the non-student population were strikingly similar.

Presentation and Discussion of Findings

The findings of this descriptive exercise can be found in Tables 3-2 and 3-3. The overall pattern of arrest, without controlling for age, found in Table 3-2 supports extant research. When observing the percentages of arrests by type within each group, the vast majority (65.38%) of college students who were arrested from 2003-2007 were, in fact, arrested for alcohol-related offenses. Interestingly, the percentages of arrests by type for non-students are evenly split among alcohol- and drug- related offenses as well as violent offenses (about 18% each). By and large, individuals in this group tended to be arrested for non-violent offenses in which the primary charge is not related to alcohol or drugs (43.46%). A better metric to compare across these two groups would be to calculate the rate of the occurrence of each arrest by type per 1,000 individuals in each group. This, too, is provided in Table 3-2. Overall, about 39 per thousand non-students were arrested for an alcohol-related offense while students were arrested at almost double the rate (about 81 per thousand students). In regards to non-violent offenses, about 89 per thousand non-students were arrested, about three times the rate of student arrests (28 per thousand) for this type of offense.

Table 3-3 presents data for students and community members aged 18-24. The differences in the rate in which students were arrested for alcohol-related offenses compared to non-students virtually disappear when focusing on this age range. The change is stark – when controlling for age, the rate of arrests for alcohol-related offenses is about 93 per thousand students compared to about 86 per thousand non-students. This roughly makes these two groups equivalent in their offending patterns when focused on alcohol-related crimes. This result is contrary to what the extant literature based on self-report would predict, but is in agreement on the ‘direction’ of the differences between these groups. If individuals aged 18-24 who do not matriculate into higher learning tend to report statistically significant reductions in harmful drinking practices compared

with those that do attend colleges and universities, these differences should translate into differences in official statistics. That is, if the harmful drinking practices documented among students lead to arrest as highlighted in the robust research on the topic (see Johnston et al., 2007; Weschler et al., 2002), non-students who are thought to engage in these practices at a lower rate should have lower arrest rates for alcohol-related offenses. In Alachua County, non-students present with only slightly lower rates of arrest for alcohol-related crimes. Perhaps the drinking experiences between students and non-students are not so great as thought. Alternatively, maybe enforcement patterns differ for students from non-students.

Current research (again, based on self-reports) also suggests individuals aged 18-24 who do not matriculate into higher education should also show slightly higher rates of arrest for drug-related offenses (see Johnston et al., 2007). That is, individuals aged 18-24 who do not attend a college or university tend to report more drug use across most categories of substances relative to college students. In these data, non-students (38.44 per thousand) were arrested at just over six times the rate of students (6.35 per thousand) for drug-related offenses while controlling for age. The difference here seems to be primarily driven by a large number of cocaine arrests in the community, but it is interesting to note that there is no dearth in marijuana or illicit prescription drug arrests in the present data. College students' use is typically on par with their non-collegiate peers within these categories while students are less likely to be cocaine users – but not by a wide margin (Johnston et al., 2007). For this reason it seems the wide division between these two groups cannot be fully explained by the levels of cocaine arrests in the community, but the direction of the difference is as expected. This is especially the case when realizing the most abundant drug-related arrest is for marijuana offenses. According to self-reports both students and non-students share equivalent rates of marijuana use, yet in these Alachua County data non-

students are arrested to a greater extent for marijuana. Inasmuch as the police agencies were inconsistent (both within and between agency) in their coding of drug-related offenses with the exclusion of marijuana-related arrests, caution needs to be taken when making these comparisons. For example, an agency that arrests a larger concentration of non-students relative to other agencies consistently teased out cocaine-related offenses in their data rather than categorizing them as a general controlled substance offense, while an agency that arrested a healthy mixture of both students and non-students remained inconsistent in its reporting practices. Regardless of what seems to be the driving force for the differences between student and non-student arrest for drug-related crimes, the initial premise still stands – existing literature on the prevalence of drug use does not suggest such wide divergence in the arrest rates between students and non-students as found in these Alachua County data.

Further refining this descriptive exercise, Table 3-3 presents the arrest data for only 18-24 year olds by gender and by race. The overall trend seems to agree with the existing research in that men compared with women tend to have elevated alcohol-related problems – in this case, being arrested for an alcohol-related offense. Interestingly, the differences between men and women shift when observing the differences in rates within each group. That is, male non-students exhibited almost twice the rate of arrests per thousand compared with their female counterparts, whereas student males had experienced elevated rates of arrest compared with their female counterparts, but not nearly as much in magnitude. It seems that the group membership driving these differences belongs with the student status. Remarkably no differences exist between the rates of arrests of male students versus non-students in respect to alcohol offenses when controlling for age. Thus, being enrolled in higher education seems to be an aggravating factor for alcohol problems (gauged by arrest) for young women, but not for young men. These

results are striking in light of the extant literature available on the topic (see Johnston et al., 2007; Weschler et al., 2002) in that the lack of perceived differences among males is counterintuitive to what is expected. In fact, college student males are considered to be among the highest at risk for alcohol-related problems in early adulthood.

Possible Explanations of Discrepant Findings

The discovery of similar rates of arrest for alcohol-related offenses between students and non-students particularly is striking relative to what is predicted by the current research available on the topic. The discrepancy between these local arrest data and national self-report data can be couched in two primary, yet nonexclusive, ways. First, the area of study could truly be classified as a “college town.” It is isolated from any metropolises by about two hours, and offers a limited set of recreational resources to youths and young adults relative to what is available in metropolitan life. In addition to this, the area of study contains two districts with a particularly high-density of bars and nightclubs (without the richness of alternative recreational activities that major metropolises may offer). This atmosphere, combined with an isolated college culture that encourages alcohol use (and some would argue, misuse) may prove to promote these behaviors in teens and young adults who live in the area and are not attending college.

For example, every year during the fall term, football season drives much of the activities in the town on Saturdays. Law enforcement from all available agencies are called upon to keep the peace between rival fans as well as ensure the well-being of fans, citizens, the university, and surrounding businesses from the swell of visitors and the high concentration of students and local residents mustering around university property. Tailgating before the game is a common occurrence and part of the university culture – a part of that culture is alcohol consumption. Local law enforcement strategies for these days shift to a lax enforcement of the letter of the law to accommodate the requirements for crowd control to some degree. Regardless, it is

inescapable that alcohol-related arrests are elevated during this period due to a culture that encourages the outdoor consumption of alcohol within large crowds. While this may not impact non-students as much as it does students, it is likely that a sizable proportion of the local residents and visitors participate in such activities. This example is only one aspect of the “college town” culture that may bleed over to the community.

Figure 3-1 depicts the levels of alcohol arrest over time for students and non-students (censoring for age 18-24). It is apparent that the patterns of arrest between the two groups are closely tied together in that the resulting outcomes appear to be mirror images of each other, only being different in their order of magnitude. In particular, the summer and fall months of each year exhibit elevated alcohol-related arrests. These months correspond to the time in which beginning freshman arrive at the university, to football season, and to rush for fraternities and sororities. Of these three cultural events, football season is likely to be tied with both student and non-student alcohol related arrests.

For this reason, Figure 3-2 depicts the levels of alcohol arrest over time for both groups while excluding the arrests that occur on football home game-days. While the two groups become discordant in their patterns of alcohol-related arrest over time, there still appears to be some similarity between them. For example, both groups display similar patterns of arrest for the summer and fall months of years 2003 and 2007. Because of the limited time line for comparison, conclusions need to remain tentative. The results, however, are suggestive. The results may be due to law enforcement strategies (e.g., crackdowns), but it is interesting to note that while accounting for football season, some similarities in the patterns of arrest between these two groups still exist. It appears that football season and the college town culture have independent effects on non-students alcohol problems (as measured by arrest).

Another possible explanation can be couched in a social inequality argument. Since many of the students who attend the university come from privileged or middle class backgrounds, the discrepancy may be evidence of a local criminal justice system that is *institutionally* biased against lower class citizens. This is not to say that individual actors of the system are racist or elitist, but the activities of the local police forces (excluding the University of Florida Police Department) focus on areas entrenched with high rates of crime and areas in which drinking behavior may spill over into public venues, becoming visible to law enforcement (especially if they are patrolling those areas more). These areas, in particular, have a higher density of impoverished residents – a large percentage of which are minorities. This argument may be somewhat limited in explaining the discrepancy between students and non-students in terms of alcohol-related offenses because the concentration of these offenses occur in two primary areas – the areas of high bar density as described above.¹⁷ At least one of these areas, however, is located fairly close to low income, high crime areas of the city.

However, this second argument does hold promise as a possible explanation for the differences between drug-related arrests for students and non-students. The poverty-stricken areas included in the current study are wrought with drug problems that are more likely to be visible by the police and exclusively targeted by police administrators. The college students at the university may use illicit drugs, particularly marijuana, to a notable extent; yet, they seem not consume illicit drugs in a manner that is as detectable by law enforcement in their normal routines or use in places where they are at higher risk to get caught.

A large study of students conducted at the university in the spring semester of 2008 (Haberman, Asal, Brady, Cavanaugh, Emmerée, Kendell, Miller, Pritz, Weiler, & Zhang, 2008)

¹⁷ In a forthcoming article by Matt Nobles, Kathleen Fox, and David Khey, these data were geospatially analyzed to understand the special patterns of student versus non-student arrest.

that utilized self-report surveys found that 12% of students respondents reported smoking marijuana in the last 30 days. A smaller, annual survey of students conducted at the university (Gatorwell Health Promotion Services, 2008) suggests this percentage may be higher – 18% of respondents reporting using marijuana in the last 30 days. These two studies used differing methodologies, yet both estimate that about 1 in 5 to 1 in 10 students actively use illicit drugs. The arrest data for drug-related offenses for students shows that only 7 or 8 per thousand students actually get into legal trouble because of it over the course of five years. Students certainly seem more likely to evade an arrest for drug offenses as it is implausible to suggest that non-students are five times more likely to use illicit substances (which equals the difference in the rates of arrest for students and non-students for a drug-related offense in the county).

A Missing Link: Jointly Controlling for Age, Gender, and Race

Table 3-4 combines race and gender to breakdown the arrest comparisons. It examines the rates of arrest by race and gender jointly for 18-24 year olds. This further refinement uncovers that indeed *three* factors are driving the variability in the rates of alcohol arrests for these different groups: student status, gender, and race. To the extent that arrest is an alcohol-related problem, the results are predicted by extant literature (see Johnston et al., 2007; Weschler et al., 2002). White college student males surpass all other groups in rates of alcohol problems as measured by arrest for alcohol-related offenses. In fact, while accounting for race, this analysis has uncovered that white male and female students are arrested at a rate over ten times as much as non-white male and female students during the study period. Remarkably these differences are not as pronounced when observing the rates in the non-student population. At first glance, race (being non-white) seems to be more important as a protective factor for students relative to non-students – or to the counter, race (being white) seems to be more important as an aggravating factor for students relative to non-students. Evidence of this protective factor

argument can be seen in the difference in rates between non-white students and non-students – in these data, non-white non-students are arrested at an elevated rate compared with their student counterparts. Furthermore, these differences are more pronounced for non-white females as being female adds another layer of shielding, so to speak, inherent in their gender.

The patterns in differences in the rates of drug-related offenses are more complicated. Overall, the patterns of arrest for these offenses are in agreement with this literature in that within racial groups males are more likely than females to experience problems with illicit drugs, including arrest. One key departure, however, warrants examination: within the non-student arrest group aged 18-24, a large discrepancy exists across the rates of whites and non-whites arrested for drug-related offenses. These data present that non-white students get arrested at a much elevated rate than do whites while in the current literature, non-whites in this age group typically report similar illicit drug use (if not slightly less) compared with their white counterparts (Johnston et al., 2007; SAMHSA, 2008). These findings have been replicated across many waves of data, across decades, and across samples. Yet, in essence, this use/arrest rate discrepancy does not exist when examining the arrest rate difference within college students across race. In fact, the rate difference is in concurrence with the robust extant literature on the topic – white students were arrested at a slightly elevated rate relative to non-white students while controlling for age. In essence, the important difference is that for white males, the drug-related arrest rate is only slightly elevated for non-students, but for non-white males (particularly black males), the arrest rate skyrockets among non-students leaving a wide difference between non-white male non-students and non-white male students. Furthermore, the percent increase for black female non-students is just as striking.

A key explanation here would be the racial differences in cocaine arrests in the community. This racial differential will not impact the student population since cocaine arrests are extremely rare for students in Alachua County. However, as previously mentioned, a large number of cocaine arrests were made over the five year span of the present study and a disproportionate level of minorities were arrested for cocaine. This seems to be a driving force for community differences in drug-related arrests across race.

Summary

After an initial examination, it appears that race, gender, student status, and age have coalescing impacts on predicting the likelihood of arrest of individuals based on group membership. White male students (aged 18-24) appear to be at the highest risk for alcohol-related arrest, but the alcohol-related arrest rate for white male students are only a little higher than that for their non-student counterparts. The reverse is true for non-white males. Non-white male students have lower rates of alcohol-related arrests than non-white male non-students. The university seems to be protective for nonwhite males even as it aggravates arrest prospects for white males. Unexpectedly, the student status may be affecting white female students more than white males. The difference in alcohol-related arrests between white female students and their non-student counterparts is actually greater than is true of white males. If the university aggravates the problem, it seems to do so most among white females. Non-white female students trend in the same way as nonwhite male students; the university provides some protection for nonwhite female students. Their rate of alcohol-related arrest is also lower than that of non-white female non-students. Given all of the media attention highlighting problematic drinking on college campuses, perhaps our focus has been misguided since there is reasonable evidence to suggest that this issue is affecting college students but is affecting white and non-white students differently.

On face value, it appears that the university culture may exasperate the problems predicted by being white students but protect nonwhite students. When minorities matriculate into higher education, the rates of arrest of these individuals are a fraction of the rates for whites (in or out of the university) and much less than for nonwhites ages 18-24 who do not enter the university. The magnitude of this difference is remarkable – at minimum, minority students are arrested at a rate of about 5 times less than minorities in the community of the same age depending on the type of offense. Overall, the rate difference between these two groups is of a magnitude of twenty-eight. These students seem to be able to resist committing criminal offenses to a considerable degree.

The following chapter begins to assess the impact of arrest and subsequent sanctions on student re-offending and academic performance to determine if this is in fact the case. This assessment will take into careful consideration the effects of gender and race since these factors were determined to have substantial influence at a basic level of analysis. Specifically, the next chapter will begin to examine the differences of being processed by the criminal justice system and by the internal university sanctioning system for analogous drug and alcohol offenses.

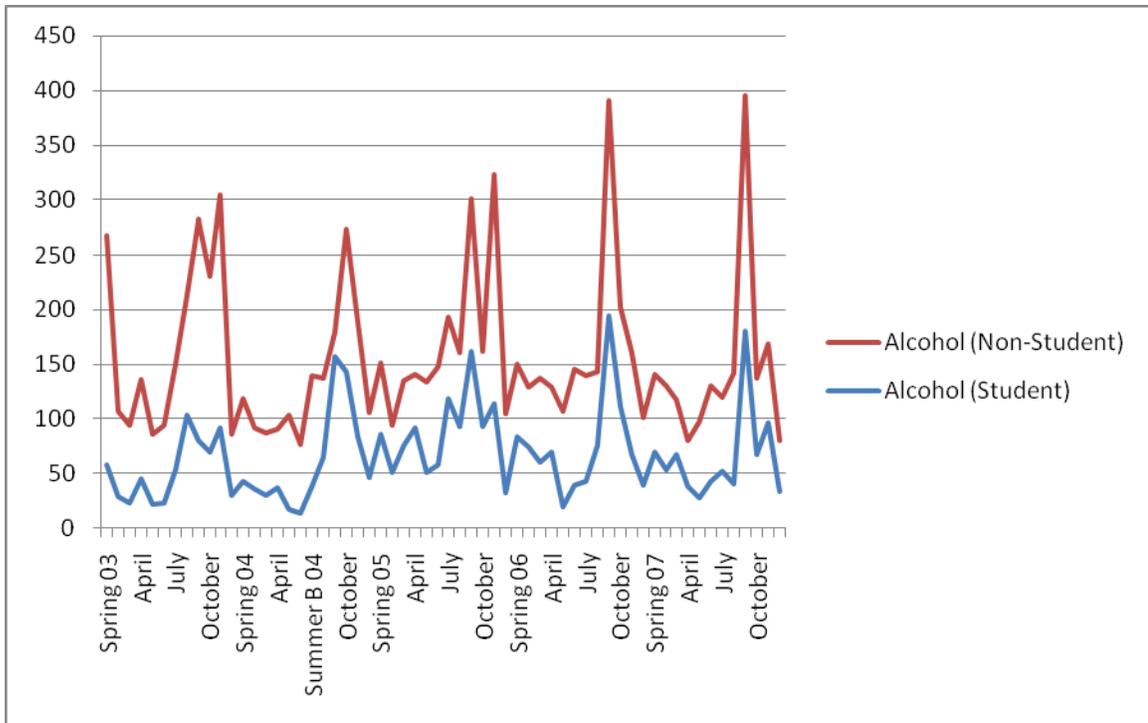


Figure 3-1: Alcohol-Related Offenses in Alachua County, 2003-2007

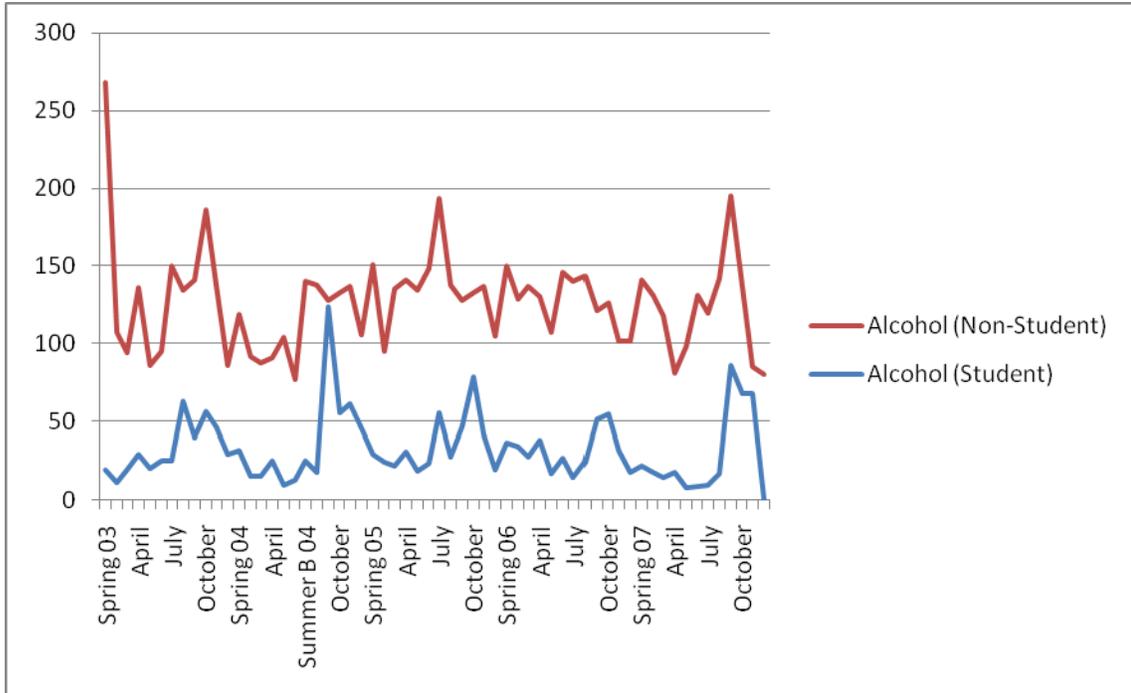


Figure 3-2: Alcohol-Related Offenses in Alachua County, Controlling for Football Home Games, 2003-2007

Table 3-1: List of Offenses Included in Alcohol, Drug, Violent, and Non-Violent Categories

Type	List of Offenses
Alcohol	Underage Possession of Alcohol
	Open Beverage Container
	Selling / Purchasing Alcohol for Underage Person
	Open House Party
	Public Intoxication
Drug	Possession of Marijuana (< 20 grams, ≥ 20 grams), Cocaine, and Controlled Substances
	Trafficking in Drugs (includes cultivation of marijuana, trafficking in cocaine and prescription drugs)
	Prescription Fraud
	Possession of Drug Paraphernalia
Violent	Murder
	Sexual Battery
	Assault and Aggravated Assault
	Battery and Aggravated Battery
	Robbery
Non-Violent	Fraud (includes driver's license fraud, excludes prescription fraud)
	Theft / Larceny, Grand Theft, Grand Theft Auto, and Shoplifting
	Eluding the Police / Resisting Arrest without Violence
	Trespassing
	Destruction of Property / Vandalism
	Burglary

Table 3-2: Arrests in Alachua County, Florida by Agency and Type

	ASO	GPD	UFPD	ABT	Total	Pop. Est.	% Within Group Total	Rate per 1,000	N Arrests Age < 25	Pop. Est. Age < 25	Rate per 1000 <25
<i>Student</i>											
Alcohol	220	3101	651	95	4067		65.38	80.84	3528		93.83
Drug	105	181	108	1	395		6.35	7.85	326		8.68
Violent	69	267	39	0	375		6.03	7.45	228		6.07
Non-Violent	179	785	419	1	1384		22.25	27.51	1240		33.01
Total	573	4334	1217	97	6221	(50,308)		123.66	5322	(37,591)	141.58
<i>Non-Student</i>											
Alcohol	1313	6969	629	332	9243		18.77	38.52	4935		86.19
Drug	3138	5836	222	27	9223		18.73	38.44	3911		68.45
Violent	4228	4474	86	1	8789		17.84	36.63	3502		61.29
Non-Violent	10171	10221	1006	8	21406		43.46	89.22	9484		165.99
Total	19423	27518	1943	368	49252	(239,915)		205.29	21732	(57,137)	380.35

Table 3-3: Arrests and Arrest Rates per 1,000 Individuals Aged 18-24 for All Reporting Agencies in Alachua County, Florida in 2003-2008 by Gender and Race.

	N Female Arrests	Rate per 1,000 Females	N Male Arrests	Rate per 1,000 Males	N Non-White Arrests	Rate per 1,000 Non-Whites	N White Arrests	Rate per 1,000 Whites
<i>Student</i>								
Alcohol	1568	76.23	1956	114.90	113	6.52	3411	134.89
Drug	51	2.48	275	16.15	43	2.48	283	11.19
Violent	62	3.01	166	9.75	47	2.71	181	7.16
Non-Violent	276	13.42	958	56.27	168	9.70	1066	42.15
Total	1957	95.15	3355	197.07	371	21.43	4941	195.39
<i>Non-Student</i>								
Alcohol	1732	58.42	3180	115.67	430	32.99	4485	101.69
Drug	535	18.07	3273	119.06	2214	169.86	1597	36.21
Violent	1008	34.00	2494	90.72	2147	164.82	1355	30.72
Non-Violent	2209	74.51	7273	264.56	5378	412.61	4114	93.28
Total	5484	201.71	16220	590.01	10169	780.19	11551	261.91

Table 3-4: Arrests and Arrest Rates per 1,000 Individuals Aged 18-24 for All Reporting Agencies in Alachua County, Florida in 2003-2007 by Gender and Race Jointly.

	N White Female Arrests	Rate per 1,000 White Females	N White Male Arrests	Rate per 1,000 White Males	N Non- White Female Arrests	Rate per 1,000 Non- White Females	N Non- White Male Arrests	Rate per 1,000 Non- White Males
<i>Student</i>								
Alcohol	1522	111.22	1883	162.29	46	6.68	73	13.47
Drug	45	3.29	235	20.25	6	0.87	38	7.01
Violent	37	2.70	144	12.41	25	3.63	22	4.06
Non-Violent	216	15.78	846	72.91	72	10.46	112	20.66
Total	1820	132.99	3108	267.86	149	21.65	245	45.19
<i>Non-Student</i>								
Alcohol	1638	71.83	2841	133.38	89	13.01	341	55.07
Drug	312	13.68	1285	60.33	222	32.45	1990	321.38
Violent	362	15.87	1003	47.09	646	94.42	1491	240.79
Non-Violent	906	39.73	3203	150.38	906	188.54	4066	656.65
Total	8332	141.12	3218	391.17	2247	328.41	7888	1273.90

CHAPTER 4
ASSESSING SIMILARITIES AND DIFFERENCES AMONG OFFENDING STUDENTS
ARRESTED BY LOCAL AUTHORITIES OR REFERRED TO JUDICIAL AFFAIRS

Introduction

Recall that the study population of the previous chapter was derived by approaching each law enforcement agency that has jurisdiction in Alachua County to provide information of all arrests, notice to appear citations, and sworn complaints for the years 2003-2007 excluding minors. This police data contained the date of arrest, time of arrest, location of offense(s) and arrest, list of offenses/charges, name of arrestee, police identified race and gender, and date of birth. Included in these police logs are all students and local residents arrested in Alachua County that are 18 years of age and older in which students were isolated from community members through an electronic process by the Registrar's Office and the Dean of Students Office.

The study population for the subsequent two chapters are limited to those students designated as beginning freshman in the Summer or Fall terms of 2004 (N = 338) who had been arrested sometime between 2003-2007. At this point, currently available arrest data for 2008 (January through August) were included as indicated from district court records via the assistance of Student Legal Services. These data were further refined to examine only those students with an alcohol or drug related offense in either their arrest or university records as collected by the Dean of Students Office (N = 292).

The justification for choosing students beginning their undergraduate career in the year 2004 is based on the availability of complete academic data from the Office of the Registrar for years 2004 - December 2008. The majority of the students identified by the Registrar as being a student prior to 2004 lack the data necessary to perform the analyses proposed by the current project. Also, by choosing students from the 2004 entering class, the principle investigator

retains the ability to determine whether students stay on track to graduate the University within the standard four-year term. If these students were to remain on track, the vast majority should have graduated by May 2008 using a conservative estimate or by August 2008 at the latest. Focusing on only those arrestees entering the university in the summer and fall allows the principle investigator to track a cohort of entering college students over time, the vast majority of whom completed high school the previous spring. The University actively encourages students to begin the academic careers in the summer term (N = 129) to “acclimate themselves to college and campus life,” and their experiences at the University may differ, but their previous cohort experiences should be similar in nature (Khey, Fox, & Lanza-Kaduce, 2008).¹⁸

Furthermore, to engage the research questions found in the present study, the principle investigator sought to identify a group of similarly situated students which did not receive the same treatment (e.g., arrest and sanctioning) as the study population. To meet this need, the principle investigator identified a subset of students who were referred to judicial affairs by university officials (typically by the Housing Office) without an official arrest or criminal justice processing. These records were included with the University of Florida Police Department’s (UFPD) daily arrest log and coded separately from 2003 to 2005. The remaining years (2006-2008) of data were made available by the Dean of Student’s Office as UFPD no longer was the primary source of this information. Data from various sources were obtained for these students too (N= 351). This comparison group will become relevant when analyzing the impact of official processing and sanctions on students’ academic careers and their likelihood of re-offending.

¹⁸ The arrest data from 2003 and the first quarter of 2004 were retained for analysis to determine if any prospective students were arrested before matriculation at age of majority. Only one student was arrested before matriculating into the university while 18 years or older (February 2004). This student was retained in subsequent analyses where applicable.

The Data

In addition to the data on arrest and referrals to university judicial affairs, information was collected from several other sources. Through an automated process, the Registrar generated student information such as student identification numbers, self-identified race, ethnicity and gender, academic progress before and after the arrest event, involvement in NCAA athletics, high school identification, and standardized test scores. The identified student numbers were then given to the Office of Sorority and Fraternity Affairs, the Dean of Students Office, and Student Legal Services to (respectively) primarily append arrestees' 1) social greek affiliation (yes / no), 2) University imposed sanctions both due to the arrest event(s) included in the police data and from disciplinary action not handled by the criminal justice system, and 3) outcomes in criminal court. Additional data (see Table 4-1) was also obtained from these sources to assist the principle investigator in the present study. All identifiers or potential identifiers were subsequently removed to protect the students' privacy and to comply with FERPA regulations. A comprehensive list of variables and their sources can be found in Table 4-1. More detail about their operationalization is provided in various sections below.

Table 4-1: Variables and Sources of Data

Variable	Description
<i>Police or University Authority</i>	
Date of Arrest/Referral	Date individual was arrested by police agency or referred to judicial affairs
Time of Arrest/Incident	Time of day individual was arrested by police agency or if incident
Primary Offense/violation	Using FBI hierarchy rules, most serious offense or university violation
Secondary Offenses	Other charges or referral reasons, if applicable
Date of Birth	Date of birth of offender
Race	Police/university identified race of arrestee
Gender	Police/university identified gender

Table 4-1: Continued.

Variable	Description
<i>Registrar Office</i>	
Self-Reported Race	Race reported by student when applying to school
College	Affiliated college at any given term
Major	Chosen major at any given term
Term Course Load	Total credit hours taken during term
Term Grade Points	Sum of grades in numerical form*
Term GPA	Calculated by taking grade points / course load
Cumulative GPA	Calculated by averaging all term GPAs
# of Withdrawn Classes	Count of withdrawn classes by term
# of Failed Courses	Count of failed courses (grade = E) by term
High School GPA	Weighted GPA (6.0 scale) as recorded at graduation
Standardized Test Score	Test score as required for admission
Standardized Test Code	Code for test taken (SAT or ACT)
Athletics Status	Denotes participation in NCAA sports
<i>Greek & Sorority Affairs</i>	
Greeks Status	Denotes active/inactive students, alumni, & termination
House Identification	Numerical identity of fraternity or sorority
<i>Dean of Students Office</i>	
Primary Offense	Offense listed by Judicial Affairs
Adjudication	Guilty or not guilty
Action Taken	Terms of sanctions
<i>Circuit Court</i>	
Adjudication	Guilty, not guilty, nolle prosequi, nolo contendere
Action Taken	Terms of sanctions

As a baseline comparison for both the arrestee group and the group of students solely processed by the university for analogous offenses, academic performance metrics at the department-, college-, and institutional-level were made available by the Office of Institutional Planning and Research. This included average GPA by college per calendar year, average number of withdrawn and failed courses by department per calendar year, and retention rates by academic year per beginning freshmen cohort. An important assumption is made regarding these

metrics: each of these figures can legitimately serve as a proxy for the academic performance of a third group – students not identified as being arrested or referred by the present study.¹⁹ The justification for this assumption is two-fold. First, there is stability in these data over time with very little variance from year-to-year. In fact, due to the nature of the increasing standards required for admission, these metrics show slow movement towards superior achievement for each measure. Additionally, students arrested and referred only make up a small percentage of the total student population. If arrested and/or referred students should in fact under-perform their peers in regards to these academic performance metrics, the global measures should only be slightly impacted as the weight of the group of students that were not arrested or referred to judicial affairs should significantly mask the smaller group. Figure 4-1 depicts the study population embedded in the wider cohort.

A Profile of Freshman, 2004

The concentration of the present study centers on the entry class of 2004. Both the subpopulation of arrested students and that of students referred for alcohol violations can be compared with the entry class on basic admissions information. From information available on the Office of Institutional Planning and Research's website and the data provided across the institution, it also appears that the incoming cohort is remarkably homogeneous in regards to their stellar high school academic achievement.

¹⁹ Arrested students typically were presented with a written citation of arrest (also known as a notice to appear) by the arresting officer on the date of the offense. Within a short period, these arrestees were sent a letter from the district attorney stating that they will defer prosecution upon the acceptance of the terms found within the letter. These terms are typically a small fine *or* community service for a first offense and notification of revocation of these terms if one were to reoffend within a year or less. If these terms were met by the end of that time, the charges will be dropped and the only thing that may be publicly available is information on the arrest event itself. Students referred to judicial affairs, on the other hand, typically received a letter from the Dean of Students Office requesting a formal meeting to discuss the violation in question. The likely outcome for a first offense is a written letter or reprimand and an online course that seeks to address the problem behavior indicated by the violation. Rarely do referred students avoid adjudication as the burden of proof for student code violations of this caliber is low.

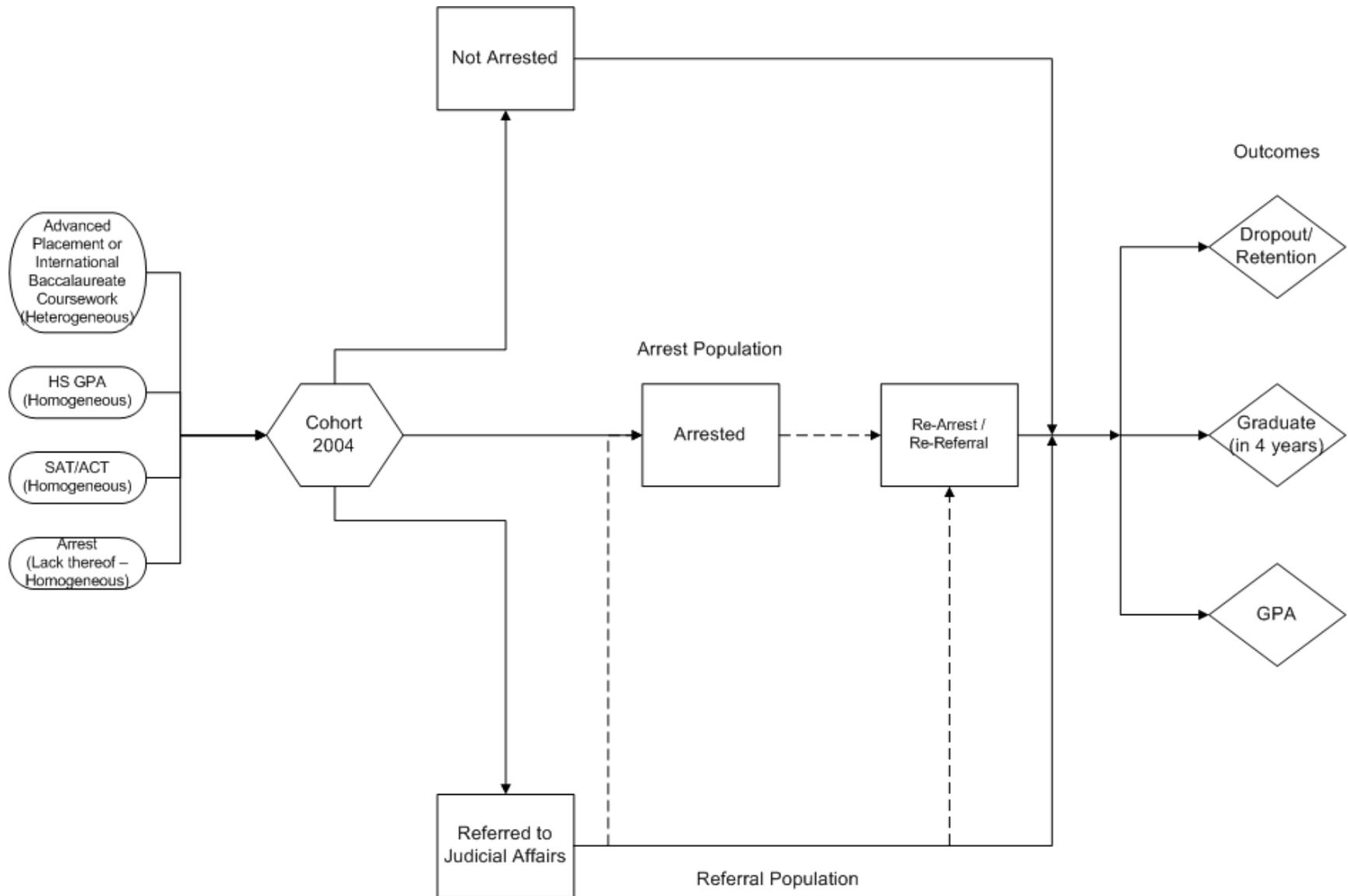


Figure 4-1: Visual Representation of Arrest and Referral Populations as Embedded in their Wider Cohort.

Neither the study sample (comprised of students who were arrested at some point while attending the university) nor the comparison sample (comprised of students solely referred to judicial affairs for a drug- or alcohol-related offense) differ from the incoming class overall on any available achievement metric when entering the university (see Table 4-2). Overall, both these samples fit within the middle 50% of the class as identified by the Office of Institutional

Planning and Research:

Middle 50% of the Class:

High School GPA 3.8 - 4.3 (academic classes only; weighted GPA)

SAT total of 1200 - 1380

ACT composite of 26 – 30

Of Those Admitted:

79 percent were in the top 10 percent of their high school class.

82 percent took 20 or more academic classes in high school.

67 percent took 21 or more academic classes in high school.

50 percent took 22 or more academic classes in high school.

38 percent took 23 or more academic classes in high school.

This certainly makes the prediction of group membership difficult, if not impossible. In fact, at a descriptive level, it appears that predict an arrest or a referral using any criteria available to the primary investigator upon entry into undergraduate education will be difficult. The probable exceptions will be race and sex: anticipating that whites and males will be overrepresented among those arrested or referred to judicial affairs.

The principal investigator checked the juvenile records of those in the arrest group to learn about their past criminality. It was limited. Of the 4,856 individual student arrestees identified by filtering local arrest data through the university's registrar databases, only 333 of these students had been processed by the Florida juvenile justice system prior to matriculation. The entering class of the 2004 - 2005 academic year had roughly the same proportion of students

with prior arrest or referral: 18 of 292 arrested students had a juvenile record (6 percent). Roughly half of these students recidivate beyond their first arrest while enrolled at the university, none of them drop out or are dismissed for poor academic performance, and seven graduate on time. Of these 18 students, half of them got into serious trouble (either more serious misdemeanors such as a DUI or felonies) as juveniles. Ironically the students that got into less serious trouble as juveniles tended to get into more serious trouble according to the arrest data obtained while they were in college. Yet their peers seem to get into serious trouble and repeat trouble at roughly the same rates. Since these offenders tend to blend in with their peers that avoid the criminal justice system as juveniles combined with the observation that juvenile offenses for the arrested student population is relatively a rare event, it stands that having a juvenile record does not seem to have much to offer as an indicator that makes these students qualitatively different relative to their co-offending peers.²⁰

Although the arrest and referral groups were similar to each other and to the entering class overall on a variety of educational and demographic variables at the point of entry, some differences among the groups emerge during their undergraduate careers. Table 4-2 examines differences in joining a fraternity and sorority, time to completion, average number of failed and withdrawn courses, and GPA. In this example, GPA differences are captured by taking an individual's term GPA and subtracting their wider college's mean GPA averaged over the last 14 available terms. These term GPA differences are then added together to observe an individual's overall performance relative to the college(s) they were enrolled in over his/her academic career. The means of this summary statistic averaged across the study and comparison samples as a whole are presented in Table 4-2.

²⁰ These data were limited to those students who were arrested as adults. The referral population did not get examined by the Department of Juvenile Justice due to their internal IRB review.

Table 4-2: Overall 2004 Freshman Profile in Relation to Those of the Arrestee and Referral Subpopulations

	Freshman Profile	Arrestee Profile	Referral Profile
Applications	23,595	-	-
Admitted	11,911	-	-
Total	6,750 (2,300 Summer / 4,450 Fall)	292 (129 Summer / 169 Fall)	351 (113 Summer / 238 Fall)
White (Non-Hispanic)	67.1%	78.4%	81.9%
Male	43.2%	61.2%	67.8%
High School GPA (Mean)	3.95	3.87	3.93
SAT (Mean)	1260	1270	1286
ACT (Mean)	27	27	29
AP or IB Students	85%	71.2%	76.2%
Greek Life Participation	28%	48.3%	42.5%
Average Withdrawn Courses	2.36	3.54	2.80
Average Failed Courses	0.60	0.76	0.99
Average GPA Difference	-	-0.14	-0.28
On-Time Completers	53.5% (estimated)	49.3%	55.4%
Recidivism (Excluding Juvenile Arrest)	-	47.6%	10.0%
Any Juvenile Arrest	-	18 (6.2%)	-
Dropouts/Dismissal (Total N)	-	2/1 (3)	29/18 (47)

At least at a basic (descriptive/univariate/bivariate) level, the study and comparison groups begin to show complex differences worth describing further. The most impressive difference is the attrition of undergraduates due to dropout or dismissal that have been arrested at least once versus those just referred to judicial affairs, whether once or several times, but never arrested.

The literature reviewed in a previous chapter would predict undergraduates with repeat problems to present with poorer outcomes across the board; this is not present in this summary data. Over 47 undergraduates (13.4%) that have been referred to judicial affairs for a drug- or alcohol-related offense drop out or are dismissed by the University or poor academic performance. This is a stark contrast to only three undergraduates (1%) who dropout or are dismissed from the arrestee group. On the other hand, the arrestee group has a higher proportion of students who habitually get into trouble – whether arrested or referred to judicial affairs. Almost half of the undergraduates in that have been arrested some time in their academic careers either get arrested two or more times or have been referred to judicial affairs and arrested independently at least one time each. This compares with only 10% recidivism of students exclusively referred to judicial affairs. These findings are echoed through the other performance metrics listed in Table 4-2: the referral subpopulation tends to under-perform the study group in regards to GPA ($t = 2.64$, $p = 0.008$) and number of courses failed ($t = -1.59$, $p = 0.112$) as well as the wider university on these metrics. When withholding students who dropped out or were dismissed, however, the arrestee and referral groups show no significant differences on these metrics except for withdrawn courses: the arrestee group withdrew from an average of 3.48 courses while the referral group withdrew from an average of 2.62 ($t = 3.482$, $p = 0.001$).

Two other departures that beg further description are the marked overrepresentation of fraternity and sorority members among both the arrestee and referral groups and the differences in on-time graduation. Both the arrestee and comparison groups contain almost double the amount of fraternity and sorority members relative to the levels of social greek membership for the 2004 first-year cohort. This is consistent with the existing literature that finds that fraternities and sororities enhance the likelihood of substance use and abuse, alcohol in particular. These

data suggest that social greek membership is a risk factor for an arrest or referral for drug- and alcohol-related offenses. It is also important to note the high magnitude in which fraternity and sorority members are officially sanctioned for drug- and alcohol-related offenses.

On the other hand, an unexpected departure exists when observing group differences in on-time graduation among the arrestee group, referral group, and the wider 2004 freshman class. Relative to the university average, the individuals in the arrestee group are more likely to experience delay in graduation but seem to be on track for a 5- or 6-year undergraduate completion. Conversely, the referral group was found to be more successful in graduating on-time, with completion rates that outperform the entire institution if one were to exclude the dropouts and dismissals from this group's ranks (65.4% graduate within 4 academic years). Thus a dichotomy exists: it seems that students who are referred to judicial affairs and avoid the criminal justice system seem to either do extremely poorly or tend to be more likely to graduate on time relative to the average university student.

These two groups have different outcomes, yet there does not appear to be any explainable differences in group membership at this descriptive level. The histogram presentation of these students' average GPA differences over their academic careers relative to their wider college found in Figure 4-2 may provide some initial answers. The graph on the left depicts the distribution of average differences in GPA for students relative to their resident colleges in the referral-only subpopulation. Interestingly, it seems that two peaks are observed – one mean centered at about 1.5 grade points below students' respective college average GPA and one centered at 0 (no differences relative to students' wider college average GPA). This bimodal pattern in the data is not present for the sample of students arrested at some point in their academic careers. There is also a more impressive left tail on the referral group distribution

representing a cluster of students that are considerably underperforming their peers. These individuals have GPAs between 2 and 3 grade points below the average GPA for their college.

This level of underperformance is also not found in the subpopulation of arrested students.

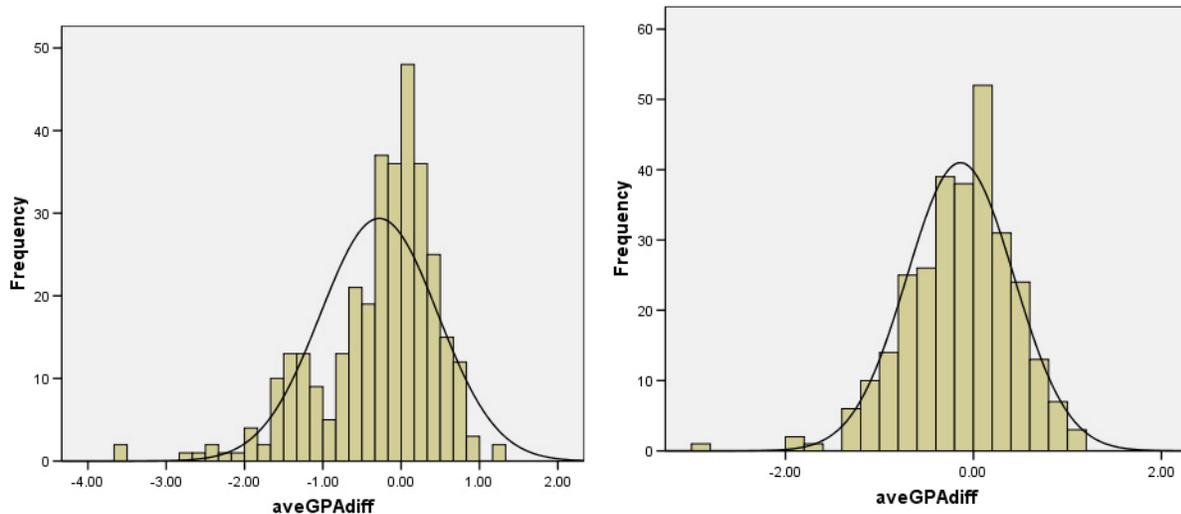


Figure 4-2: Comparison of Average GPA Differences. (Referral subpopulation is on the left; Arrest subpopulation on the right)

Perhaps the students at the left tail of the referral group are very much at risk for dropping out or being dismissed for poor academic performance. This is statistically suggested by the means comparison of these GPA differences mentioned in the previous paragraphs. When comparing the mean GPA difference between these two groups while including dropouts and dismissals, the difference was statistically significant. This significance disappeared when excluding these dismissals and dropouts. The visual representation of this difference is impressive: Figure 4-3 depicts a histogram that is virtually identical to the arrest subpopulation distribution except a slightly more positive skew suggesting slightly better academic performance as a group.

It may be possible that individuals arrested or referred to judicial affairs in their first term (or very early in their academic career) experience exasperated academic problems at a critical

time – just as they are making the break from home. Due to the different contexts in which students may find themselves in the referral group versus the arrest group, perhaps differences exist in the timing of first offense between these groups. As early as students arrive at the university and move into their dorm rooms, they begin to be monitored by officials at the division of housing. Their visibility and the guardianship enhance the prospect of their alcohol/drug behaviors being seen by university officials.

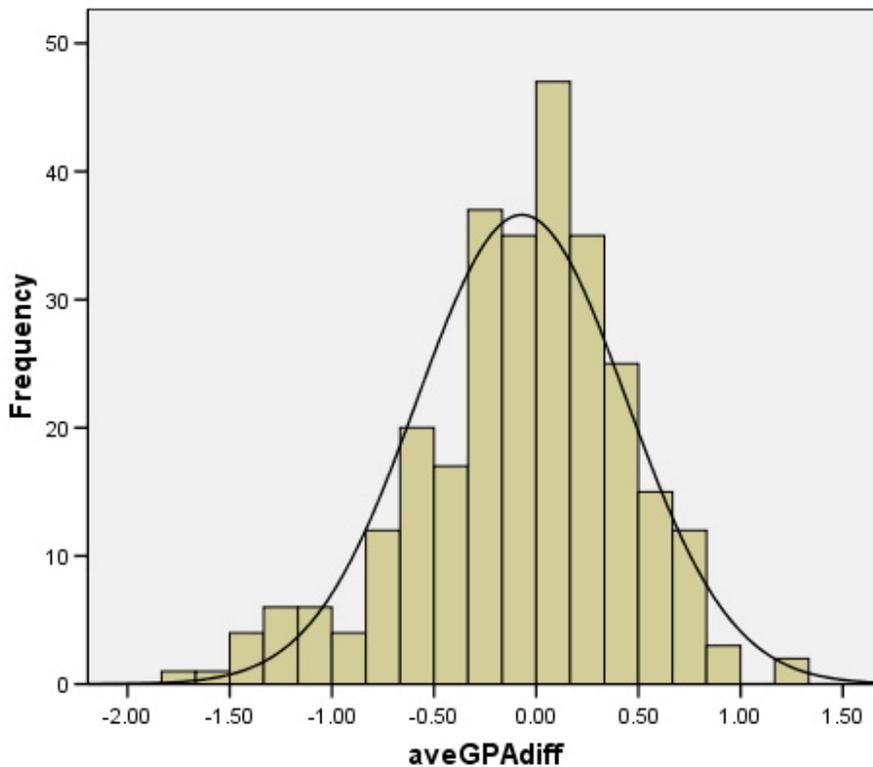


Figure 4-3: Average GPA Differences (Relative to Each Student’s Resident College) of the Referral Subpopulation with Dropouts and Dismissals Removed.

The minority of students who do not move into dorms their freshman year may frequent new acquaintances’ dorm rooms which are actively monitored by housing officials. This translates into immediate supervision when students begin their experience with higher education.

Alternatively, arrest may be more likely when students begin to feel comfortable with the surrounding community and start expanding where they choose to recreate. Possibly early

referral or arrest is a warning sign of maladjustment. Figure 4-4 depicts the timing of first arrest and referral.

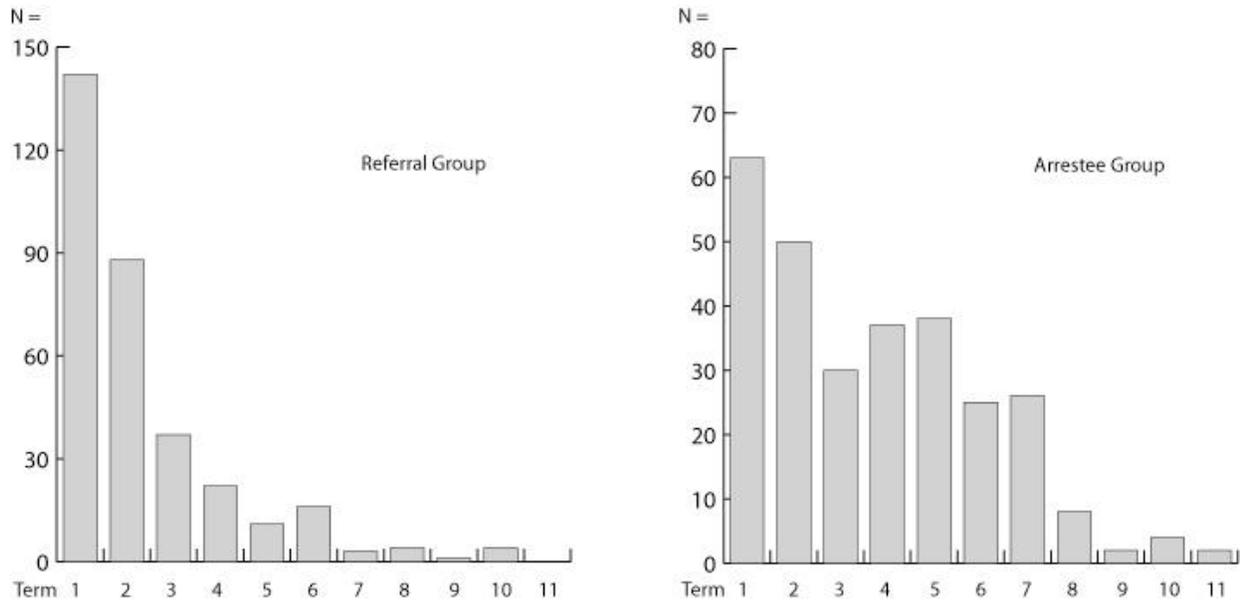


Figure 4-4: Depiction of Timing of First Offense for Both Referral and Arrestee Groups

As predicted, for those in the referral group, the referral to judicial affairs is likely to occur in the first two terms of enrollment. For those in the arrest group, the first arrests or referrals seem to range over a longer time span. It is important to note here that the arrest group consists of any undergraduate who has any arrest while in residence at the university regardless of referral to judicial affairs. Some of those in the arrest group also have referrals to judicial affairs that did not lead to a formal arrest.

There are 66 undergraduates in the arrestee group whose first offense resulted in a referral to judicial affairs without any arrest, and 52 of those 66 referrals occurred within the first two terms of enrollment at the university. Yet these 52 offenders do not show signs of academic problems in contrast to some of those in the referral-only group described in the previous paragraphs. These 52 students who were referred early and whose records included an arrest

perform well. Their mean grade point average relative to their college(s) of residence is only slightly lower (- 0.12 points), their average number of course withdrawals is 3.71, and the average number of failed courses is 0.65. In fact, these averages do not differ much from the wider group of 98 undergraduates with both an arrest and a referral to judicial affairs regardless of the timing of these events. The mean group GPA difference for these students relative to their college(s) of residence is - 0.17, the average number of courses withdrawn is 3.93, and the average number of failed courses is 0.83.

Overall, there seems to be three phenomena co-occurring in these data that will need further analytical refinement to explain: 1) a segment of undergraduates exclusively referred to judicial affairs seems to display poor academic performance and are at higher risk for dropping out or dismissal from the university; 2) the remainder of the undergraduates exclusively referred to judicial affairs seem to outperform undergraduates with an arrest and even fare better than predicted by university performance metric averages; 3) students with an arrest, regardless of whether they are referred to judicial affairs for the offenses for which they are arrested or for independent offenses, seem to under-perform the wider university but are able to resist dropping out or dismissal.

At this point, it is possible to suggest a few possibilities for why these events may be occurring. For instance, the success of the students found in the comparison group may be due to a therapeutic and reintegrative response from the dean of students at the university. The undergraduates found in the arrestee sample, on the other hand, may be experiencing significant declines in their academic performance and progress due to stigmatic and/or ineffective criminal justice processing. Qualitatively, this asserts that the typical response of the university system, which most times consist of a meeting with the dean of students, a letter of reprimand, and a

subsequent task such as community service and/or an alcohol education course, produces positive outcomes relative to the typical criminal justice system response, which most times consist of a deferred prosecution of criminal charges and fines *or* community service. It could also be that the qualitative difference in the *experience* of being processed between these two systems may produce significant departures in academic performance and progress. In regards to the fact that the university response is private, one-on-one, and not viewed as criminal, a sanctioned student may react differently to the criminal justice response which is public, batch processed, and has the potential of creating a criminal record. This suggests that there will be differences in academic performance metrics pre- and post- processing in these two manners.

Alternatively, the context in which students are likely to belong to these two groups can lend to a substantially different interpretation. To be exclusively captured in the comparison group suggests that one's offending patterns are relegated, by and large, to private settings (e.g., dorm rooms). Individuals with an arrest, on the other hand, have overtly broken the law primarily in public – regardless if this is done so on university property. Thus the comparison group may be comprised of students that choose to be deviant, but not do so overtly where (seemingly) the likelihood of getting in trouble is higher in public. Ironically, it seems that the likelihood of getting into trouble is greater at the university as exhibited by the greater numbers of referred students relative to the number of students arrested. Nevertheless, these students may comprise a group of “good” students that make poor decisions and would normally abstain from criminal activity. If this were the case, the official university reaction may serve to sure up these students' resolve in abstaining from deviance and continue being good students – in this situation, pre- and post-differences in performance metrics may not significantly change after a student is processed through the university system.

The sub-group in the referral-only subpopulation that dropped out or were dismissed seem to be consistently “bad” students who are maladjusted to university life. This maladjustment may be expressed with alcohol and drug use and misuse. Since early problems tend to be picked up by the university relative to law enforcement, group membership seems to be driven by student culture in that students generally begin offending in dorm rooms and expand their “comfort zone,” so to speak, as time goes on. Along these lines, this scenario should be identified by the existence of no significant differences in performance metrics or worsening performance before and after a referral and its affiliated sanctions. These students should show poor performance from when starting higher education to the point in which they dropout or are dismissed.

Continuing this line of reasoning, arrested students are more likely to venture out into public and overtly break the law by choosing to acquire and use fake or borrowed ids, gaining access to alcohol or illicit drugs and carrying/using them on city streets or within cars, and/or by frequenting bars in which they have a better likelihood of drinking underage by some means. On face value, these students seem to be socially well-adjusted as they tend to engage in these activities in groups of friends, but their scholastic achievement may wane due to their recreational choices and their inability to delay gratification. The evidence of impulsivity lies in the high rates of recidivism incurred within this group and the reduced ability to graduate on-time. Differences in performance metrics should then be better explained by levels of recidivism rather than the timing of the arrest and sanctioning for these individuals.

Another outcome of interest concerns trends in grade point averages. The mean GPA differences relative to students’ resident college over their academic career as well as the difference in these metrics before and after being exclusively processed by either the criminal

justice system or judicial affairs can be examined. To make clear comparisons, this assessment separates those students with an experience with both systems. The results are opposite to what would be expected overall when one group has a higher concentration of repeat offenders relative to the other. Indeed, the results are far from what is expected – but not at first glance. The violators who were solely processed by the judicial affairs system and completed their degree on time tended to have higher grade point averages than did those in their resident college over the span of their academic careers (mean difference in GPA = 0.11). Similarly, arrestees who completed their degrees on time and were processed by the criminal justice system also had higher GPAs than did students generally in their respective colleges (mean difference in GPA = 0.12). Those that did not complete their degree on time expressed the opposite outcome across both groups: those processed by judicial affairs got worse grades than did those in their college generally (mean difference in GPA = -0.41) as did those processed through the criminal justice system (mean difference in GPA = -0.31)

A more telling pattern emerges when observing the *change* in grades for the semesters before and after the students were first processed by either system. The calculation of these differences are compiled in this manner: 1) the difference of a student's performance relative to average GPA for their resident college(s) is captured for each semester, 2) the mean of these differences is calculated for the term(s) before and after a student's first referral or arrest, ignoring the term in which the referral or arrest occurs, 3) the pre- referral or arrest mean is subtracted from the post- referral or arrest mean to observe the change in academic performance relative to one's resident college(s) before and after a student first gets processed by either system. Any student that was arrested or referred in the first or last term of attendance was

removed from the analyses that utilized this change in GPA variable since the pre- or post-change was not available to analyze.

For those in the referral-only group (i.e., processed only judicial affairs), the change for individuals who complete their degree on time is slightly negative (change in GPA difference = -0.126). For individuals who complete their degree on time and are processed by the criminal justice system, the change in grades is slightly *positive* (change in GPA difference = 0.117). It is interesting to note that the individuals who completed their degree on time and were processed by judicial affairs seemed to be earning higher GPAs relative to their college before being processed by the dean of students office, yet this level of performance virtually disappeared afterwards (see Table 4-3). Averaged across the terms after processing, these students' GPAs were on a whole only slightly above their resident colleges' GPA average. On the other hand, individuals who completed their degree on time and were processed by the criminal justice system actually performed *better* after criminal justice processing.

These differences seem to be most extreme for students who have not completed their degree on time. For these students that are processed by the criminal justice system, there does not appear to be any changes in GPA differences before and after being arrested and processed (change in GPA difference = -0.036). Yet for students who are processed by judicial affairs and fail to complete their degree on time, the outcome appears to be quite bleak. These students average a change in GPA performance equal to a half of a letter grade (-0.501) below the average GPA of students' resident colleges after they are processed by judicial affairs. This impact on GPA occurs despite the observation that more frequent and serious offending occurs within the group of arrested and not among those solely referred to judicial affairs. There seems to be something inherent within judicial affairs processing that is associated with two extremes:

students who are processed by judicial affairs for drug and alcohol offenses tend to graduate on time more frequently than those who are processed by the criminal justice system; however, those who fail to do so experience exasperated decrements in their academic performance that is just not found with students who also fail to graduate on time but are processed by the criminal justice system.

Table 4-3: Changes in the Difference in Individual Student GPA Relative to their Resident College Before and After First Arrest or Referral

Group	GPA Difference Before	GPA Difference After	Change
Referral-only (N = 332)			
Complete degree on-time	0.185	0.057	- 0.128
Defer on-time completion	- 0.028	- 0.529	- 0.501
Dropouts/Dismissals	- 0.645	- 1.799	- 1.154
Arrest (N = 166)			
Complete degree on-time	0.102	0.175	+ 0.073
Defer on-time completion	- 0.261	- 0.297	- 0.036
Mixed – Both Arrest and Referral (N = 126)			
Judicial affairs 1 st processed (Completers)	0.331	0.086	- 0.245
Judicial affairs 1 st processed (Defer on-time completion)	- 0.273	- 0.351	- 0.078
Criminal justice 1 st processed (Completers)	0.049	0.086	+ 0.037
Criminal justice 1 st processed (Defer on-time completion)	0.007	- 0.305	- 0.312

These findings are further supported by examining changes in GPA performance metrics for students who have experience with both systems (mixed group). Extreme caution must be

taken here however, as the sample sizes of these groups do not offer much analytical power. Accordingly, only directionality will be emphasized in presenting these results. The change in grades is negative in three of the four rows under Mixed Group in Table 4-3. Only those who are arrested and complete college show a positive change in grades after their offense.

The next chapter of the present study will begin to explore these phenomena with greater analytical power to begin to unravel these group differences as well as explain the impact of arrest and punishment on a student's academic career and likelihood of being re-arrested or referred again. In particular, the unexpected results from the descriptive analyses included in this chapter will be critically dissected to investigate differential outcomes in the arrest and referral groups while controlling for other factors.

The present chapter has identified that students' overall GPA performance relative to the average in their resident colleges over the span of their student careers does not tend to vary across students who are processed by either system. This performance metric does, however, vary across students that complete their degree on-time versus those that do not. On the other hand, the change in this measure before and after a students' first referral or arrest suggests that individuals processed by judicial affairs experience a reduction in their academic performance versus those processed by the criminal justice system which tend to experience either no change or a positive change. These differences occur in spite of the fact that students with an arrest are more likely than those referred to judicial affairs to recidivate and to commit more serious offenses – both of these would predict more severe punishment as well. Furthermore, since academic performance seems to be closely associated with whether a student can manage to finish their undergraduate degrees on-time, it is important to mention that a higher concentration

of individuals succeeded when processed through the university system when ignoring those that drop out or are dismissed for poor academic performance.

Those who dropped out or were dismissed came almost exclusively from the group of students who were referred only to judicial affairs. A likely reason for this phenomenon seems to be that these students fail to acclimate to university life from the moment they begin their academic careers. They are referred early in their career and exhibit poor academic performance, with their grades getting worse after the referral. Students who are arrested did not drop out and were not dismissed, yet those that do not complete their degree on-time seem to under-perform relative to their resident college average GPAs (both before and after their first arrest). These data suggest that students who are jointly processed by both systems have the best outcomes in regards to academic performance, completing undergraduate study on-time, and reducing recidivism. This hypothesis will be put to the test with multivariate analysis in the next chapter.

A final note regarding the students found in these data: athletes are largely absent from the ranks of offending students. Upon conferring with agents of the University Athletic Association, athletes are processed and sanctioned through a separate system and its data were not available to this researcher. It is interesting to remark, however, that this disciplinary system does not prevent athletes from being arrested. Regardless, it would be unwise to speculate the reason why athletes are underrepresented in these data since the principle investigator is blind to the vast majority of incidents involving these students. This factor is therefore dropped from further consideration.

Summary

An overview of the results of the descriptive analysis offers some unique challenges that multivariate modeling may be able to resolve. In particular, it seems that judicial affairs processing and sanctioning may actually be tied with detrimental impacts on academic

performance while retaining the power to reduce recidivism relative criminal justice processing and sanctioning. Unexpectedly, it seems that students who are likely to dropout or be dismissed for poor academic performance are almost exclusively processed/sanctioned by the university system alone. In this circumstance, only multivariate analysis can determine whether the university process or levied sanctioning has any impact on dropout/dismissal independent of other factors. Individuals processed/sanctioned through the university system also seem to more likely to complete their undergraduate education on time. Recidivism (either a subsequent arrest or referral) seems to be more heavily concentrated among individuals in the arrest group. It could be that getting into habitual trouble helps to explain the differences found in on-time completion at the bivariate level instead of the criminal justice process or the sanctions students receive from the local circuit court. If this were the case, the analytical models focusing on recidivism as an outcome will determine if higher levels of recidivism are indeed predicted by criminal justice processing and sanctioning while holding all other factors constant. The following chapter will assess these basic relationships with greater analytical refinement to begin to unravel the complexities identified by the descriptive analysis presented earlier.

CHAPTER 5
MULTIVARIATE ANALYSIS OF ARRESTEE AND REFERRAL GROUPS: A FOCUS ON
SANCTIONS

Research Questions and Strategies

The Impact of Different Sanctions

A major thrust of this dissertation is to examine the impact of different sanctions for those who were arrested or referred for alcohol or drug-related offenses while a university student. Previous scholarship focuses attention on two different features of what might be happening—the sanctions and the cultural context of substance use on American college campuses.

Some criminological research and theory places an emphasis on the sanctioning itself. Deterrence formulations argue that the sanctions can deter unwanted behavior (which may also increase desirable behavior). From that perspective, more severe sanctions can be expected to predict less recidivism and better academic performance.

On the other hand, labeling perspectives suggest that sanctioning can backfire. For example, from Braithwaite, the expectation is that more stigmatizing sanctions will lead to subsequent problems, especially if they are not accompanied by reintegrative measures. As guided by this perspective, the working hypothesis is that the academic performance indicators and recidivism of students who receive probation/suspension and/or formal court sanctions and criminal records will be negatively affected relative to students who receive informal sanctions levied by the university. Several more specific hypotheses can be advanced regarding the impact on academic performance. Students who receive more stigmatizing sanctions will (as compared with those who receive other sanctions) (1) be less likely to complete a degree in four years (measured dichotomously), (2) be more likely to drop out or be dismissed by the university for poor academic performance, (3) have a lower grade point average for course work taken after their arrest (calculated relative to the college in which a student belongs, as described later), and

(4) have a lower grade point average overall relative to their peers (computation described later). They will also have a higher risk of recidivism (measured continuously representing the sum of arrests and judicial affairs referrals).

The research on substance use on college campuses raises other issues. The impacts of sanctions may play out differently given the university and student cultures surrounding substance use, especially alcohol use. Certainly that literature has identified some risk and protective factors that should be considered in the analysis. Thus, educational outcomes and recidivism may not be affected by the sanctions so much as by other factors that include social greek membership and sex. A series of OLS and logistic regressions will be performed in this chapter to examine these issues.

Dependent Variables

Four primary dependent variables have been identified to measure academic performance for analytical purposes: (1) overall GPA, (2) GPA change, (3) dropout/dismissal, and (4) current student status (those who are still students did not complete on time). For these analyses, “GPA” is measured relative to a students’ resident college (in which the vast majority of students do not have an arrest or a referral) for each term. “GPA change” is a calculated difference and will be created for each student in the study population as well as the comparison subset of students who were only referred to judicial affairs and avoided arrest. If students were to change colleges, the calculation will be adjusted to the average GPA for the new college. These differences will be assessed (1) across students’ entire academic career by taking the mean of these GPA differences for all terms in which the student is enrolled in coursework, and (2) before and after the semester of the students’ first arrest/referral and averaged over the previous and remaining semesters, respectively. Any student that was either first arrested or referred in their first or last term at the university were removed from consideration from the analyses that utilize this variable since

they lack the requisite pre- or post- mean GPA comparison. Both “dropout/dismissal” and “current student status” are measured dichotomously, 1 signifying dropout/dismissal and the status of being a current student, respectively. The final dependant variable analyzed in the present study, “recidivism,” is a count of the offenses across the span of students’ academic career as identified by this study.

Independent and Control Variables

The primary independent variables of interest are the sanctioning alternatives these students receive. To indicate group membership, three dichotomous variables are constructed to separate which students received sanctions from judicial affairs alone, from circuit court alone, and from both judicial affairs and circuit court. A fourth group, for reference, is left out of the analytical models to indicate how these three groups fare relative to those that were not sanctioned at all (those found not guilty or had their cases dropped). Alternatively, the study also examines the type of *processing* students receive across their academic career for drug- and/or alcohol-related offenses. This ignores the impact sanctioning and solely examines the impact of going through the motions required by each system (or both systems combined) to resolve a case against a student. Doing so truly hones in on true value of the sanction applied independent of the process. Three dichotomous variables are compiled that identify students solely processed by judicial affairs, solely by the criminal justice system, or processed by both systems at some point in time.

Other variables in consideration are compiled as follows: (1) fraternity and sorority membership at any point in students’ academic careers is indicated dichotomously, with 1 signifying membership, (2) the impact of re-arrest/re-referral is controlled for by utilizing a count of offenses accumulated by a student, (3) the term of first offense is an integer signifying the term a student first offends, counting only the terms in which students are enrolled, (4) high

school GPA is the raw cumulative weighted GPA, which can exceed 4.00 by factoring in honors or advanced placement/International Baccalaureate coursework, and (5) enrollment in a five-year undergraduate program, with 1 signifying enrollment. Serious offending is taken into account by defining a serious offense as one of the following: driving under the influence, felony drug possession / intent to sell, and felony false identification / fraud. A count of serious offenses is utilized to control for the impact this type of offending may have on the outcomes. Lastly, gender (1 = male) and race (1 = white, non-hispanic) are measured dichotomously.

Introduction to Multivariate Analysis

As described in the previous chapter, some unique differences exist between the group of arrested students compared with students who were only referred to judicial affairs and were never formally processed through the criminal justice system. This ignores a key group of students that were processed by both systems. The present set of analyses found in this chapter not only adds analytical value by controlling for variables that may be correlated with the various outcomes identified by this study, but it also allows for these students to be compared with their peers to determine how their outcomes may differ.

To review, the following outcomes will be assessed using both ordinary least squares (OLS) regression (for continuous dependent variable outcomes) and logistic regression (for dichotomous dependent variable outcomes): completing undergraduate study on-time (current student (1) / graduate (0)), dropout or dismissal from the university (yes (1) / no (0)), overall GPA differences relative to students' resident college averaged over their academic careers (continuous), change in mean GPA difference for the terms before and after students' first arrest/referral (continuous), and recidivism (continuous, zero-censored). Of these outcomes, it seems the most imperative to sort out on-time undergraduate completion as it was determined in

the previous chapter that this correlated with differences in academic performance as well as the *change* in academic performance at first intervention.

Predicting On-Time Completion

Logistic regression was employed to evaluate the available variables as possible predictors of graduating on-time with an undergraduate degree from the university among drug and alcohol offenders. Most important for the present study, differences in the system in which students are processed for their offenses (whether through the criminal justice system or the university system) are tested to determine if this processing has any impacts on degree completion while controlling for other variables.

The results of this analysis can be found in Table 5-1. Each of the models presented utilizes the full sample of students while removing students with missing data, or more importantly, students who have dropped out or were dismissed from the university for poor academic performance. Obviously the latter group should not be assessed in estimates of on-time completion as they will never achieve this outcome. Dismissals and dropouts will be handled separately in a forthcoming set of analyses. The full model (model 5) is impacted by case deletion due to missing data since high school GPA is not available for all students in the study. A very small subset of students (and/or their parents) choose alternatives to traditional secondary education in which this metric either does not exist or goes unreported to the university. For example, students that are home schooled or attend some charter schools may fit into this category.

The variables that significantly predict on-time graduation seem to remain statistically significant across the partial models (models 1 – 4) through the full model. The partial models signify how a particular type of official processing for drug and alcohol offenders (relative to

students processed in a different manner) impacts students' likelihood of being a current student in Fall 2008, one full semester after these students should have graduated.

Table 5-1: Logistic Regression Estimates of the Effect of Official Processing on On-Time Graduation¹

Independent Variables	1 N = 570	2 N = 570	3 N = 570	4 N = 570	5 N = 550
Race	0.89	0.92	0.90	0.89	0.95
Gender	2.69***	2.54***	2.44***	2.68***	2.57***
IB or AP Student	0.51***	0.51***	0.51***	0.51**	0.55**
Greek Affiliation	1.06	1.05	1.08	1.07	1.01
Term of First Offense	1.08	1.10*	1.13**	1.08	1.07
Number of Offenses	0.91	1.13	0.93	0.87	0.88
Sum of Serious Offenses	1.40	1.36	1.43	1.41	1.21
Five-Year Program	5.11***	5.23***	5.15***	5.09***	5.33***
Judicial Affairs Only	0.51***	-	-	Reference	Reference
Arrest Only	-	1.51†	-	1.86**	1.87**
Both Judicial and Arrest	-	-	1.64†	2.21**	1.96*
High School GPA	-	-	-	-	0.75
R²	0.17	0.16	0.16	0.17	0.18

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

There are three types of official processing assessed by this analysis: 1) judicial affairs only, comprising of students solely referred to judicial affairs – whether once or several times – by authorities other than any police agency, thereby avoiding any contact with and processing by the criminal justice system, 2) arrest only, comprising of students solely arrested by law enforcement agencies other than the university police department – whether once or several times – and subsequently processed by the local criminal justice system, and 3) both judicial

affairs and arrest, comprising of students that were either arrested by the university police department, whose practice is to automatically refer these students to judicial affairs, or are referred to judicial affairs by another authority *and* arrested by an agency other than the university police department independently with no regard to the order of these events.

According to the results of this analysis, one's gender, having previous advanced placement or International Baccalaureate coursework, and the type of official processing one receives have a statistically significant impacts on a student's likelihood of being a current student during Fall 2008 while controlling for other variables. In the study sample, males are 2.69 times more likely to be current students, advance placement or International Baccalaureate students are about half (0.51) as likely to be current students, and both those processed by the criminal justice system alone or processed by the criminal justice and university system jointly at some point in their academic career are about two times as likely to be current students relative to students that were processed by judicial affairs alone. Importantly, these models control for students that are enrolled in programs that are designated as 5-year undergraduate programs. The likelihood of these students to be enrolled in Fall 2008 is almost absolute, as demarcated by the magnitude of the effect size of this variable (odds ratio = 5.33, $p < 0.001$). The absence of statistical significance for race, fraternity and sorority membership, term of first offense, number of offenses, number of serious offenses, and high school GPA is also revealing. Controlling for all other variables, these factors do not seem to predict current student status. This should not come as a surprise, however, as these variables were not significantly correlated to the dependent variable at the bivariate level in the first place.

The next approach taken in the current analysis focuses on the impact of the first intervention a student receives on current student status rather than the overall type of official

processing a student receives as a result their offending over their academic career. That is, relative to receiving no punishment at all, the following analysis examines the impact of which authority (university or criminal justice) is doling out the punishment as well as what level of punishment (mild or severe) is given. In these data, level of punishment can easily be separated into mild and severe. In the university system, the standard “mild” or light punishment consists of a written reprimand by the dean of students in conjunction with a subset of optional disciplinary devices such as an drugs and alcohol education course (online; popularly assigned), community service (rarely assigned), counseling (rarely assigned), and a written assignment (rarely assigned). More “severe” punishments consist of a conduct probation or semester suspension in conjunction with more liberal use of the disciplinary devices listed previously. For the criminal justice system, the standard “mild” or light punishment consists of a deferred prosecution in conjunction with a fine *or* community service. More “severe” punishments consist of unsupervised probation, fines, *and* community service (which may also serve to reduce the amount fined, but not to zero).

The result of this analysis is remarkably similar to the previous one specifying the impact of official processing on current student status. The advance in knowledge the present model gives is the finding that receiving a mild punishment for one’s first offense by either judicial affairs or the criminal justice system predicts a reduction in the odds of being a current student in Fall 2008. This impact can be calculated by observing the odds ratio of the effect of punishment adjusting for the odds ratio of the effect of the level of punishment.

In general, it appears that the reduction in the odds of being a current student as predicted by receiving a mild punishment for one’s first offense is greater for those solely punished by judicial affairs relative to those punished solely by the criminal justice system. The scenarios

that predict the highest likelihood of current student status remain with students who do not receive any punishment for their first offense and with students who receive severe punishments, particularly those punished by the criminal justice system.

Table 5-2: Logistic Regression Estimates of the Effect of Official Intervention on On-Time Graduation¹ (N = 570)

Independent Variables	Exp(B)
Race	0.95
Gender	2.48***
IB or AP Student	0.49***
Greek Affiliation	1.09
Term of First Offense	1.07
Number of Offenses	1.02
Sum of Serious Offenses	1.21
Five-Year Program	5.44***
No Punishment (First Offense)	Reference ²
Judicial Affairs Punishment Only (First Offense)	1.28***
Criminal Justice Punishment Only (First Offense)	1.73*
Joint Punishment (First Offense)	1.81
Mild Punishment (First Offense)	0.49*
Severe Punishment (First Offense)	0.86
R²	0.17

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

² Serves as a reference category for both level of punishment (e.g., mild or severe) as well as type of punishment (e.g., judicial affairs or criminal justice)

On the other hand, individuals who receive both a judicial affairs and criminal justice punishment are not predicted to experience an increase in the odds of being a current student (as

noted by statistical insignificance) while controlling for other factors even though its odds ratio was 1.81. These students may receive a combination of mild and severe punishment that work in opposite directions, inflating the standard error estimate and render the relationship to be statistically insignificant.

Predicting Dropout or Dismissal

Of the outcomes under review by the current study, dropping out or dismissal for poor academic performance is the paramount worst outcome for the students in the sample. As presented in the descriptive chapter, it appears that this outcome predominantly appears in the portion of the sample that was solely referred to judicial affairs for drug- and/or alcohol- related offenses. For this reason, the next set of analyses focuses on this subsample to predict this outcome while removing cases with missing data due tied to the high school GPA variable (as described earlier) when this variable is applied. Logistic regression was employed to produce these results which can be found in Table 5-3.

Without any consideration of an intervention by judicial affairs (models 1 and 2), a student's race, fraternity or sorority membership, number of offenses, and number of serious offenses all have an initial impact (model 1) on the likelihood of dropping out or dismissal. When high school GPA is taken into consideration (model 2), however, this predictor eliminates the effect of race and number of offenses. The resulting model can be interpreted as follows: while controlling for other factors, students belonging to a fraternity or sorority are about half as likely to drop out or be dismissed (odds ratio = 0.46, $p < 0.05$), those with a serious offense are more likely (3.51 times per each serious offense; odds ratio = 3.51, $p < 0.01$) to drop out or be dismissed, and those with a lower high school GPA are more likely (4.35 times per 1 unit drop in high school GPA; odds ratio = $1 / 0.23$, $p < 0.01$) to drop out or be dismissed from the university.

Table 5-3: Logistic Regression Estimates of the Effect of Official Intervention on Dropout or Dismissal¹

Independent Variables	Model 1 N = 329	Model 2 N = 318	Model 3 N = 329	Model 4 N = 318
Race	0.50†	0.60	0.49†	0.60
Gender	1.90	1.77	1.88	1.77
IB or AP Student	0.65	0.82	0.65	0.82
Greek Affiliation	0.52†	0.46*	0.54†	0.47*
Term of First Offense	0.94	0.94	0.91	0.93
Number of Offenses	1.85*	1.64	1.85*	1.62
Sum of Serious Offenses	3.54**	3.51**	3.56**	3.63**
Mild Punishment (First Offense)	-	-	0.64	0.76
Severe Punishment (First Offense)	-	-	0.77	0.76
High School GPA	-	0.23**	-	0.24**
R²	0.12	0.18	0.13	0.18

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

The impact of the first intervention by judicial affairs is offered in models 3 and 4 of Table 5.3. These models are virtually identical as the previous two, indicating that any action taken by judicial affairs – including non-action – does not even the slightest impact on the likelihood of dropout or dismissal when controlling for other factors. Poorer high school academic performance and increased amount of serious offending during one’s academic career alone predict dropout or dismissal while membership in a fraternity or sorority can mitigate one’s likelihood of this outcome.

Predicting Recidivism

Recall from previous discussion that many students in the present study reoffend at some point in their academic career, whether this means being re-arrested, referred back to judicial

affairs, or crossing over to the sister system rather than revisiting the one that first processed the student. The following set of analyses focus on the predictors of recidivism, particularly how judicial affairs processing compares with criminal justice system processing in reducing recidivism. Additionally, these analyses examine the impact of the intervention (or lack thereof) each system applies to an offender's first violation either in isolation or in tandem while controlling for other variables. Linear (ordinary least squares) regression was employed to accomplish these goals and these results are found in Tables 5-4, 5-5, and 5-6.²¹

The initial examination into predicting recidivism reveals that gender, having previous advanced placement or International Baccalaureate coursework, fraternity or sorority membership, the term of a student's first offense, and the type of official processing one receives has a significant impact on recidivism. However, when factoring in high school GPA, advanced placement or International Baccalaureate status loses its significance. The remaining results can be interpreted as follows: males and fraternity brothers and sorority sisters are predicted to reoffend to a greater extent as well as students that offend earlier in their academic career and/or have a lower high school GPA while controlling for other factors. The type of official processing, on the other hand, is more difficult to interpret. On face value, it appears that students who have an arrest at any point in their academic career relative to students processed solely by judicial affairs are more likely to reoffend, especially when processed by both systems whether jointly or separately at some point during the study period. However, the very fact that this latter group contains individuals who are independently processed by both systems thereby biases this group by absorbing the wider sample's recidivists, skewing the results.

²¹ Alternatively, both Poisson and negative binomial regression were applied to this research question since the distribution of the dependent variable was skewed favoring less recidivism. The data favorably fitted linear regression compared to these alternative approaches as determined by post-hoc goodness of fit tests and log likelihood estimates where applicable.

Table 5-4: Ordinary Least Squares Estimates of the Effect of Official Processing on Recidivism¹

Independent Variables	1 (N = 620)	2 (N = 599)
Race	- 0.02	- 0.02
Gender	0.13***	0.11***
IB or AP Student	- 0.06*	- 0.04
Greek Affiliation	0.05†	0.05†
Term of First Offense	- 0.16***	- 0.17***
Dropout or Dismissal	0.03	0.02
Current Student	- 0.01	- 0.01
Five-Year Program	- 0.04	- 0.03
Judicial Affairs Only	Reference	Reference
Arrest Only	0.13***	0.13***
Both Judicial and Arrest	0.69***	0.69***
High School GPA	-	- 0.01**
R²	0.49	0.50

¹ Standardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

The subsequent analyses take this bias into consideration by utilizing a split-model approach – students who are processed solely by either judicial affairs or the criminal justice system are analyzed separately from students who have contact with both systems at some point in their academic careers. In Table 5-5, models 1 and 2 focus on the impact of the first official intervention (or lack thereof) on recidivism for students who have had contact with both systems while models 3 and 4 examine this impact for those solely processed by either judicial affairs or the criminal justice system.

Table 5-5: Ordinary Least Squares Estimates of the Effect of Official Intervention on Recidivism¹

Independent Variables	1 (N = 124)	2 (N = 113)	3 (N = 496)	4 (N = 477)
Race	- 0.03	- 0.05	- 0.02	- 0.02
Gender	0.35***	0.31***	0.05	0.04
IB or AP Student	- 0.12	- 0.05	- 0.01	- 0.01
Greek Affiliation	0.07	0.06	0.04	0.03
Term of First Offense	- 0.15†	- 0.15†	- 0.16**	- 0.19***
Received No Punishment (First Offense)	Removed	Removed	Reference ²	Reference ²
Received Mild Punishment (First Offense)	Reference	Reference	- 0.27***	- 0.30***
Received Severe Punishment (First Offense)	- 0.15†	- 0.23*	- 0.14**	- 0.19***
Dropout or Dismissal	Constant	Constant	0.002	0.003
Current Student	0.01	0.01	0.02	0.003
Five-Year Program	- 0.16	- 0.16†	- 0.02	- 0.02
Judicial Affairs Punishment Only (First Offense)	Reference	Reference	0.60***	0.61***
Criminal Justice Punishment Only (First Offense)	- 0.15†	- 0.13	0.23***	0.26***
Joint Punishment (First Offense)	- 0.12†	- 0.13	-	-
High School GPA	-	- 0.25**	-	- 0.03
R²	0.23	0.28	0.36	0.39

¹ Standardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

² Serves as a reference category for both level of punishment (e.g., mild or severe) as well as type of punishment (e.g., judicial affairs or criminal justice)

Model 1 reveals that students who receive their first intervention from the criminal justice or jointly from both systems actually tend to reoffend less than those disciplined by judicial

affairs, especially when receiving a severe punishment while controlling for other factors.²² When placing high school GPA into the analysis, as shown in model 2, the differential impacts of the authority that doles out the intervention lose their statistical significance but the level of sanctioning remains significant. Yet given the sample size ($N = 113$) and the degrees of freedom used to specify this model, it is interesting to note that the direction and magnitude (favoring a reduction in recidivism) of the impact of these interventions relative to judicial affairs intervention remain similar and are approaching significance at the $p = 0.10$ level. What remains important in predicting recidivism is similar to what was previously found and can be interpreted as follows: males are predicted to reoffend to a greater extent as well as students that offend earlier in their academic career and/or have a lower high school GPA while controlling for other factors. Fraternity and sorority membership does not seem to carry over as a predictor of recidivism when taking the first intervention a student receives into consideration. Another difference found is that individuals who are enrolled in five-year undergraduate programs tend to be less likely to reoffend after respecifying the analytical models to focus on intervention rather than official process. Lastly, as alluded to earlier, a reduction in the level of recidivism is predicted when a student receives a severe punishment at their first intervention relative to receiving a mild punishment.

For individuals solely processed by judicial affairs or the criminal justice system separately (models 3 and 4), notable differences exist when predicting recidivism. What seems most important is the statistical insignificance of both gender and high school GPA. The other divergence in these models is the insignificance of enrollment in a five-year undergraduate program, but this comes as a lesser surprise since this variable is insignificant in model 1. What

²² In order for this model to compile properly in the statistical package used for analysis, students who received no punishment ($N = 4$) had to be dropped from this analytical model.

remains are models that mirror those for students who have had contact with both judicial affairs and the criminal justice system. There are enough cases receiving no punishment that they could constitute the reference category for models 3 and 4. In regards to the system doling out the first intervention (relative to no intervention), the criminal justice system seems neither to aggravate nor mitigate the levels of recidivism when it intervenes while judicial affairs intervention seems to *increase* the level of recidivism (regardless of the level of punishment). In fact, it appears that when the university system intervenes, students are likely to reoffend at least once more holding all other factors constant. The last point to consider is that the term in which a student first offends retains its significance in predicting recidivism – those who offend earlier tend to experience increased levels of recidivism.

Taking this investigation one step further, the next set of analyses takes into account whether students had a juvenile arrest record with the Florida Department of Juvenile Justice in that prior arrest has been found to be one of the most robust predictors of future offending in criminological literature. These data are only available for students with an adult arrest record. Thus these analytical models utilize the subsample of students that have had contact with both judicial affairs and the criminal justice system. These results are found in Table 5-6.

The results of this analysis are difficult to interpret. It seems that juvenile arrest does not predict adult recidivism when controlling for other factors but does at the bivariate level. Looking deeper into this issue, the number of juvenile offenders ($N = 10$) in this subsample is not optimal to detect effect size as a result of juvenile arrest. Nevertheless, the significance level of this predictor does approach the $p = 0.10$ level, suggesting that a larger sample size may resolve this issue.

Table 5-6: Ordinary Least Squares Estimates of the Effect of Official Intervention on Recidivism for Arrestees While Factoring in Juvenile Arrest¹

Independent Variables	1 N = 117	2 N = 107
Race	- 0.01	- 0.03
Gender	0.33***	0.30***
IB or AP Student	- 0.05	- 0.02
Greek Affiliation	0.06	0.13
Term of First Offense	- 0.14	- 0.18†
Received No Punishment (First Offense)	Removed	Removed
Received Mild Punishment (First Offense)	Reference	Reference
Received Severe Punishment (First Offense)	- 0.18*	- 0.20*
Dropout or Dismissal	Constant	Constant
Current Student	0.02	0.07
Five-Year Program	- 0.16	- 0.17†
Judicial Affairs Punishment Only (First Offense)	Reference	Reference
Criminal Justice Punishment Only (First Offense)	- 0.12	- 0.16†
Joint Punishment (First Offense)	- 0.10	- 0.16†
High School GPA	- 0.21*	- 0.13
Juvenile Arrest	0.10	Removed
R²	0.27	0.24

¹ Standardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

Additional evidence does exist in favor of this interpretation of these data: when removing students with a prior juvenile arrest record as displayed in model 2 of Table 5.6, the results

mirror that of model 1 in Table 5-5, high school GPA loses its statistical significance and criminal justice and joint-system intervention (relative to judicial affairs) regain their mitigating influence on recidivism. The correlation of juvenile arrest and high school GPA seem to mask the impact of first intervention. This may also be interpreted – with notable caution – that students with a juvenile arrest record (which enter the university with a lower high school GPA) may be resistant to the mitigating effects of the criminal justice system or joint-system intervention in regards to reducing levels of recidivism. At this point, it is difficult to disentangle the independent effects of juvenile arrest and high school GPA given the rarity of juvenile arrest in these data. However, juvenile arrest has the potential to be a particularly useful predictor of offending (and reoffending) in college student samples given that these effects were felt when only ten juvenile arrestees were controlled for in this analysis.

Predicting Overall Mean GPA Differences and Change in Mean GPA Differences Before and After First Intervention

The next set of analyses examines the impact of type of official processing as well as the first intervention (if any) applied to students on two outcomes: 1) the difference of students' GPA relative to their resident college's mean GPA averaged across the span of their academic careers, and 2) the difference in this metric for the terms before and after a student's first offense. It should be noted here that the sample size is reduced when investigating the second outcome as some students were arrested/referred in their first semester of attendance, thus lacking available data for the change computation. These models also remove students who dropout or are dismissed for poor academic performance for the same reasons as previously discussed. The results of these analyses are found in Table 5-7.

Table 5-7: Ordinary Least Squares Estimates of the Effect of Official Processing and Intervention on Overall GPA Difference (Models 1 & 2) and Change in GPA Difference Before and After First Intervention (Models 3 & 4)¹

Independent Variables	1 (N = 548)	2 (N = 548)	3 (N = 356)	4 (N = 356)
Race	0.09**	0.09**	- 0.03	- 0.03
Gender	- 0.01	0.01	- 0.08	- 0.09
IB or AP Student	0.03	0.03	- 0.03	- 0.04
Greek Affiliation	0.07	0.07†	0.04	0.04
Term of First Offense	- 0.07†	- 0.06	- 0.15**	- 0.14**
Number of Offenses	- 0.10*	- 0.10†	- 0.34	- 0.01
Received No Punishment (First Offense)	Reference	Reference ²	Reference	Reference ²
Received Mild Punishment (First Offense)	- 0.01	- 0.04	- 0.03	- 0.13
Received Severe Punishment (First Offense)	- 0.03	- 0.05	0.08	0.01
Current Student	- 0.46***	- 0.46***	- 0.14**	- 0.14**
Five-Year Program	0.17***	0.17***	- 0.02	- 0.02
Judicial Affairs Only	Reference	-	Reference	-
Arrest Only	0.07†	-	0.19**	-
Both Judicial and Arrest	0.09†	-	0.12	-
Judicial Affairs Punishment Only (First Offense)	-	0.05	-	0.06
Criminal Justice Punishment Only (First Offense)	-	0.06	-	0.22***
Joint Punishment (First Offense)	-	0.07	-	0.03
High School GPA	0.25***	0.25***	- 0.10†	- 0.11†
R²	0.32	0.34	0.12	0.09

¹ Unstandardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001.

² Serves as a reference category for both level of punishment (e.g., mild or severe) as well as type of punishment (e.g., judicial affairs or criminal justice)

Models 1 and 2 focus on grades over the course of an academic In regards to overall GPA difference, race, term of first offense, students enrolled in a five-year undergraduate program, and high school GPA have independent impacts on this outcome while holding all others constant and while controlling for current student status. In particular, whites, students enrolled in a five-year undergraduate program, and those with better high school GPAs tend to perform better than their resident colleges on a whole across their academic career. Offending earlier in one's academic career, on the other hand, predicts a reduction in overall academic performance. In regards to the official processing students experience due to their drug and alcohol offenses (model 1), it seems that criminal justice or joint-system processing offers a slight improvement in overall GPA differences relative to those processed by judicial affairs alone. In regards to the first intervention (or lack thereof) students receive (model 2), neither criminal justice nor joint-system intervention seem to have an impact on this outcome. This finding also stands when examining the level of punishment doled out by these authorities. Regardless of who does the punishing and the severity of punishment applied to students, overall academic performance seems unfettered.

The change in this metric centered at term of first offense offers some challenges. In particular, this analysis finds that criminal justice processing predicts a positive change in academic performance after intervention relative to judicial affairs processing (model 3). This effect carries over to the actual intervention applied by the criminal justice system for a student's first offense without regard to the severity of the punishment issued – the intervention seemed to have a positive impact on students' academic performance across subsequent semesters (model 4). Of particular interest, these analyses find that students who scholastically performed better in high school are more negatively impacted and exhibit lower academic achievement in the

semesters after their first offense relative to students with lower high school GPAs holding all other factors constant.

For this outcome, race does not retain its statistically significant impact, meaning that whites and non-whites do not experience differences in the change in their academic performance in the terms after their first offense. However, it seems that white students with a drug and/or alcohol offense slightly perform better over their academic careers relative to the non-whites in the sample. Likewise, students that are enrolled in a five-year undergraduate program in the sample perform better over their academic careers than those who are not, but do not experience any differences in the change in academic performance in the terms after first offense. The number of arrests or referrals also works in the same manner – lower numbers predict better overall performance, but no difference in the change in performance. However, the logic is reversed for individuals that offend earlier in their academic career: earlier offending predicts a reduction in the change of academic performance in the terms following the first offense but fails to reliably predict a reduction in overall academic performance.

Summary

The key findings of the present study are as follows. First, in conjunction with mild punishment for the first offense, students sanctioned by the university system alone express an increase in odds of completing their undergraduate education on-time relative to students who were sanctioned by the criminal justice system alone, specifically when mild sanctions are applied. Students who received no punishment or severe punishments, particularly when levied by the criminal justice system, express a decrease in their odds of on-time graduation. While holding all other factors constant (in particular, enrollment in a 5-year degree program and entering the university with college credit), it seems that being male is the strongest predictor of deferring on-time graduation. Differential processing and sanction serve to either exasperate or

mitigate the likelihood of on-time graduation for males as it is very rare to find females with serious offenses (that elicit severe punishment).

Second, dropout or dismissal for poor academic performance is not evidenced to be related to judicial affairs processing or sanctioning. Instead, high school weighted GPA and number of serious offenses seem to be the strongest predictors of this outcome. Individuals with lower high school weighted GPAs and with higher levels of serious offending in college seem to be most likely to dropout or be dismissed by the university. Of particular interest, fraternity and sorority membership decreases the odds of dropping out or being dismissed in half while holding all other factors constant.

Third, split-model OLS regression revealed that increases in recidivism are tied to university processing and sanctioning, regardless of the level of sanction (mild or severe) applied. Interestingly, this analysis also detected that males are substantially more likely to offend again cross-system; females, on the other hand, seem to have an equal offending pattern to males, but tend to only offend in one system (either exclusively on-campus and not detected by university police or exclusively in the greater city).

Fourth, regardless to the level of sanctioning (mild or severe) applied, students that were sanctioned by the criminal justice system alone tended to experience a positive change in their GPA performance relative to their resident college average GPA after their first arrest relative to those sanctioned solely by the university system. Furthermore, students who entered the university with better high school weighted GPAs expressed a marked decrease in the GPA performance relative to their resident college average GPA after their first offense – the better the high school GPA, the larger decrease in college academic performance gauged by GPA performance after the semester the offense occurs. Overall academic performance over the span

of students' college experience does not seem to be affected by the authority that levies the sanction nor the level of sanctioning (mild or severe) applied. High school GPA, on the other hand, plays a critical role in predicting academic performance at the university. This suggests that being processed for drug- and alcohol- related offenses "levels the playing field," so to speak, such that stellar high school students regress to the mean academic performance while those who enter the university on the lower end of the academic performance spectrum seem to remain close to the mean over the span of their college careers. It seems that criminal justice sanctions may mitigate this decrement in performance for all students relative to receiving no sanctions, university sanctions, or sanctions from both the criminal justice and university systems.

The following chapter will expand on these findings by utilizing the theoretical framework presented earlier. Does the university disciplinary system follow Braithwaite's reintegrative shaming? In general, does either labeling or deterrence perspective fit these results? How do they speak to the culture of ambivalence? More importantly, these results will be interpreted in a manner that can inform policy to optimize the best outcomes for college students that experience an arrest or referral in the future.

CHAPTER 6 DISCUSSION OF FINDINGS, POLICY IMPLICATIONS, AND CONCLUSIONS

Introduction

Arriving back full circle to a remark made by a prominent criminology within a comprehensive review of official intervention and its efficacy presented to the United States Congress in 1997, the present study finds that "...the effects of police [or the formal criminal justice system] on crime are complex, and often surprising" (Sherman et al., 1997: 8-39). For example, the college students in this study experienced no substantial differences in the likelihood of re-offending subsequent to their first *arrest* regardless of whether they received an additional criminal justice sanction or not. If the university were to handle these cases, however, it seems that students actually seem to experience an increased likelihood of re-offending relative to receiving no punishment alone (e.g., only experiencing the process of being referred to the university). There is an exception to this trend: male students processed by both the university and criminal justice system at some point in their academic careers are substantially more likely to re-offend unless sanctioned by the criminal justice system or jointly by the university and criminal justice systems. Female students who were processed by both the university and the criminal justice system and received an additional formal sanction actually were *less* likely to re-offend than those who were not sanctioned.

Whether the goal of the intervention of an arrest/referral and its subsequent sanctions is to be therapeutic or to prevent future offending (or both), the results of this study suggest that the local authorities may be missing the mark. In some ways, particular interventions may be making matters worse. A cultural ambivalence to alcohol and alcohol problems may be intervening here to some degree so the discussion turns to explaining why.

Labeling, Deterrence, and Modeling Success and Failure

The theoretical perspectives presented to frame this study predict different outcomes regarding the impact of sanctions on offending students. None predict the outcomes found in these data. For example, the extension of labeling found in Bernburg and Krohn (2003) and Sweeten (2006) lead to expectations that students arrested and processed by the criminal justice system will be more likely to re-offend and drop out of school, particularly if students lack the shielding provided by a higher position in our social structure. This adaptation of labeling theory does not seem to apply to college students arrested for drug- and alcohol- related offenses. In the study population, being arrested and sanctioned by the criminal justice system had no substantial impact on future offending. In regards to educational attainment (which will lead to employment opportunities), being arrested and sanctioned by the criminal justice system does not seem to harm students' chances of completing their degree and in some circumstances may improve students' academic performance (as measured by a positive change in GPA relative to a student's wider college across the terms after a his/her first offense). Additionally, the social structural component proffered by Bernburg and Krohn (2003) and Sweeten (2006) does not seem to play a role in either recidivism or educational attainment. If one assumes that a college student's disadvantage in the social structure incurred upon matriculation improves over time (e.g., students regain social support networks, identify private housing and move off-campus, discover local resources and volunteering opportunities), this model would suggest early offending would increase recidivism and reduce educational attainment. While early offending is tied to re-offending in these data, educational attainment seems to be particularly impacted when students are processed and sanctioned later on in their academic careers. Perhaps offending early should not be framed in this manner at all – it could be that these individuals just have more time to be caught and captured in these data. However, these concepts were not directly assessed by the

present study; future study should examine social structural disadvantage in the transition to higher education to make light of these issues.

Alternatively, Braithwaite's reintegrative shaming perspective (1989; 1992) suggests the potential importance of differences across the authorities that process and sanction students. The working hypothesis of the current study is that if college students are processed and sanctioned through a system that is inherently less stigmatizing by nature (e.g., the university system), there should be a marked reduction in the levels of reoffending and an increase in academic performance. A qualitative assessment of the judicial affairs system at the university system reveals that this disciplinary system appears to have reintegrative qualities: the process is private (privileged record compared to public record) and informal (meeting with the dean of students or an agent of her office compared to public hearing). Yet, rather than experiencing a therapeutic effect, students that were processed and sanctioned through the judicial affairs system actually experienced amplification in recidivism while not benefiting from the predicted improvement in academic performance when processed by the criminal justice system (regardless of sanction). Could it be that the university system applies sanctions in a stigmatizing nature? This is doubtful.

The standard practice for students processed for minor offenses tend to include meeting with the dean of students or an agent of judicial affairs, discussing the event, receiving a written letter of reprimand, and attending an online alcohol education course. Recidivists (known to the university system), driving under the influence offenders, and serious drug or alcohol offenders (e.g., intoxication to the point of requiring medical attention, possession of drugs with intent to sell, felony false identification), on the other hand, receive a conduct probation or suspension, but the rest of the process is much the same. They may attend an online alcohol education

course, perform community service, pay restitution for any damages done, and/or receive counseling. The standard criminal justice processing for minor offenses (e.g., underage possession of alcohol) typically comes in the form of a letter from the state attorney's office for first offenses describing conditions of deferred prosecution. The terms are usually a small fine or community service and a clean record for the subsequent six months – one year in exchange for a *nolle prosequi*. At times, students choose to attend a misdemeanor court hearing, which is batch-processed and becomes a part of the public record. More serious offenders (e.g., drunk drivers) almost always spend the night in jail and are most likely sentenced to probation at a public hearing in either misdemeanor or felony courts. If these data were to pick up on any problematic outcomes due to stigmatization, certainly criminal justice processing and severe sanctions would be the most likely candidates for poor outcomes.

Labeling and reintegrative shaming cannot explain the results found by the current study well: students who received what would be considered the most stigmatizing of processing and sanctioning – those who spent the night in jail, had to post bail/bond, were required to have a public hearing, and who ended up with a criminal record – were just as likely to re-offend as those who received mild or no criminal justice punishment but less likely to re-offend than those processed by the university system. Those who were arrested and formally sanctioned in the criminal justice system also showed marked academic performance improvements compared with those whose referrals were dealt with only in the university system.

Reintegrative shaming does not fit these data well; interpreting the effects of a culture of ambivalence on potentially stigmatizing processes and sanctions is difficult. Inasmuch that certain crimes like driving under the influence are substantially stigmatized in society (see Grasmick, Bursik, and Arneklev, 1993), the culture of ambivalence should only impact the potential stigmatization of petty drug and alcohol offenses. This research finding runs counter to the hypothesis that stigma predicts offense amplification and academic performance decrements.

The deterrence framework does not seem fit these data either. Students who have direct experience in punishment avoidance (e.g., arrested but not receiving sanctions)

were as likely to re-offend as those who were processed and received any level of sanction (e.g., mild or severe) from the *criminal justice system*.

Furthermore, the students who were sanctioned by the university system experienced amplification—a finding that is completely out of line with deterrence. Piquero and Paternoster (1998) discovered that punishment and punishment avoidance is the strongest predictor of future intentions of wrongdoing (in this case, drinking and driving) when taking moral beliefs out of the equation among a sample of drivers across the nation. In these data, neither punishment nor punishment avoidance seem to make a difference.

The culture of ambivalence seems to be at play for these students. Sanctions levied by either criminal justice or university system fail to reduce levels of recidivism while sometimes backfiring and increasing the likelihood of re-offending. Yet, stigmatization does not seem to play a role in determining when amplification occurs. The root of this problem remains a mystery. It could be that the perception of the university sanctioning system is not taken as seriously as the criminal justice system; but even if it were on an equal plane, making *improvement* in reducing recidivism seems to be out of reach. A silver lining to this conundrum is that marked improvements in academic performance occurred for offenders processed through the criminal justice system regardless of sanction.

Disciplinary Systems Imbedded in a Culture of Ambivalence

First and foremost, the present study detects a substantial amount of drug- and alcohol-related offending among the college population. Across the years of study (2003 – 2007), almost 5,000 students were arrested – many more than once – for any criminal offense. Of this amount, the vast majority of student offenders were cited for drug- and alcohol- related offenses. The sheer amount of offending and the amount of re-offending, in particular, strongly suggest

nonchalant attitudes towards these types of criminality. When critically analyzed, the criminal justice and university disciplinary systems seem to be impotent in preventing future offending.

In fact, the judicial affairs system at the university seems to be amplifying a student's likelihood of re-offending regardless of whether or not a student receives punishment for their offending over and above the official processing.

Another point embracing this perspective is the finding that, regardless of recidivism, the vast majority of the students in these data are poised to graduate or have successfully graduated. For them, there is little evidence of a delay in graduation or a disruption in their academic careers. When student offenders experience delays in completing their degree (most likely male students who did not enter the university with college credit), the delays are not out of step with the wider university averages in the timing of graduation. However, a minority of students do experience detrimental changes in their academic performance after official processing and sanctioning. These differences seem to shift these students to regress to the mean academic performance for their colleges over the span of their academic career: a student's weighted high school GPA predicted his/her overall performance at the university as well as the change in academic performance after his/her first offense. These two functions were reflexive: the better a student's high school grades, the better he/she performed at the university overall but the worse he/she performed in the terms subsequent to first arrest or referral relative to previous terms. Males with lower weighted high school GPAs who did not enter the university with college credit are at the highest risk of experiencing a drop in academic performance after a first offense as well as poorer overall performance.

Notably, it seems like students are very successful in continuing their substance using behaviors despite intervention while continuing on an academic performance trajectory that is correlated to independent factors such as high school grades and gender. Evidence exists that supports the notion that students are likely to re-offend despite negative consequences (experiencing a drop in their university GPA and being sanctioned for their first offenses).

If the negative consequences of official intervention and academic performance decrements fail to reduce the likelihood of re-offending, the premise of a cultural ambivalence seems difficult to refute. Additional evidence exists when examining the arrest records of the non-student community members.

When honing in on alcohol arrests (in which an alcohol violation was the primary offense), non-students are arrested at the same rate as students when controlling for age. Thus, *college students* are not particularly problematic in relation to the wider population when observing official statistics; the extant literature on student problems may not examine similar problems of non-students.

The college students analyzed in this study may have distinctive alcohol- and drug- related problems; however, 18-24 year olds in the community seem to resemble university students when examining alcohol-related official statistics. While the levels of binge or heavy drinking across these two groups are not presently assessed, these differences are of reduced importance when considering the wider implications of this finding. Diving deeper into the patterns of arrest in the greater city area, one uncovers that the vast majority of law enforcement efforts (and alcohol offending) occurs in two hospitality districts. These districts – midtown and downtown – are dense with restaurants and bars (bars in particular) that stay open until 2 a.m. and are in close proximity to the university campus. Since university students and non-students (controlling for age) tend to be arrested at equal rates, meaning that a roughly proportionate amount of offending exists across these groups, making an assumption that an equal proportion students and non-students (relative to their respective populations) frequent these districts seems within reason. If this were the case, both students and non-students about equally immerse themselves in environments that place them at an increased risk for assault, sexual harassment/assault, theft, and many other forms of victimization (Dowdall, 2008; Jennings, Gover, & Pudrzynska, 2007; Kinney 2007). While increased levels alcohol consumption are correlated with risk of victimization, placing oneself in that environment while drinking to some degree (remember,

everyone in the present data is an offender) makes up some proportion of that risk. Thus, arguing the difference of consuming three alcoholic beverages versus five in one sitting may not yield substantive differences when observing alcohol-related problems in this manner. It would be more beneficial to observe level of intoxication while patrons frequent these districts (e.g., routine activities) instead of bright-line criteria (e.g., 4 or 5 drinks in one sitting) as defined in the binge drinking literature.

Football season aside, students and non-students exhibit a strikingly similar pattern of alcohol-related arrest over time. This suggests a shared/universal cultural experience to some extent. Considering that fraternity and sorority members make up about half of the students arrested, it is hard to imagine individuals not enrolled in a 4-year institution of about the same age sharing the same cultural experiences. Conversely, the evidence presented in this study leans towards favoring an overarching culture of ambivalence to alcohol rather than the existence of campus cultural influences that unilaterally inflate alcohol-related incidents within the non-student population of the same age. While these forces are at work as strongly suggested when observing arrests during football season across these two groups, it seems that the similar patterns of arrest for students and non-students co-exist despite differential cultures of students and non-students (albeit anecdotal at this point). This leads to the conclusion that:

Alcohol-related offending (and re-offending) seems to be tied to a cultural ambivalence toward alcohol for students and non-students alike. While the study university and area may be unique in many respects, it should not be surprising if these results could be replicated in cities without a Carnegie-1 institution or in major metropolises. It also should not be surprising if these findings could be replicated in areas with large universities with liberal to moderate campus/community alcohol policies, which are isolated from major metropolises, that have a large fraternity and sorority base, and have areas of a high density of bars.

Policy Implications

As currently operating, any increase in enforcement will not serve to reduce the levels of alcohol- or drug- related offending among college students. In fact, there is evidence that suggests that increased enforcement may backfire. There are distinct advantages, however, by handling these types of offenses through the criminal justice system rather than the university disciplinary system. For first offenders that would typically be solely referred to judicial affairs, it may be beneficial to investigate an alternate sanctioning system that joins university and criminal justice resources. While joint processing and sanctioning (having the two systems run parallel) does not seem to add any benefit to students academic performance, it still offers a reduction in this amplification effect found among students disciplined by the university.

These data suggest an extensive review of the efficacy of the university disciplinary system. This review is especially important since this authority is much more likely to identify potential problem students earlier in their academic careers and serves as a first line of defense to prevent future problems. It could be that some sort of criminal justice component needs to be added to the process to create a perception of getting into “real” trouble. For this to be examined, a self-report study of the underlying differences between the perceptions of these two systems should be performed. Furthermore, the university disciplinary system is poised to readily make an impact on the prevention of dropping out or dismissal for poor academic performance. Regular follow-ups of students that are underperforming their college mean GPA by a half of a grade point at the time of first offense and have a below median weighted high school GPA to increase this opportunity. These students do not seem to be acclimating to the university and do not respond to sanctioning. It is imperative to identify an alternative program for these individuals to improve their odds of success as nothing works for them at this point.

Perhaps referral to community college with an open admissions policy after completing two years of community college coursework would prove beneficial.

Sharing intelligence across domains does not seem to offer much potential for optimizing outcomes. That is, if one system (either the criminal justice system or the university system) had the knowledge of prior offenses that were processed by the system, the result may likely be to increase the level of sanction levied—something that did not affect subsequent arrests or referrals. For example, if the criminal justice system knew that an arrestee had a “prior record” for a similar offense at the university, it would be less likely to offer a deferred prosecution. Recall that level of punishment does not seem to offer any relief in risk of recidivism for most offenders. This potentially costly database of shared knowledge holds little promise of reducing alcohol- or drug-related offenses among students.

Dowdall’s (2008) review of the current thinking on preventing problem drinking and alcohol-related crime is informative. First and foremost, Dowdall reminds readers that educational efforts alone fail to make any differences. A successful approach is one that is multi-dimensional and coordinated across many layers of a local community and the state (less importantly, the federal government). Next, he reviews the National Institute on Alcohol Abuse and Alcoholism’s (NIAAA) meta-analysis of evidence-based strategies to reduce alcohol-related crime (See National Institute on Alcohol Abuse and Alcoholism, 2002). The successful community- / environmental- based strategies (labeled Tier 2) are as follows: (1) increased enforcement of minimum legal drinking age laws, (2) implementation, increased publicity, and enforcement of all other laws to reduce alcohol-impaired driving, (3) restrictions on alcohol retail outlet density, (4) increased price and excise taxes on alcoholic beverages, (5) responsible beverage service policies in social and commercial settings, and (6) the formation of a campus

and community coalition involving all major stakeholders. Of these strategies listed, the study community/university has utilized numbers 1, 2, and 6, yet have not seen any results (as measured by official statistics) its concerted efforts.

Of particular interest is number 1: increased enforcement of minimum legal drinking age (MLDA) laws. Dowdall's previous research (2006) as well as other prominent scholars (see Wagenaar and Wolfson, 1994; Wagenaar and Toomey, 2002) finds a substantial inverse relationship to MLDA and problem drinking and alcohol-related problems. However, the present study predicts little success, perhaps even increased problems if policymakers choose to target students (or underage drinkers, generally). Alternatively, Wagenaar and Wolfson (1994) suggest increased enforcement efforts to be directed at those providing the alcohol to the underage. Yet in this circumstance, if policymakers were to target the high density bar areas, displacement may also make matters worse by increasing recidivism as noted previously. Thus, the NIAAA chief community-based strategy may actually be creating unintended consequences, or at the minimum, be expending valuable resources with little gain. At this point, it is easy to predict that any resources expended to address this problem will be met with minimal gains. For example, it is interesting to note that any displacement that may occur due to target hardening may increase student drug and alcohol offending if these changes shift substance use patterns to the residential areas or make no substantial changes if violations became more difficult to detect due to wider use in private residences (therefore remain unpunished). It is quite the catch-22.

Factors Tied to Drug- and Alcohol- Related Offending and Re-offending

These data confirm existing knowledge about the risk factors associated with problematic alcohol use, but only to a certain extent. Fraternity and sorority membership, in particular, predicts a substantial increase in the likelihood of arrest or referral for drug- or alcohol- related offenses. However, this increased likelihood of offending does not carry through to predict *re-*

offending. When observing the characteristics of students upon their first offense, the only substantial predictor of future offending is gender – males are much more likely than females to re-offend overall. Yet, in general, male students are only slightly more likely than females to offend in the first place. In regards to race, white students are much more likely to offend than non-whites; yet, whites and non-white students re-offend at equal rates. What characteristics to fraternity brother offenders and regular male student offenders have in common? What of the rare minority student that offends that also is not part of the Greek system? It seems that once a student embraces the culture and gets caught, their characteristics do not seem to matter in predicting re-offending.

Limitations

As previously mentioned, the findings of the present study should be replicated to be generalizable to similarly situated college towns with a large university. Insofar that the criminal justice processing and sanctioning in these towns should be very similar, the affects of these interventions should be parallel. However, the standard practices among university sanctioning systems may vary substantially across universities. The findings of this study should be able to be replicated if the university sanctioning system at the replication site handles students in a similar manner. For certain, the results of this study can be extrapolated to other cohorts at the study university as there is no evidence to suggest that subsequent cohorts will differ substantially on factors of consequence.

Extrapolating these results to any other context is not suggested. Further evaluation of the same type (examining official statistics longitudinally) is proposed to examine whether processing/sanctioning for drug- and alcohol- related offending differs across types of authorities in other contexts.

Future Research

The present study takes a different approach to examine a contemporary problem that exists on college campuses across the United States by utilizing official data. One particular issue that arises that will need further evaluation in future research is potential selection effects in these data. There is a possibility that an uncontrolled variable or group of variables may be helpful in explaining the reason why the present study did not find any positive outcome after criminal justice or university intervention for alcohol and drug offenses. Of specific interest are details about offenders at the time of entry into higher education – future research should try to bring in more detail about students’ prior life histories at this point. These data should include information on students’ familial history (specifically family drinking problems, delinquency and arrest, opinions on drinking and drug use, et cetera), preexisting substance use behaviors (including alcohol and observing the age at first use for any substance consumed), peer influences in high school, and other factors such as low self-control, socio-economic information, and opinions on drug and alcohol use before arriving on campus. Well-funded replications should also examine activated genetic markers as influence on life outcomes. The present research has revealed that previous contacts with the criminal justice system may not aid researchers and administrators in predicting problems in early adulthood. However, some other these other factors may provide better indicators of potential problem students as they arrive on campus and help determine if students with different background characteristics respond differently to sanctions.

Methodological challenges will be abundant while trying to tease out the selection effects described above. One way to begin to control for these influences is to utilize propensity score matching (Rubin & Rosenbaum, 1983). If the background history of students is available to analysts, propensity score matching can assign a conditional probability to each student gauging

their likelihood of receiving a treatment or intervention. As long as the intervention is independent of the outcome, the selection effect can be controlled with the inclusion of this conditional probability. Alternatively, experimental designs can be employed to determine the differential impact of a variety of treatment – particularly within university sanctioning systems as these systems can be readily flexible relative to the criminal justice system. In these designs, students can be randomly assigned to different types of sanctions and followed over time to determine treatment effects. Meta-analyses (Carey, Scott-Sheldon, Carey, & DeMartini, 2007; Vasilaki, Hosier, & Cox, 2006) indicate some programs seem to be beneficial – using these kinds of results to identify a kind of sanction or intervention that should be most effective in contrast to present practices on college campuses. For example, the individualized prevention-based intervention applied that University of Washington (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; see also Schulenberg, Maggs, Long, Sher, Gotham, Baer, Kivlahan, Marlatt, & Zucker 2001) may yield significant reductions in drinking and its related problems.

The analyses presented earlier identify a “high-risk” group that is likely to reoffend but eventually graduate. The vast majority of these students are privileged, white, and remarkably intelligent who are resilient and manage to achieve their goals (e.g., graduation) regardless of sanctions. Yet, there is a subset of students who seem doomed for problems (e.g., dropout or dismissal from the university) that need further investigation, which is consistent with previous research (see Weschler & Wuethrich, 2002). Both the correlates of offending/reoffending and poor academic performance need to be reexamined to begin to address these substance use related problems on campus.

Future research should also examine the long-term consequences of delinquency in the collegiate years. This includes following up with students beyond graduation, dismissal, and

dropping out. At this point, we do not know if the criminal justice system has distinct advantages over a university sanctioning system years after graduation. Students need to be reevaluated after graduation to observe residual effects of sanctioning, if they exist. For example, it may be that the impact of criminal justice sanctions remains latent until one enters the workforce. Researchers should also begin to focus on the career model to better frame research in this area. If college (e.g., the campus culture, collegiate peers, local drinking rituals, et cetera) negatively impacted these students' lives, administrators should arm themselves with the predictors of these potential problems to assist students through this tumultuous growth period in their lives. The life-course perspective can aptly frame the transitions into higher education and post-graduation life and all of the years in between.

Lastly, the findings of the present study need to be further contrasted with the over abundance of self-report data that exists on collegiate alcohol and drug use. In particular, the reasons why the findings of existing self-report data do not translate into the results found in the analysis of official data need further explanation. Replication in other college towns is necessary to determine where the gaps in these analyses are. These replications should vary the size of the host university and town, and also look into the variables that predict alcohol/substance use problems. These factors include the density of alcohol outlets, density of student living, residential versus commuter campuses, local attitudes and policies towards alcohol/substance use, and average drink price. Campuses in communities that are state capitols (such as Virginia Commonwealth University, Ohio State University, University of South Carolina, and Florida State University) may differ due to the level of politics that exist in these towns and should be carefully controlled for in any replication. Of particular interest is a better description of the cultural ambivalence outlined in the present study. Does this ambivalence project outward from

campus cultures that promote alcohol and drug consumption, from host communities, or do these cultures feed off of each other yielding amplified problems for both students and community members aged 18-24?

Conclusions

Interventions levied on students for alcohol- and drug- related offenses in the form of sanctions from either the criminal justice system or a university disciplinary system fail to produce the desired outcomes expected by these authorities. Other than a slight increase in academic performance for students sanctioned by the criminal justice system, the effects of each system are null or may actually backfire. These data strongly suggest that a culture of ambivalence toward alcohol exists that impedes the sanctioning process regardless of the severity of the punishment as proscribed by law. Thus, any crackdowns or increased prosecution of these types of offenses may prove to offer little results other than slight improvements for students' academic careers.

The majority of theoretical frameworks that focus on procedural justice also fail to predict the outcomes presented in this study. These students appear to be impervious to procedural stigmatization and the forces of deterrence for these types of offenses. Future research should concentrate on the cultural factors that predict offending and recidivism within this population. For example, fraternity and sorority membership predicts offending, but not recidivism. The same occurs across race: being white predicts offending, but not re-offending.

Finally, understanding the reasons why the university disciplinary system predicts amplification in the likelihood of recidivism is of great importance. If the underlying factors that are associated with this amplification can be identified, the university stands a better chance in seeing a reduction in the levels of recidivism since this system tends to catch offenders earlier in their academic careers.

APPENDIX A
DESCRIBING A CULTURE OF SUBSTANCE USE

A Culture of Substance Use

Products such as coffee, tea, and soda, cigarettes, cigars, and smokeless tobacco, and beer, wine, and liquor have long been intertwined with American culture at different levels throughout the country's history. Take, for example, the entanglement of smokeless tobacco and Major League Baseball (MLB). At the point in time in which professional baseball began in the 1840s, chewing was overwhelmingly the primary method of consuming tobacco products in the United States (Orleans, Connolly, & Workman, 1993). In spite of the popular consciousness coming to believe that spitting spread tuberculosis, then the leading cause of death in the nation, the habit was still popular with ball players while the nation had progressively switched to a "safer" alternative – cigarettes. Many of these players reported to use chewing tobacco to keep their mouths moist in ballparks with poor air and dusty conditions and continued to use despite the potential for consequences.

Over 150 years later, a substantial amount of players continue to use smokeless tobacco despite the modernization of ballparks and thus without the poor air quality the forefathers of baseball were trying to combat. Only, in recent times, slight differences in the form of the habit occurred since the advent of snuff and pouches (so-called 'bandits'). Using self-report surveys from 1998 to 2003, Severson, Klein, Lichtensen, and Orleans (2005) discovered that 24.8% of minor league players used smokeless tobacco products in the previous 7 days in 2003, down from 31.7% in 1998 – a substantial, short-term victory for public health officials and the administration of the minor leagues. Yet, these researchers found that 36% of major league players reported using in the previous 7 days in 2003 compared to 35.9% in 1998.

Without a doubt chewing tobacco has always been prevalent in baseball and deeply imbedded in its culture at rates that eclipse the general public's usage of this and similar products; yet, the active promotion and marketing (primarily) of snuff in the late 1970s and early 1980s have greatly exasperated the amount of smokeless tobacco use among professional players (Severson, Klein, Lichtensein, Kaufman, & Orleans, 2005). Regardless of the larger and successful societal anti-tobacco movement, and even some internal pressures on players, coaching staff, and league administrators, shifts in tobacco use among professional baseball players are slow to come. The habit is well established in the institution of baseball to the point in which use among current players is seemingly self-sustaining while the pressures to initiate use among young players remain high. This is well after the dangers of tobacco use have been disseminated among the general public and the fates of Babe Ruth and Bill Tuttle sealed. When substances are so tightly tied to a culture (or subculture), effectively addressing the problem without addressing the underlying culture can prove disappointing to public health officials, researchers, and policy-makers. This sort of tale could be told of many products that are currently marketed to consumers or have been in the past.

Of these products listed earlier, alcoholic beverages have the potential to cause a trifecta of impairment, interpersonal strife and violence, and significant health maladies – but have dominated, and now monopolizes, as the nation's acceptable and legitimized inebriant in social settings (Kenney, 2006). The nation's youth, however, are excluded from this norm, in theory, until their 21st birthday. Yet the American culture tolerates some levels of alcohol use among our youth, particularly in private settings, and the prevalence of teenaged consumption partially reflects this notion. As remarked by Wechsler and Wuethrich (2002):

Some parents oppose their children drinking hard liquor but don't mind beer. One student told us about her father's response to alcohol: 'On prom night I went to my friend's house, his parents were not home. Dad wasn't sure he was going to let me go; he was concerned about drugs, sex, and drinking. I told him that I could promise two of the things, but couldn't tell him there wasn't going to be beer. He said that was the least of his worries.' (243)

In a time when so many noxious influences, substances, and situations exist for children and young adults growing up, some beer or other "soft" substances with friends may not seem so bad relative to all the other possibilities available to our youth. In fact, to some, it may be considered a rite of passage that connects generations with a bond that has been shared by many previous generations that have preceded us.

An imbalance of positive depictions of alcohol consumption, and to a lesser degree, "soft" drug use, by teens and young adults in American films and similar popular references in popular music (across genres) consumed by youth is prima facie evidence of the foremost contradiction: American society recognizes and tolerates some levels of consumption as being ingrained in its culture yet it remains essentially punitive when youths are arrested for alcohol and drug violations. A simple overview of popular culture speaks volumes. For example, "cult classic" films and television series with hipster beauties of both sexes and jesting and jovial accounts of substance use continue to reap substantial profit each year. *Weeds*, a Showtime series that follows an attractive, young, widowed mother who deals marijuana in Southern California to sustain her family's posh lifestyle, is entering its third season with rave reviews and healthy DVD sales for previous seasons. In April of 2008, the first season of *Weeds* ranked third in Netflix Top 25 of Television Series rentals behind *The Sopranos: Season 1* and *24: Season 1* (Netflix, 2008). *That 70's Show*, which follows a clique of teens through their stoney high-school years and shortly beyond, lasted eight seasons and continues in syndication. Movies such as *Friday*, *Harold and Kumar Go to White Castle*, *Half Baked*, *American Pie*, *Dazed and*

Confused and *Jay and Silent Bob Strike Back* depict substance use (alcohol and soft-drug use) in a lighthearted manner, attracting millions that can relate. Hollywood continues to embrace the young adult years and the follies of adolescence and post-adolescence, with drugs and alcohol conceivably inseparable.

Many celebrities are astutely picking up on this and marketing their own intoxicating concoctions: shock rocker Marilyn Manson produces his own brand of absinthe named Mansinthe, a winner of the 2008 San Francisco World Spirits Competition; hair band giant and tequila enthusiast Sammy Hagar manufactures a line of fine tequilas from 100% blue agave called Cabo Wabo, bearing the same name as his night club in Cabo San Lucas, Mexico; Madonna, Bon Jovi, Barbara Streisand, Celine Dion, Lil' Jon, KISS, Francis Coppola, and George Lucas all have their own wine labels, and the Rolling Stones are producing a special kind of pinot noir called "ice wine" in 2008 labeled "Symphony for the Devil." As with smokeless tobacco, alcoholic beverages and other drugs have a long cultural history in America. Yet it seems that, unlike tobacco, alcohol and particular soft drugs are currently portrayed as mainstream and acceptable – especially among the youth of America.

APPENDIX B
PERCEPTION OF STUDENTS

A Self-Report Study

In the fall of 2006 and spring of 2007, Jennings, Khey, Miller, and Lanza-Kaduce (2007) replicated a study primarily used as a teaching device for an undergraduate course in research methods in criminology. The study utilizes a convenience sample of undergraduates at the university and asks these respondents a battery of questions regarding their perceptions of crime and victimization as well as their own attitudes on these subjects. Relevant to the present study, several questions were posed to respondents asking them to reveal their opinions on and own use of drugs and alcohol at the university. Figure 4-7 summarizes the pertinent questions of interest. Broadly speaking, students remained either neutral or agree with the statements “drunkenness is a campus problem” ($\bar{x} = 3.20$, $\sigma = 1.165$) and “binge drinking is a campus problem” ($\bar{x} = 3.30$, $\sigma = 1.147$). Interestingly, student responses on the statement “I usually drink when I go out” were more widely dispersed. The two modal responses are strongly disagree and agree, however the mean response centers on neutral ($\bar{x} = 2.93$, $\sigma = 1.470$). One can begin to see that there are a good amount of abstainers in this group of undergraduates as well as active drinkers. In fact, 10.7% of the respondents in this study reported never drinking alcohol in their lifetime, and of the remaining respondents, 64.7% were considered active drinkers (as measured by use in the last 30 days). Problem drinking, as proxy measured by responses to this statement: “When I go out and drink alcohol, I drink until I am intoxicated,” tended to center between disagree and neutral responses ($\bar{x} = 2.43$, $\sigma = 1.412$). This seemed to be due to a large influx of abstainers in the sample, but the fact remains that a good proportion of students responded agree or strongly agree when posed to assess this statement. The preponderance of this evidence suggests that students are diverse in their assessment of alcohol as a campus problem and their own drinking

habits – and both range widely. In terms of students’ assessments of campus problems, drinking ranks highly: students tended to disagree with the statements “I am afraid of being robbed” ($\bar{x} = 2.04, \sigma = 1.118$), “I am afraid of having my car stolen” ($\bar{x} = 2.15, \sigma = 1.403$), and “I am afraid of being assaulted on campus” ($\bar{x} = 2.10, \sigma = 1.116$).

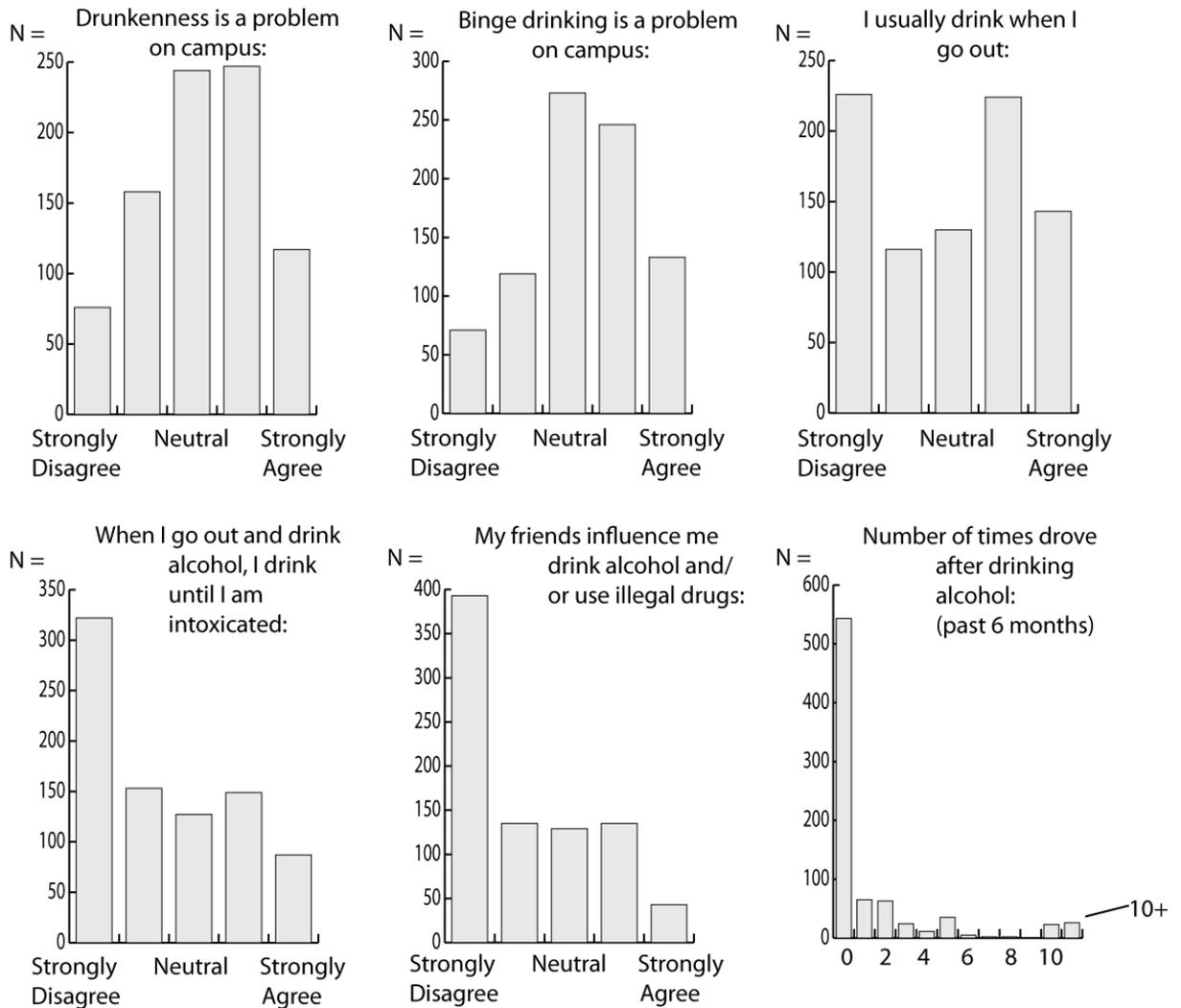


Figure B-1: Summary of Students’ Attitudes and Perceptions of Drug and Alcohol Use at the Study University.

APPENDIX C
MULTIVARIATE TABLES INCLUDING STANDARD ERRORS

Table C-1: Logistic Regression Estimates of the Effect of Official Processing on On-Time Graduation¹

Independent Variables	1 N = 570	2 N = 570	3 N = 570	4 N = 570	5 N = 550
Race	0.89 (0.246)	0.92 (0.245)	0.90 (0.244)	0.89 (0.246)	0.95 (0.254)
Gender	2.69*** (0.204)	2.54*** (0.202)	2.44*** (0.199)	2.68*** (0.204)	2.57*** (0.210)
IB or AP Student	0.51*** (0.208)	0.51*** (0.207)	0.51*** (0.207)	0.51** (0.208)	0.55** (0.220)
Greek Affiliation	1.06 (0.185)	1.05 (0.184)	1.08 (0.184)	1.07 (0.185)	1.01 (0.192)
Term of First Offense	1.08 (0.046)	1.10* (0.045)	1.13** (0.042)	1.08 (0.046)	1.07 (0.048)
Number of Offenses	0.91 (0.136)	1.13 (0.120)	0.93 (0.161)	0.87 (0.164)	0.88 (0.174)
Sum of Serious Offenses	1.40 (0.262)	1.36 (0.263)	1.43 (0.261)	1.41 (0.263)	1.21 (0.279)
Five-Year Program	5.11*** (0.405)	5.23*** (0.402)	5.15*** (0.402)	5.09*** (0.405)	5.33*** (0.414)
Judicial Affairs Only	0.51*** (0.220)	-	-	Reference	Reference
Arrest Only	-	1.51† (0.220)	-	1.86** (0.237)	1.87** (0.245)
Both Judicial and Arrest	-	-	1.64† (0.300)	2.21** (0.322)	1.96* (0.334)
High School GPA	-	-	-	-	0.75 (0.270)
R²	0.17	0.16	0.16	0.17	0.18

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

Table C-2: Logistic Regression Estimates of the Effect of Official Intervention on On-Time Graduation¹ (N = 570)

Independent Variables	Exp(B)
Race	0.95 (0.247)
Gender	2.48*** (0.206)
IB or AP Student	0.49*** (0.210)
Greek Affiliation	1.09 (0.187)
Term of First Offense	1.07 (0.046)
Number of Offenses	1.02 (0.160)
Sum of Serious Offenses	1.21 (0.277)
Five-Year Program	5.44*** (0.408)
No Punishment (First Offense)	Reference ²
Judicial Affairs Punishment Only (First Offense)	1.28*** (0.367)
Criminal Justice Punishment Only (First Offense)	1.73* (0.408)
Joint Punishment (First Offense)	1.81 (0.408)
Mild Punishment (First Offense)	0.49* (0.348)
Severe Punishment (First Offense)	0.86 (0.412)
R²	0.17

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

² Serves as a reference category for both level of punishment (e.g., mild or severe) as well as type of punishment (e.g., judicial affairs or criminal justice)

Table C-3: Logistic Regression Estimates of the Effect of Official Intervention on Dropout or Dismissal¹

Independent Variables	Model 1 N = 329	Model 2 N = 318	Model 3 N = 329	Model 4 N = 318
Race	0.50† (0.390)	0.60 (0.411)	0.49† (0.391)	0.60 (0.412)
Gender	1.90 (0.405)	1.77 (0.414)	1.88 (0.410)	1.77 (0.418)
IB or AP Student	0.65 (0.369)	0.82 (0.394)	0.65 (0.372)	0.82 (0.395)
Greek Affiliation	0.52† (0.367)	0.46* (0.382)	0.54† (0.370)	0.47* (0.386)
Term of First Offense	0.94 (0.099)	0.94 (0.099)	0.91 (0.106)	0.93 (0.106)
Number of Offenses	1.85* (0.312)	1.64 (0.331)	1.85* (0.314)	1.62 (0.332)
Sum of Serious Offenses	3.54** (0.485)	3.51** (0.500)	3.56** (0.498)	3.63** (0.518)
Mild Punishment (First Offense)	-	-	0.64 (0.533)	0.76 (0.558)
Severe Punishment (First Offense)	-	-	0.77 (0.650)	0.76 (0.692)
High School GPA	-	0.23** (0.472)	-	0.24** (0.475)
R²	0.12	0.18	0.13	0.18

¹ Exp(B) values reported, representing the odds ratio of current student status. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

Table C-4: Ordinary Least Squares Estimates of the Effect of Official Processing on Recidivism¹

Independent Variables	1 (N = 620)	2 (N = 599)
Race	- 0.04 (0.061)	- 0.05 (0.061)
Gender	0.21*** (0.051)	0.19*** (0.051)
IB or AP Student	- 0.12* (0.054)	- 0.08 (0.05)
Greek Affiliation	0.08† (0.054)	0.08† (0.047)
Term of First Offense	- 0.06*** (0.012)	- 0.06*** (0.012)
Dropout or Dismissal	0.09 (0.091)	0.06 (0.092)
Current Student	- 0.02 (0.052)	- 0.02 (0.051)
Five-Year Program	- 0.11 (0.096)	- 0.09 (0.095)
Judicial Affairs Only	Reference	Reference
Arrest Only	0.24*** (0.061)	0.23*** (0.061)
Both Judicial and Arrest	1.38*** (0.062)	1.36*** (0.062)
High School GPA	-	- 0.19** (0.065)
R²	0.49	0.50

¹ Unstandardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

Table C-5: Ordinary Least Squares Estimates of the Effect of Official Intervention on Recidivism¹

Independent Variables	1 (N = 124)	2 (N = 113)	3 (N = 496)	4 (N = 477)
Race	- 0.09 (0.217)	- 0.12 (0.224)	- 0.02 (0.044)	- 0.02 (0.042)
Gender	0.78*** (0.189)	0.66*** (0.190)	0.05 (0.037)	0.04 (0.035)
IB or AP Student	- 0.25 (0.178)	- 0.10 (0.185)	- 0.01 (0.040)	- 0.02 (0.039)
Greek Affiliation	0.14 (0.163)	0.11 (0.166)	0.04 (0.034)	0.03 (0.033)
Term of First Offense	- 0.11*** (0.041)	- 0.07† (0.043)	- 0.03** (0.009)	- 0.04*** (0.008)
Received No Punishment (First Offense)	Removed	Removed	Reference ²	Reference ²
Received Mild Punishment (First Offense)	Reference	Reference	- 0.29*** (0.059)	- 0.31*** (0.057)
Received Severe Punishment (First Offense)	- 0.38* (0.217)	- 0.55* (0.213)	- 0.19** (0.071)	- 0.25*** (0.067)
Dropout or Dismissal	Constant	Constant	0.003 (0.060)	0.005 (0.058)
Current Student	- 0.03 (0.171)	0.03 (0.172)	0.02 (0.038)	0.002 (0.036)
Five-Year Program	- 0.54 (0.295)	- 0.49† (0.291)	- 0.04 (0.072)	- 0.04 (0.069)
Judicial Affairs Punishment Only (First Offense)	Reference	Reference	1.09*** (0.069)	1.06*** (0.066)
Criminal Justice Punishment Only (First Offense)	- 0.38* (0.217)	- 0.32 (0.213)	0.24*** (0.044)	0.25*** (0.042)
Joint Punishment (First Offense)	- 0.25* (0.181)	- 0.25 (0.179)	-	-
High School GPA	-	- 0.61** (0.213)	-	- 0.03 (0.046)
R²	0.23	0.28	0.36	0.39

¹ Unstandardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

² Serves as a reference category for both level of punishment (e.g., mild or severe) as well as type of punishment (e.g., judicial affairs or criminal justice)

Table C-6: Ordinary Least Squares Estimates of the Effect of Official Intervention on Recidivism for Arrestees While Factoring in Juvenile Arrest¹

Independent Variables	1 N = 117	2 N = 107
Race	- 0.01 (0.226)	- 0.07 (0.236)
Gender	0.72*** (0.192)	0.61*** (0.192)
IB or AP Student	- 0.10 (0.189)	- 0.05 (0.188)
Greek Affiliation	0.11 (0.168)	0.23 (0.170)
Term of First Offense	- 0.07 (0.043)	- 0.08† (0.042)
Received No Punishment (First Offense)	Removed	Removed
Received Mild Punishment (First Offense)	Reference	Reference
Received Severe Punishment (First Offense)	- 0.44* (0.217)	- 0.44* (0.209)
Dropout or Dismissal	Constant	Constant
Current Student	0.04 (0.177)	0.13 (0.178)
Five-Year Program	- 0.52 (0.298)	- 0.50† (0.291)
Judicial Affairs Punishment Only (First Offense)	Reference	Reference
Criminal Justice Punishment Only (First Offense)	- 0.29 (0.221)	- 0.35† (0.213)
Joint Punishment (First Offense)	- 0.20 (0.185)	- 0.31† (0.181)
High School GPA	- 0.52* (0.222)	- 0.33 (0.225)
Juvenile Arrest	0.37 (0.336)	Removed
R²	0.27	0.24

¹ Unstandardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values.

Table C-7: Ordinary Least Squares Estimates of the Effect of Official Processing and Intervention on Overall GPA Difference (Models 1 & 2) and Change in GPA Difference Before and After First Intervention (Models 3 & 4)¹

Independent Variables	1 (N = 548)	2 (N = 548)	3 (N = 356)	4 (N = 356)
Race	0.13** (0.051)	0.13** (0.051)	- 0.06 (0.098)	- 0.05 (0.097)
Gender	- 0.01 (0.042)	0.01 (0.042)	- 0.12 (0.086)	- 0.13 (0.086)
IB or AP Student	0.03 (0.046)	0.03 (0.046)	0.06 (0.093)	0.06 (0.093)
Greek Affiliation	0.07 (0.039)	0.07† (0.039)	0.07 (0.079)	0.06 (0.079)
Term of First Offense	- 0.02† (0.010)	- 0.01 (0.010)	- 0.06** (0.021)	- 0.05** (0.021)
Number of Offenses	- 0.07* (0.034)	- 0.06† (0.032)	- 0.03 (0.071)	- 0.01 (0.064)
Received Mild Punishment (First Offense)	- 0.02 (0.067)	- 0.05 (0.073)	- 0.04 (0.122)	- 0.22 (0.139)
Received Severe Punishment (First Offense)	- 0.04 (0.081)	- 0.08 (0.085)	0.16 (0.151)	0.02 (0.160)
Current Student	- 0.50*** (0.040)	- 0.49*** (0.040)	- 0.21** (0.081)	- 0.21** (0.081)
Five-Year Program	0.34*** (0.075)	0.33*** (0.075)	- 0.06 (0.147)	- 0.05 (0.147)
Arrest Only	0.07† (0.049)	-	0.29** (0.096)	-
Both Judicial and Arrest	0.12† (0.068)	-	0.22 (0.142)	-
Judicial Affairs Punishment Only (First Offense)	-	0.08 (0.075)	-	0.15 (0.159)
Criminal Justice Punishment Only (First Offense)	-	0.06 (0.052)	-	0.34*** (0.102)
Joint Punishment (First Offense)	-	0.13 (0.085)	-	0.09 (0.177)
High School GPA	0.35*** (0.054)	0.36*** (0.055)	- 0.19† (0.109)	- 0.21† (0.109)
R²	0.32	0.34	0.12	0.09

¹ Unstandardized Beta values reported. Significance values are as follows: †, p < 0.10; *, p < 0.05; **, p < 0.01; ***, p < 0.001. The standard error is found below the reported Exp(B) values. No punishment is the reference category for all models.

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BIOGRAPHICAL SKETCH

Dave Khey holds two masters degrees from the University of Florida, one in Pharmacy and Pharmaceutical Sciences with a concentration in Forensic Drug Analysis, and the other in Sociology. This work fulfills his requirements for a Doctorate in Criminology, Law, and Society at the University of Florida. His most recent works include an assessment of internal controls across gender, and their role in academic dishonesty in undergraduates with Chris Gibson and Chris Schreck, several investigations into a psychoactive plant called *Salvia divinorum* and its use among undergraduates with Bryan Miller and Hayden Griffin, and the geospatial analysis of college student arrestees with Matt Nobles and Kathleen Fox.

DRUG AND ALCOHOL ARRESTEES IN A COLLEGE TOWN: EXPLORING MULTIPLE-
AGENCY OFFICIAL DATA TO ASSESS THE IMPACT OF ARREST AND SANCTIONS
ON CRIMINAL AND ACADEMIC CAREERS

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This dissertation assesses the impact of alcohol- and drug- offenses on a student's college career as well as examine if offenders are likely to get into further trouble. The reader will gain a better understanding of what factors are involved in the likelihood of reoffending for these crimes, and in turn, understand how they may begin to address reducing drug- and alcohol-related problems in college student populations. This dissertation also fills in a much needed gap by looking at this issue by using officially collected arrest data instead of those produced by surveys. It is always best to approach a problem using a variety of data sources and methodologies for data collection, and this dissertation begins to fill this void.