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THE LASTING IMPACT OF A CRIMINAL RECORD: EFFECTS OF ARRESTS AND INCARCERATIONS ON EMPLOYMENT STATUS

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ABSTRACT

The purpose of this study is to examine the "scarlet letter" of a criminal record in today's society, specifically the lasting impact it has on employment. The current study aims to explain the impact of criminal justice contact, and how it can impact employment status. Given prior research largely uses audit studies with experimental design and focuses on individuals actively searching. The current study uses survey method analyses and targets individuals who are out of the labor force. This research is also unique because it focuses on young adults aged 20 to 24. Moreover, this research examines how race moderates employment status. By using the National Longitudinal Youth Survey 1997 (NLSY97), a nationally represented sample, this research found that both arrest and incarceration have a negative impact on employment status. The results also show prior incarceration is associated with a to a greater likelihood of an individual being out of the labor force, when compared to arrest. Additional results also show the relationship between criminal justice contact and being out of the labor force is the strongest among black respondents.

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Chapter 1

Introduction

It is crucial to understand the impact of a criminal record in today's society, specifically regarding employment. In 2018, the United States had 2.3 million inmates (Wagner & Sawyer 2018). In the past three decades alone, the number of United States inmates has increased by 600% (Pager 2003). While there has been a staggering increase of inmates in the United States, many will be released and re-enter society. About 95% of inmates will be released, resulting in more than 500,000 releases per year (Pager 2003). With most inmates returning to society, finding work is a key factor too successful reintegration. Most ex-offenders are willing and able to work, but are often discriminated against because of their criminal record (Pager 2003).

Punishment for a crime is meant to be served through incarceration, yet many individuals face the effects of a conviction long after their jail time through disadvantages in the employment market. Having a steady job has been found as a key to successful reintegration (Pager, Western, & Sugie 2009). Ex-offender unemployment rates range from 25 to 40 percent (Pager 2005). Recidivism is more likely when ex-offenders are unable to find a job, as they are more likely to turn to informal or illegal work methods. Recidivism is the likelihood of someone with a prior conviction to reoffend (Pager 2005). Those with an arrest or incarceration are often branded with a "scarlet letter" of their prior record. This scarlet letter leads to an additional invisible punishment for those with a record, or even those who never served jail time (arrested but never incarcerated). Arrests can follow someone for the rest of their life, ruining their reputation, especially for something they were never incarcerated for (Uggen, Vuolo, Lageoson, Ruhlan, & Whitman 2014). Many people with prior arrests are at a disadvantage because they "having a record", leading to "arrests [being] associated with long-term joblessness" (Uggen et. al. 2014, p. 630). Those with

criminal records face difficulty when looking to re-enter the labor market, and can be affected long after their time has been served (Pager 2003).

The current study revisits the relationship between the impact a criminal record (self-reports of both arrest and incarceration) and employment status. While there have been prior studies to show the lasting impact of a criminal record, this is often done through experimental design. Prior studies focus on employment status defined as employed and unemployed, while the current study will also include the discouraged worker. For example, Pager's famous audit study focuses on developing resumes of fake applicants to apply for a job (Pager 2003). These resumes are sent to different employers, and the researchers vary the race and if they have a criminal record (Pager 2003). This, and many other similar audit studies, do not consider the trends for those who are not formally looking, also known as the discouraged worker. These prior studies focus on a criminal record as a whole, ignoring the different impacts of arrests and incarcerations.

The current study focuses on explaining the difference between the impact of arrests and incarcerations, not just a criminal record, and how each can impact employment status. This study is novel because it uses a nationally represented survey of young adults (ages 20 to 24). Existing research uses experimental design and does not concentrate on a certain age demographic. This study will also look at respondents who are not formally searching for jobs or may not be searching at all. This research incorporates those who are unemployed, as well as those who are out of the labor force. By looking at these varying levels of involvement in the labor market, this study will contribute to developing an understanding of how the mark of a criminal record can relate to employment status.

I will analyze the effect of self-reported arrests and incarcerations on ex-offenders and how this is related to labor market status. This study uses the National Longitudinal Survey of Youth 1997 (NLSY97) to provide comprehensive survey responses of a national sample. I will emphasis a time period when the respondents are most likely to start entering the labor market, ages 20 to 24. This research will

complement the findings of prior audit studies by examining if there is a relationship between criminal justice contact and employment status.

Chapter 2

Literature Review

Overview

Of the 14 million arrests in the United States in 2009, over 7 million arrests were for behaviors that are not seen as a danger to society or workplace (Solomon 2012). A key for successful ex-offender reentry into society is employment. Statistically, 60% of inmates who are released from prison will remain out of work for a year (Pager et. al. 2009). Studies have found over half of released inmates will being rearrested within 3 years (Pager et. al. 2009). Inmates often find difficulty readjusting to society, but face added difficulty when they are unable to find work. Research suggests inmates face discrimination from their arrest record when looking for work. These assumed judgements from their prior record can lead to individuals returning to a life of informal or illegal work, as they are unable to find a traditional job to support themselves.

Discrimination against those with records not only harms the individuals with records, but also society's labor market. Today's current labor market shows a demand for employees. The current unemployment rate has been at a record low, ranging from 3.7% to 4% during September 2018 to February 2019, which is the lowest it has been since 2000 (Bureau of Labor Statistics 2018). For comparison and scope, the Great Recession in the late 2000s caused 10% unemployment (Lee 2017). Those who were unemployed during the Great Recession are not returning to their jobs, causing many vacant roles and low unemployment (Lee 2017). Society and the labor market should take advantage of those unemployed, whether or not they have a criminal record. The economy needs these positions filled, but employers have hesitation in filling jobs with ex-offenders.

As previously stated, many employers will choose to not hire someone with a criminal record. Employers stereotype ex-offenders as "unskilled, untrustworthy, [have] a propensity to steal, and that he or she might harm customers" (D'Alessio, Stolzenberg, & Eitle 2014, p. 89). This negative attitude tends to remain a constant stereotype of employers, but their willingness to hire those with a criminal record fluctuates with the labor market. When unemployment is low, employers are more likely to hire ex-offenders (D'Alessio et. al. 2014). This is because of the restricted labor market, and employers are in desperate need of bodies to fill open roles. When the economic conditions change and cause higher unemployment, those with a criminal record are often the first employees to be released. This trend is known as "first in, first out" or "last hired, first fired" (D'Alessio et. al. 2014). Last hired, first fired shows the elastic demand of employees with a criminal record. With ex-offenders out of a job due to poor economic conditions and high unemployment, they are often unable to provide for themselves. This can lead to them to apply for different jobs, turning to crime to provide for themselves, or becoming a discouraged worker.

Many workers who have arrest or incarceration records try to apply to jobs, but quickly become discouraged from the bias they face in the labor market. According to the Bureau of Labor Statistics, a discouraged worker is defined as "marginally attached…those persons not in the labor force who want and are available for work, and who have looked for a job sometime in the prior 12 months, but were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey" (Bureau of Labor Statistics 2019, n.p.). Furthermore, discouraged workers are not looking for work because "they believed no jobs were available for them or there were none for which they would qualify (Bureau of Labor Statistics 2019, n.p.). This suggests a difference in their search strategies. In one specific experience, a man applied to over 200 positions, but was never selected, assumingly because of his criminal background (Solomon 2012). He wrote a letter to the US Department of Justice explaining his circumstances and the discrimination he was facing in the labor market (Solomon 2012). This

frustration can lead to individuals turning to informal or illegal methods to make money, risking recidivism.

Those who are able to enter the job market through legal employment are more likely to refrain from crime. Ethnographic studies support that individuals who participate in illegal work might switch between legal work and illegal work depending on the various costs and benefits from each (Fagan & Freeman 1999). Research supports that "crime rates are inversely related to expected legal wages, particularly among young males with limited job skills or prospects" (Fagan & Freeman 1999, p. 225). This means if expected legal wages are low, crime rates will be high. This shows that individuals with limited skills and a criminal record are more likely to participate in illegal work if there are low legal wages. Those with a record need income to provide for themselves. If legal wages are low, these individuals will choose to risk their involvement with illegal work for the potential of higher wages. Ethnographic research suggests "that involvement in illegal work often is motivated by low wages and harsh conditions in legal work" (Fagan & Freeman 1999, p. 225). This also echoes that some people are willing to participate in illegal work if their opportunities for legal work are not "good enough", which can be seen with low pay or poor conditions.

Both the government and employers have the potential to make positive, effective changes. Some governments are writing legislation to seal low-level records after a certain number of years (Solomon 2012). For potential employers, surveys suggest that minority business owners are more willing to hire ex-offenders than white business owners (Uggen et. al. 2014). The evidence and logic behind this idea is that blacks are more likely than whites to have exposure to incarceration, due to disproportionate arrests among blacks (National Association for the Advancement of Colored People n.d.). Therefore, blacks have a reduced stigma associated with hiring those with a criminal record, as they often have more exposure to those with records (Uggen et. al. 2014). Decreasing stigmas leads to these employers as being more likely to look at individual circumstances, such as discounting minor offenses (Uggen et. al. 2014). Right now, the evidence suggests that a positive search strategy for minorities with criminal records is to apply for

jobs with minority employers and bosses (Uggen et. al. 2014). This is similar to how some states are starting to seal low-level offense records, but instead, is up to the business owner. In the United States, there tends to be a disconnect with businessowners having a fearful stigma of hiring those with records.

Prior Theory: Labeling Theory

When focusing on the impact of a criminal record on employment, it is important to understand different sociological theories that can shed light on this topic. There are many prior trends and existing research theories focusing on criminal records and employment status. Specifically, there is a strong focus on the lasting impact of a criminal record. While there are many different theories, the labeling theory best explains the lasting impact.

Labeling theory is a relevant theory surrounding discrimination in the labor market from arrest and incarceration records. The labeling theories proposes when people are defined or labeled as deviant, there can be an undesirable and lasting impact (Lopes, Krohn, Lizotte, Schmidt, Vasquez, & Bernburg 2012). Labeling theory is further defined as "labeling entails that the identity assigned to an individual is in some respect altered to his discredit" (Knutsson 1977, p. 9). While all individuals can show behavior that is deviant, labeling theory recognizes that only some people who show their deviance are labeled (Knutsson 1977).

When applied to this specific study, labeling theory can be seen when those with records are unable to find work. Those with records are often left out of employment opportunities, as they are stuck with the "label" of a criminal, even after they have served their time for their crime. The labeling theory has strong effects on employment, as there is already overwhelming evidence that employers are resistant to hiring people with a criminal record. A recent study found that strong differences in attitudes and actions with willingness to hire ex-offenders: "Employers indicate a high level of willingness to hire ex-drug offenders…less than half as likely to call back such applicants compared without criminal records"

(Lopes et. al. 2012, p. 461). It is harder to transition to adulthood and employment with a criminal label, so people who develop a record when they are young face more difficulty. The impact of early labeling has a stronger correlation to affect someone throughout their life (Lopes et. al. 2012). This can be inferred from these individuals having little additional experience to be judged on, so their record negatively affects them. This supports the need to focus on those aged 20 to 24 for this research, and control for age. This timeframe can be a pivotal age, and can have strong impacts on one's long-term future, specifically through the labeling theory.

Labeling can have lasting effects on younger people, specifically teenagers and adolescents. When looking at teenagers, findings show that labeling can increase teenagers' interest and involvement with deviant groups (Bernburg, Krohn, & Riveria 2006). For example, teenagers are more likely to join a gang after having experience with criminal contact (Bernburg et. al. 2006). Furthermore, they are also more likely to engage with other deviant teenagers after having contact with the criminal justice system. Deviant labeling is crucial for teenagers, as getting this label could be a "consequential event for the life course, pushing or leading youths on a pathway of blocked structured opportunities and delinquency in young adulthood" (Bernburg et. al. 2006, p. 83). This is applicable to this study, as this study focuses on respondents aged 20 to 24. This study supports the labeling theory research of prior criminal contact, and the likelihood of interacting with other deviant teenagers. Labeling theory has an impact on people any age, but there is a specific emphasis, and detriment, on teenagers. Because the study focuses on early adulthood, it is crucial to understand the impact of labeling theory prior to early adulthood, as actions from a younger age can have lasting impacts.

The labeling theory can also be seen with early police intervention. "Early police intervention indirectly related to drug use", unemployment, and welfare recipients at ages 29-31 (Lopes et. al. 2012, p. 456). Policing has been found to have short-term and long-term effects, especially surrounding drug use. Early police intervention affects criminal outcomes, as well as unemployment and high school graduation (Lopes et. al. 2012). Police contact directly leads to being more likely to be arrested as a young adult

(Lopes et. al. 2012). This directly relates to the study, as an arrest as a young adult can have lasting impacts. One would assume that police contact would help, and deter people from crime. Instead, police contact shows discrimination, evidenced from the labeling theory. Individuals who have early contact with police see this as a stigma surrounding them, and they are most likely going to assume that they themselves are "bad". This can make it seem difficult like they are stuck being a target of police and act bad because they feel they are already labeled as "bad" by law enforcement. This highlights the key contributions of the labeling theory, and how it can be applied to this specific research study.

This existing label can lead to them becoming discouraged and unable to find work, leading to a life of illegal work, or recidivism. Relating to this research, labeling theory can be seen through those with prior criminal justice contact. Those who report a prior arrest or incarceration have the potential to be labeled as deviants, which can impact their job search and employment ability.

Prior Theory: Expected Discrimination

Evidence suggests that employers discriminate against those with criminal records. In a survey of employers, 90% of employers said they would rather fill their position with a welfare recipient, while only 40% were willing to fill the same position with an ex-offender (Holzer, Raphael, & Stoll 2003). While it is good for society to employ those on welfare, it shows the inherent discrimination and judgement against those with a criminal record. Employers vary their willingness to hire ex-offenders based on work experience since their release and specific type of crime (Holzer et. al. 2003). As cited earlier, over half of the arrests in 2009 were for behaviors not seen as a danger to society or the workplace (Solomon 2012). If ex-offenders are not given employment opportunities, there is a potential they will be unable to provide for themselves without turning to informal or illegal work. Without a legal job, individuals are unable to earn money, which can lead to higher chances of recidivism. This also relates

back to the labeling theory: an employer sees someone with a criminal record as a "bad" person, and makes a judgement to not hire them based on their record, rather than their actual qualifications.

There is a large amount of perceived discrimination in the workplace when considering prior records. When there is perceived discrimination, the applicant will expect less (for example, a lower salary) to improve their chances of being offered a job (Orazem, Werbel, & McElroy 2003). The Idaho Department of Labor has researched criminal history and employment questions. Through a resource guide for ex-offenders, the Idaho Department of Labor suggests the best answer on job applications to be "yes, will explain during interview" (Idaho Department of Labor 2009). A potential employee could be immediately terminated if they fail to disclose and is hired (Idaho Department of Labor 2009). As the resource points out "signing an application for employment, you are allowing an employer to do a background check", emphasizing it is best to share prior records with the employer before they discover it on their own (Idaho Department of Labor 2009). Those with prior convictions often feel "stuck", as they worry they will face discrimination if they report, but also could get be terminated if they don't report but it is discovered later.

One theory applicable to expected discrimination is the values theory. This theory argues "individuals' choice, persistence, and performance can be explained by their beliefs about how well they will do on the activity and the extent to which they value the activity" (Wigfield & Eccles 2000, p. 68). This theory assumes that an individual's values will directly influence their choices, leading to their achievement (Wigfield & Eccles 2000). This suggests if someone with a criminal record believes their record will have a negative impact of their ability to get employment, they will naturally perform "worse" and not value their own employment as much as someone without a criminal record. Someone with a criminal record is more likely to not value themselves as highly because they already expect to be treated at a lower value.

One study focusing on social integration of released prisons shows the impact of perceived discrimination. This study specifically focuses on transition data of 122 people released from

Massachusetts state prisons to the Boston area (Western, Braga, Davis, & Sirois 2015). This study shows the participants' different trends for social integration. When focusing on employment and public assistance findings, this study finds it was much more common for those who had been released to receive public assistance compared to employment, especially within the first two months (Western et. al. 2015). As time went on, more respondents were employed (Western et. al. 2015). At six months after release, only 52.6% of participants were employed (Western et. al. 2015). Of all respondents, 70.5% were receiving public assistance (Western et. al. 2015). This study emphasized the importance of being aware of disadvantage, citing that many of the participants start with being disadvantaged. Overall, this study shows the struggles and difficulties of life after prison. Ex-criminals face difficulty readjusting and re-entering society, which can lead to them feeling as if they are being mis-treated from their prior conviction. As seen in this study, almost three-fourths of the participants still relied on public assistance six months after release (Western et. al. 2015). This shows the majority are unable to fully provide for themselves, and need to rely on public support.

This highlights the importance of this new research. As seen from this Massachusetts-based study, the majority of individuals released still rely on public assistance. Those individuals with criminal records are unable to support and provide for themselves, causing them to rely on public support. These difficulties can lead to finding informal or illegal work, as well as recidivism.

Prior Research: Race and Criminal Record Discrimination

Racial issues have consistently been a problem in many aspects of society. The first issue relating to the impact of race is the perception of race. In a survey of metropolitan area residents, 25% of whites believe there is "a lot" of discrimination against blacks (Pager 2003). In the same survey, over 60% of blacks feel as if they face a lot of discrimination (Pager 2003). This demonstrates the perception of discrimination and race in today's society. Furthermore, there are racial disparities in the United States'

incarceration trends. African Americans represent 34% of the prison population, and are arrested at more than 5 times the rates of whites (National Association for the Advancement of Colored People n.d.). Africans and Hispanics make up 32% of the United States population, but represent 56% of the incarcerated population as of 2015 (National Association for the Advancement of Colored People n.d.). If incarceration rates for whites, African Americans, and Hispanics were all equal, the current prison population would decrease by about 40% (National Association for the Advancement of Colored People n.d.). These statistics show that minorities are disproportionately impacted by the criminal justice system.

Not only are minorities discriminated against in the criminal justice system, but they are also discriminated in the workplace. Over the past 25 years, there have been no changes in hiring rates (Quillian, Pager, Midtboen, & Hexel 2017). There is some evidence to suggest a decline in discrimination for Latinos, but due to the small amounts of research focusing on Latinos, it is inconclusive if it has actually declined (Quillian et. al. 2017). Coupling criminal justice and workplace disadvantages, minorities face a double disadvantage. This shows the disparity in today's society and how they are at extreme disadvantages for being a different race.

Throughout this study, race is used as a control variable. While this study will control for race, it is important to highlight racial discrimination against those with a criminal record. There have been multiple, well-known studies that have compared whites and blacks with call-back rates for job interviews, emphasizing the effect of race on receiving a call-back. Prior studies use experimental design, and there is a lack of similar studies using survey method. This specific study is important because it will show the impact of a criminal record through survey design, with a national represented sample, and control for race. After controlling for race, there are additional sub-analyses to show the impact and importance of race.

There have been multiple, well known studies that have compared whites and blacks on call-back rates for job interviews, emphasizing the effect of race and receiving a call-back. A seminal study was conducted by Pager. This study design was created through filling out applications for entry-level

positions posted in a local Milwaukee newspaper (Pager 2003). When looking just at the effects of whites through this experimental design study, there is a drastic impact of a criminal record for call-backs. Of 150 job applications submitted, 17% of whites with a criminal record compared to 34% of whites without a criminal record received a call-back (Pager 2003). This shows a criminal record for whites decreases their chances of a call-back by about half. (Pager 2003) A second, well-known study by Uggen found similar results: blacks are less likely to receive a call-back from an employer, with or without a misdemeanor arrest (Uggen et. al. 2014). Results showed 38.8% of whites without a misdemeanor arrest received a call-back, compared to 34.7% receiving a call-back and having a misdemeanor arrest (Uggen et. al. 2014). Comparatively to blacks, 27.5% of blacks with no misdemeanor arrests received a call-back, compared to 23.5% called back with an arrest record (Uggen et. al. 2014). These existing studies support the notion that there is discrimination against those with a criminal record, even when just examining whites. The current study will be important to see if there are the same impacts when controlling for race, while also looking at the different impacts of arrests and incarcerations.

"Ban the Box" policies are a common trend to attempt to reduce disparities against minorities and those with a criminal record through the job search. These policies are meant to prevent employers from asking about an applicants' criminal record (Agan & Starr 2016). The purpose of this is to reduce the discrimination of hiring those with criminal records (Agan & Starr 2016). However, Ban the Box policies have actually unintentionally suggested for employers to make their own assumptions about criminal records based on other characteristics—most notably race (Agan & Starr 2016).

Two studies support the theory that Ban the Box policies are actually encouraging double discrimination, rather than eliminating discrimination from the hiring process. This leads to statistical discrimination, specifically from making assumptions about race. One audit study, using about 15,000 fictitious online job applications, found that "white applications are on average about…23% more likely to receive a callback from an employer" (Agan & Starr 2016, p. 15). The study also found that, of employers who ask about prior criminal records, they are 62% more likely to call back an applicant with

no record compared to one with a record (Agan & Starr 2016). When focusing on race, there were even more drastic differences. Before the Ban the Box policies were in place, there was only a difference of about 7% for callbacks between whites and blacks (Agan & Starr 2016). When companies used the Ban the Box policies, the gap increased to 45%, meaning that whites were 45% more likely to receive a callback than similar black applicants (Agan & Starr 2016). Another comparable study, focusing on black and Hispanic men, found similar results, showing the negative consequences of Ban the Box policies (Doleac & Hansen 2016). This study found that Ban the Box policies "decrease the probability of being employed by 3.4 percentage points for young, low-skilled black men, and by 2.3 percentage points for young, low skilled Hispanic men" (Doleac & Hansen 2016, p. 2). This study echoes and supports "when an applicant's criminal history is unavailable, employers statistically discriminate against demographic groups that are likely to have a criminal record" (Doleac & Hansen 2016, p. 2).

The results of these two studies show that Ban the Box tactics are good in theory, but often lead to more discrimination. Arguably, Ban the Box policies could be worse for potential minority employees because they allow for employers to stereotype applicants based on race rather than knowing if their applicants have a criminal record or not. Ban the Box policies allow for the employer to "self-determine" if they think a certain demographic would have a criminal record, leading to them discriminating against those who might not even have a criminal record. When connecting Ban the Box policies to this study, research shows that getting rid of the "box" often leads to more discrimination. This discrimination can hurt individuals based on race or other factors, even if they do not have criminal justice contact. Ban the Box allows for assumed discrimination and stereotyping individuals, even if they do not fit the stereotype.

Chapter 3

Hypotheses

Through this research, I will analyze the relationship between arrest and incarceration and employment status of those surveyed in the National Longitudinal Survey of Youth 1997 (NLSY97).

Hypothesis 1

Based on prior research from the labeling theory, it is expected that once someone is labeled with an arrest record, the impact of the record will linger and be related to their employment abilities. This hypothesis is similar to prior research suggests, as it looks at the possible disparities of a criminal record and employment. This hypothesis will be tested in a different way from prior research, by using a nationally represented survey design.

Respondents with an arrest record will have a stronger likelihood of being unemployed or out of the labor force, compared to respondents without an arrest.

Hypothesis 2

According to prior research from the labeling theory, this is expected because once someone is labeled with an incarceration record, it is believed that the impact of the record will linger and affect their employment outcomes. This hypothesis is also similar to what prior research suggests through discrimination of a criminal record having lasting impacts.

Respondents with an incarceration record will have a stronger likelihood of being unemployed or out of the labor force, compared to respondents without an incarceration.

Hypothesis 3

From Hypothesis 1 and Hypothesis 2, it is expected that both an arrest record and an incarceration record will have a negative impact on employment status, leaving an individual with a record more likely to be unemployed or out of the labor force. When comparing arrests to incarcerations, an incarceration would be assumed to have a larger impact, because it accounts for actual jail time. This is supported through labeling theory, as I believe incarceration would have a "bigger label" than arrests, as it is more permanent and more public. I believe an incarceration record will have a greater impact than arrest records, leaving someone more likely to be unemployed or out of the labor force. This study will extend prior research, as prior studies have not analyzed the difference of the impact of arrests compared to the impact of incarcerations. Prior research only focuses on the impact of a criminal record as a whole, with no regard to arrests or incarcerations. This study offers a new perspective to research and shows the different impacts of arrests and incarceration records.

A prior incarceration will make someone more likely to be unemployed or out of the labor force, compared to an arrest record.

Hypothesis 4

As suggested from prior research through discrimination-based theories and audit studies, this is expected from previously observed discrimination against blacks. This hypothesis is also similar to what prior research suggests through discrimination of a blacks, when compared to whites in the labor force. This hypothesis will be tested through moderation analyses by focusing just on whites and blacks.

The relationship between criminal justice contact and employment status will be moderated by race. Blacks will have a stronger likelihood of being unemployed or out of the labor force, when compared to someone who is white.

Chapter 4

Data and Methods

Analytic Strategy

Bivariate Analysis

To start the analysis of the data, I first used a descriptive analysis to understand the variable distributions. Table 1 shows the descriptive of each variable included in the research. In addition to the descriptive table, I used a Spearman's R correlation (Table 2). This correlation shows how each variable relates to every other variable within the study. Spearman's R correlation is used because it measures the association between variables that are ordinal, interval, or ratio. Spearman's correlation determines the monotonic relationship strength and direction. Monotonic relationships mean as one variable increases, the other variable increases; or as one variable increases, the other variable decreases (Spearman's rank order correlation n.d.). This relationship is important to Spearman's correlation because it is less restrictive than having a true "linear" relationship between two variables (Spearman's rank order correlation n.d.). It is important to be able to identify relationships between variables, which helps to show relationships between variables and their significance.

Ordinal Regression

Multi-variate analyses were used to understand relationships between the descriptive variables, and the strengths of the relationships. Regression analyses mathematically calculate which variables have an impact and measure the impact on the other variables (Gallo 2015). Regressions look at the way these variables relate, and predict the future of their relationships from prior data (Gallo 2015). The research used ordinal regressions, because of the nature of the values. Ordinal regressions are important for this

study because it allows for an ordinal dependent variable and ordinal or continuous (ratio or interval) independent variables (Conduct and interpret an ordinal regression n.d.). By using an ordinal regression, there regression is not restricted to using binary variables.

The current study uses two different independent variables: arrests and incarcerations. Both regressions compare the independent variables to the main dependent variable: out of the labor force weeks. Out of the labor force weeks is the main dependent variable because the purpose of this study was to see how arrests and incarceration specifically impact the discouraged worker. Table 3 shows the regression between arrests and weeks out of the labor force, which also includes regressions including the control variables. Table 4 shows the regression between incarcerations and weeks out of the labor force, which also includes regressions including the control variables.

Moderation Analyses

To understand the relationship between criminal justice contact and its different employment statuses, I completed additional sub-analyses of race. If all of the races were observed in one model, the results would be averaged out from the different races. This would not accurately reflect the impact of race on arrests, incarcerations, and employment status. The sub-analyses allow for whites and blacks to be separated through different analyses, while focusing on only one race per analysis. This gives the ability to see the true impact of race for both whites and blacks. These sub-analyses are created in a similar to the regressions seen in Table 3 and Table 4, but are separated by race (whites and blacks) to show the specific impacts and disparities for whites and blacks. By focusing only on race, the different impacts of each race are highlighted. Table 5 focuses on the impact of race and arrests, with Table 6 focusing on the impact of race and incarcerations.

Sample

The data used for the analysis is a sub-sample of the National Longitudinal Survey of Youth 1997 (NLSY97). The NLSY97 is a nationally represented sample consisting of about 9,000 people between the ages of 12 and 16 years old as of December 31, 1996. The first round of the survey occurred in 1997, with both the eligible youth and the eligible youths' parents participating in hour-long individual interviews. To date, this group has been surveyed 17 times. The group is now interviewed every other year. At the time of this research, the most recent survey and data release took place in 2015-2016 (Round 17), with about 80 percent of the first-round sample interviewed in Round 17. The gender breakdown of the NLSY97 survey is 51% (4,599 participants) male and 49% (4,385 participants) female. The representative sample consists of 51.9% (4,665 participants) non-black/non-Hispanics, 26% (2,335 participants) black non-Hispanics, 21.2% (1,901 participants) Hispanics or Latinos, and .9% (83 participants) mixed. The NLSY97 collects various types of information including: employment; education, training, and achievement scores; household, geography, and contextual variables; parents, family process, and childhood; dating, marriage and cohabitation, sexual activity, pregnancy and fertility, children; income, assets and program participation; health: conditions and practices; attitudes, expectations, non-cognitive tests, activities; crime and substance abuse. (National longitudinal surveys n.d.)

Description of the Analytic Sample

I will be focus on Round 6 (2003) and Round 7 (2004) of the NLYS97. Some variables only focus on the specific round, but for the data, it is important to understand the responses from the start of the survey in 1997. Because of this, I draw on data from Round 1 (1997) to Round 7 (2004) for some variables. This scope allows for an accurate representation of the respondents' prior history. Round 6 and Round 7 were determined as the best rounds for this research based on questions asked and age of respondents. During Round 1, starting in 1997, interviewers were aged 12 to 16. By Round 6 (2003),

most respondents are out of high school and could be actively searching for jobs. Because employment is the focus of the dependent variables, it is crucial to make sure most respondents will be of employment age during this time period to be searching for jobs. Round 6 and Round 7 also included questions about arrests, incarcerations, and employment status, which were not all available in the following rounds.

The data was imported from the NLSY97 to STATA. I recoded variables to be able to ensure adequate counts and representations (see Appendix A for details on recoding). To provide a comprehensive overview of each of the variables, I used multiple parts from different topics. For example, each variable was asked in different ways and each question sometimes considered different things; therefore, I recoded all of the variables to represent one variable, rather than the multiple times it was being asked in various ways. Then, I used various analyses to examine the relationship on labor force participation, and understand if there is an impact of a criminal record on employment.

Dependent Variables

For the dependent variables of job search, there are many ways to analyze this. NLYS97 has many different ways to understand and interpret employment.

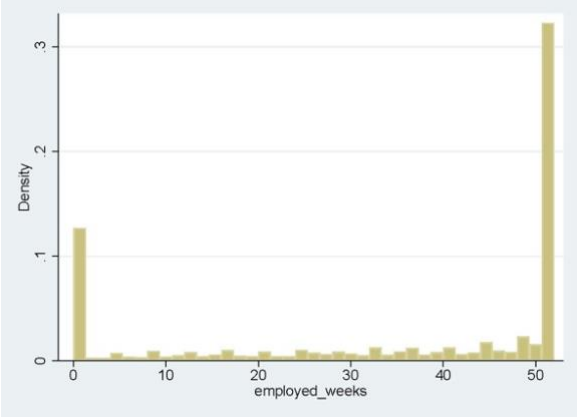


Figure 1. Weeks Employed

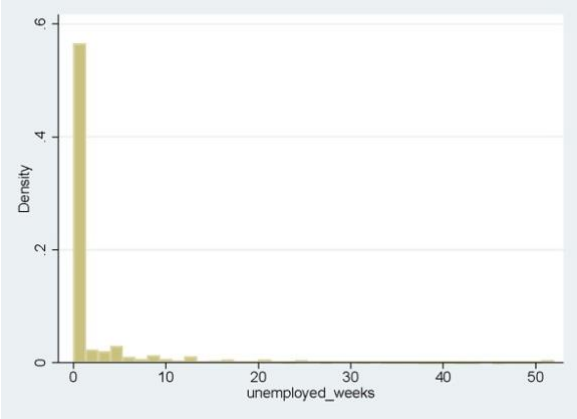


Figure 2. Weeks Unemployed

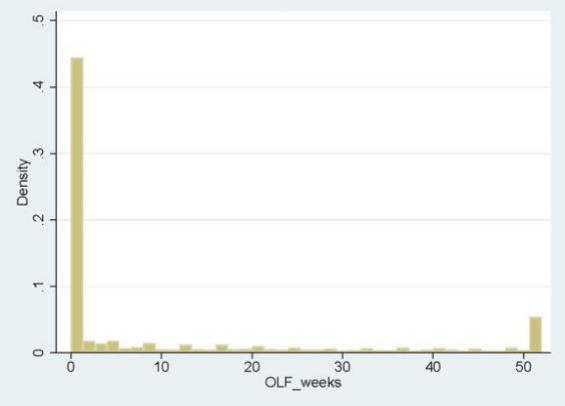


Figure 3. Weeks Out of the Labor Force

The dependent variables are employed, unemployed, and out of the labor force. The main variable used in creating the analyses is out of the labor force, which includes the discouraged worker. While this is the main dependent variable for the regressions and analyses, it is still important to understand the additional employment statuses. To determine employment status, I will use three recoded variables to represent the different employment statuses being evaluated (see Appendix A for details on recoding). The three variables used for the dependent variable are employed (Figure 1), unemployed (Figure 2), and out of the labor force (Figure 3). Employed represents respondents who said they were employed through military service or a company each week. Unemployed represents respondents who said they were unemployed. Out of the labor force represents respondents who said they were out of the labor force. After being recoded, the distribution can be seen for each of the variables in the histograms (Figure 1 to represent number of weeks respondent was employed, Figure 2 to represent number of weeks respondent was unemployed, Figure 3 to represent number of weeks respondent was out of the labor force). The figures show the number of weeks in the year the respondent said they were either employed, unemployed, or out of the labor force. These variables were representative of the different employment statuses during 2004, and were used to create an analysis of how employment status is related to arrests and incarcerations. This is represented by 52 weeks within the year 2004, based on the respondents' answers from the survey administered by the NLSY97. As stated within the hypotheses, I expect to find a relationship between both arrest records and incarceration records and employment status, leading someone to be more likely to be unemployed or out of the labor force.

For labor force participation, these three variables were generated through recoding and grouping responses. For all three variables, there were 8,984 responses. The minimum for all three variables was 0, with the maximum as 52, to represent 52 weeks in the year and the question being asked 52 times in the survey. The average number of weeks respondents were employed was 3.251, with the standard deviation as 8.529. The average number of weeks respondents were unemployed was 34.607, with the standard

deviation as 20.451. The average number of weeks out of the labor force (OLF) was 10.711, with the standard deviation as 17.156.

Independent Variables

For this research, it is important to look at both self-reported arrests and incarceration records. Arrests and incarceration records are both valuable to this research because they identify the differences between the impact of an arrest compared to how someone is treated after they have an incarceration record.

According to the Merriam Webster Dictionary, arrest is defined as to seize or capture, "specifically: to take or keep in custody by authority of the law" (Arrest n.d., n.p.). Incarceration is defined as "confinement in a jail or prison, the act of imprisoning someone or the state of being imprisoned" (Incarceration n.d., n.p.). Someone can be arrested without being incarcerated. For example, an individual may be arrested, but found not guilty, and therefore would not be incarcerated. To understand this research, it is crucial to understand the difference and the progression of arrests and incarcerations.

For this analysis, it is important to use both arrests and incarcerations. Both arrests and incarcerations have an impact on employment status. An arrest does not always lead to a record, but can still lead to a stigma (Uggen et. al. 2014). Using both arrests and incarcerations, the results will show the different impacts of an arrest and incarcerations. The results of this study are expected to show the differences of the impact for an arrest and an incarceration, and show that an incarceration leads to a stronger relationship.

Ever Arrested 2003

To measure arrest, I used a recoded variable to summarize if the respondents self-reported if they were ever arrested prior to 2004 (see Appendix A for details on recoding). This variable was created by accounting for arrests prior to the start of the survey (prior to 1997) and any arrests that might have taken place before 2004 (Round 1 to Round 6, 1997 to 2003). From this data, 22.25% percent of respondents had been arrested prior to 2004. This variable accounted if a respondent was ever arrested, but does not account for specific type of arrest.

To account for the variations in which arrests were recorded during the survey, the new variable "Ever Arrested 2003", was created. This identifies the number of people ever arrested (Table 1). When recoded, 0 was coded to represent those who have never been arrested, and 1 represents those who have been arrested. Of the 8,984 respondents observed, the mean to ever be arrested as .223, or 22.3%. This variable has a standard deviation of .416. The minimum is 0, with a maximum of 1, due to the dichotomous nature of the variable.

Ever Incarcerated 2003

The second independent variable is incarceration. To measure incarceration, I used a recoded variable to summarize if the respondents self-reported if they were ever incarcerated prior to 2004 (see Appendix A for details on recoding). This variable was created by accounting for incarcerations from January 1992 until December 2003. The survey asks participants about their incarceration prior to the survey, starting with the month the respondent turned 12 years old. The survey then asked each respondent for each month's incarceration status after their 12^{th} birthday. This variable does not account for what the respondent was incarcerated for specifically, or how many days the respondent was incarcerated. The survey question only has the following options: "R not incarcerated in this month and not incarcerated in a previous month", "R was incarcerated during all or some of this month", and "R

incarcerated previously but not in this month". From this data, 3.8% of respondents had reported an incarceration prior to 2004. To create the variable to show if the respondent was ever incarcerated prior to 2004, any respondent who had been incarcerated previously or during all or some of the month in question was coded as a yes for prior incarceration. This allowed for the creation of a comprehensive variable to show if someone had ever been incarcerated. The data's questioning method limits the survey from not knowing the exact amount of days the respondent may have been in prison.

The "Ever Incarcerated 2003" variable was created by recoding any respondent who had ever been incarcerated as a 1, and someone who never responded yes to being incarcerated was coded as a 0. Of the 8,984 respondents observed, the mean to ever be incarcerated is .038, or 3.8%. This variable has a standard deviation of .192. The minimum is 0, with a maximum of 1, also due to the dichotomous nature of the variable. Logically, these mean values make sense, as someone would need to be arrested before being incarcerated, but can also be arrested and never incarcerated. This explains why the mean arrest value is higher than the mean incarceration value.

Control Variables

Many control variables are used to understand the true relationship between the dependent and independent variables. In this study to understand the correlates of a criminal record and employment, gender, age, race, marriage status, and education levels were all control variables.

Gender

Statistically, men are more likely to commit crime when compared to women (Hidensohn & Silvestri 2012). Men are also more likely to commit more serious and more violent crimes (Hidensohn &

Silvestri 2012). Due to these trends, it is important to control for gender to avoid these trends potentially skewing the results.

Gender was recorded in 1997 at the beginning of the survey. It was measured by male, female, or no information. All 8,984 respondents answered this question. The gender from this response was assumed to remain the same throughout the survey, as the gender the respondent initially identified as. The gender variable was only recoded to change the numerical values associated with each response (see Appendix A for details on recoding). Gender was measured through the variable "gender", as this is the reported sex and assumed gender of the respondents. Gender was recorded from 8,984 respondents, with the average at .488. Male is represented by 0, and female is represented by 1, showing there were slightly more males surveyed.

Age

Age is very important to control, as there is an asymmetrical bell shape curve related to the correlation of age and crime (Loeber & Farrington 2014). Loeber & Farrington found the "prevalence of offending tends to increase from late childhood, peak in the teenage years (from 15 to 19) and then decline in the early 20s" (Loeber & Farrington 2014, n.p.). Age of a first crime has been noted to lead to different "developmental trajectories" (Loeber & Farrington 2014, n.p.). This means if someone commits a crime earlier in life, there is a higher chance they could have a "worse off" life from the stigma from their first crime. Age is incredibly important to control for, especially considering the lasting impact a first offense can have on a respondent's life.

Age is measured by recording the month and year of the respondent's birth date. Month is recorded by asking the respondent which month they are born, giving the respondent twelve options for the twelve months. Year is recorded by asking which year respondents were born, with the minimum being 1980 and the maximum being 1984. The age was calculated through recoding the month and year to

generate an age value (see Appendix A for details on recoding). This was automatically controlled for when selecting respondents to start their participation in the survey because the survey started with children at a certain age, leading to the range of those surveyed in 2004 being between 20 and 24 years old. The average age of the 8,984 respondents is 21.990, with a standard deviation of 1.397.

Race (White)

There are many studies that show whites often have "white privilege" when it comes to arrests, resulting in minority arrests occurring more frequently than whites. According to the National Association for the Advancement of Colored People, "in 2014, African Americans constituted 2.3 million, or 34%, of the total 6.8 million correctional population" (National Association for the Advancement of Colored People n.d.). When compared to white incarceration rates, blacks are incarcerated more than 5 times the rate of whites (National Association for the Advancement of Colored People n.d.). In 2015, blacks and Hispanics made up 56% of the incarcerated population, even though blacks and Hispanics only represent 32% of the population. There are many disparities in the United States correctional system. Race is essential to include as a control because of the disparity minorities face. While this is an important control, I would also conduct a sub-analysis to focus specifically on race and highlighting the differences between blacks and whites.

Race was recorded in 1997 at the beginning of the survey. The recoded variable measured race as white, black, and Hispanic. All 8,984 respondents answered this question. Race was assumed to remain the same throughout the duration of the survey. The race variable was recoded to change the values associated with each response and to group them together to be more unified (see Appendix A for details on recoding). Race was grouped by white as 0, black as 1, and Hispanic as 2. To represent whites, this was recoded as non-white as 0, white as 1. The variable was labeled as white to identify whites being coded as 0. There were slightly more whites included in the survey than non-whites. It is crucial to control

for race, as the variables involved in this research can be skewed from racial biases. Controlling for race allows for a focus on how arrests and incarcerations affect employment, and won't let race skew the results. Prior studies tend to focus on the impact of race, which is why it is important to control for it with this study.

Marital Status 2004

There are common trends for relationship status and employment. The University of Chicago found that "a woman's employment status has no effect on likelihood that her husband will opt to leave the marriage", and men who are not employed are more likely to initiate divorce (University of Chicago Press Journals 2011, n.p.). This study focuses on employment status, and specifically highlights respondents who are out of the labor force. Additionally, there is less social pressure for women to not work outside of the home, while men face significant pressures to be the main source of family income (University of Chicago Press Journals 2011). These trends could have effects on the results, showing the importance of needing to use them as a control.

To see the impact of arrests and incarceration on employment, it is important to control for relationship status, specifically marital status, in 2004. Marital status was recorded each round of the survey, but for the control variable, only Round 7 (2004) is used. Knowing the martial status during this specific round is important, as marital status can change throughout the survey rounds. To control for marital status, the collapsed version of this question is used, and also recoded to identify married or not married (see Appendix A for details on recoding). Marriage was recoded to simply show if the respondent was married or not married, as marriage can have an impact on behavior. Marital status was represented by 7,493 respondents. This was coded to account for those were married (0), or not married (1). The mean is .144, showing that the majority of respondents were not married.

Highest Degree 2003

Education can have an important impact on crime. More education leads to higher wages, which can increase income (Lochner & Moretti 2003). This would lead to less of a chance of resorting to crime for income, as well as increase the opportunity costs of crime (Lochner & Moretti 2003). If those who are more educated are able to make more money, arrests and incarcerations could remove them from the labor market (Lochner & Moretti 2003). This would make crime more costly and more risky for these individuals, as it would temporarily remove them from access to the labor market (Lochner & Moretti 2003). Additionally, studies have found an increased stigma for white collar workers when compared to blue collar workers (Lochner & Moretti 2003). This shows how the lasting stigma and effect of a conviction can last affecter the time spent incarcerations for those who are "upper class" workers (Lochner & Moretti 2003).

These theories suggest the more educated someone is, the less likely they are to commit a crime. The theory also suggests the more educated someone is, the better chances for them to be employed. These theories support using education as a control variable to make sure the results are not skewed from the respondents' educational attainment.

Education is measured in a variety of ways through the NLSY97. The variable used to measure education was recoded to group the education into smaller categories with: less than high school or GED, completed high school or GED, and greater than high school or GED (see Appendix A for details on recoding). This was done to simplify the variable, and focus on the most relevant education groupings for this study. Our focus year, 2004, has all participants aged 20 to 24 years old. It can be assumed that most are of age to be completing high school, and either entering the workforce or continuing their education. This reasoning from the age demographic of the survey year is why this variable was used to see their highest degree earned in 2003, and then broken down in this way. The data from 2003 was used, as it accounts for the highest degree completed. If we used their highest degree completed in 2004, it could

have the potential to impact employment status in 2004, which is why the prior round for highest degree needs to be used. This ensures this is the degree level individuals would have their employment based on. Using the 2003 data also provides the highest degree received prior to the start of the 2003-2004 school year. Highest degree was recorded by 7,697 respondents. In the recode, no degree (not completing high school or GED) was coded as 0, GED or high school equivalent as the highest degree was coded as 1, and having more than a high school education was coded as 2. The mean from this sample was .891 and standard deviation as .471. This translates to the majority of the respondents completed high school or GED, with 5,900 completing high school or their GED. Education can impact employment status, which is why it is important to control for.

To summarize, I will analyze the impact both arrest and incarceration have on employment status in the year 2004 (Round 7). While doing so, it is important to control for different correlates of crime through gender, age, race, marital status in 2004, and highest degree earned in 2003.

Descriptive Analysis

Table 1. Descriptive of NLSY97 Analytical Sample

Variable	Observed	Mean	Standard Deviation	Minimum	Maximum
Sanctions:					
Ever Arrested 2003	8,984	0.223	--	0	1
Ever Incarcerated 2003	8,984	0.038	--	0	1
Labor Force Participation:					
Employed	8,984	3.251	8.529	0	52
Unemployed	8,984	34.607	20.451	0	52
Out of Labor Force (OLF)	8,984	10.711	17.156	0	52
Controls:					
Gender	8,984	0.488	--	0	1
White	8,984	0.519	--	0	1
Highest Degree 2003	7,697	0.891	0.471	0	2
Age 2004	8,984	21.990	1.397	20	24
Marital Status 2004	7,493	0.144	--	0	1
Number of observations	N = 8,984				

Source: National Longitudinal Survey of Youth, 1997

The variables used are reflected in Table 1. Table 1 highlights the number of respondents, the mean value, the standard deviation, the minimum value, and the maximum value for each variable used in this study.

Chapter 5

Results

Correlation

Table 2. Spearman's R Correlation

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Employed weeks	1.000											
2. Unemployed weeks	-0.483*	1.000										
3. OLF weeks	-0.790*	0.185*	1.000									
4. Ever arrested	-0.089*	0.078*	0.062*	1.000								
5. Ever incarcerated	-0.085*	0.065*	0.073*	0.335*	1.000							
6. Marital status 2004	0.036*	-0.070*	-0.011	-0.047*	-0.025*	1.000						
7. Gender	-0.068*	-0.001	0.094*	-0.211*	-0.115*	0.098*	1.000					
8. Age 2004	0.108*	-0.049*	-0.113*	0.010	0.080*	0.169*	0.009	1.000				
9. White	0.112*	-0.109*	-0.063*	-0.009	-0.029*	0.056*	-0.032*	-0.021	1.000			
10. Black	-0.134*	0.128*	0.076*	0.038*	0.039*	-0.127*	0.028*	0.023	-0.633*	1.000		
11. Hispanic	0.009	-0.006	-0.006	-0.031*	-0.007	0.070*	0.008	0.001	-0.533*	-0.3180*	1.000	
12. Highest degree earned 2003	0.229*	-0.133*	-0.174*	-0.231*	-0.151*	0.014	0.056*	0.188*	0.166*	-0.1079*	-0.085*	1.000
Number of observations	N = 7,119											
* if p < 0.05 significance												

Table 2 represents the results from a Spearman's R correlation. This table shows the correlation between the dependent variables (1-3), independent variables (4-5), and control variables (6-12). As observed in the table, there is a positive, significant correlation for ever arrested, both with unemployment weeks ($r = 0.078$, $p < .05$) and out of labor force weeks ($r = 0.062$, $p < 0.05$). There is also a positive, significant correlation for ever incarcerated, both with unemployment weeks ($r = 0.065$, $p < 0.05$) and out of labor force weeks ($r = 0.073$, $p < 0.05$). There is a stronger correlation with ever arrested and unemployment when compared to out of the labor force. This suggests that those who have previously been arrested are more likely to be unemployed than out of the labor force. Inversely, there is a stronger correlation with ever incarcerated and out of the labor force when compared to unemployment. This suggests those who have been previously incarcerated are more likely to be out of the labor force than be unemployed.

All control variables had significant correlations in the expected direction. When focusing on the control variables, there are a few important correlations to highlight. Being white is positively, significantly correlated with being employed ($r = 0.112$, $p < 0.05$), while being black is negatively, significantly correlated with being employed ($r = -0.134$, $p < 0.05$). This shows that whites are more likely to be employed than blacks. Additionally, there is a positive, significant correlation with blacks being unemployed ($r = 0.128$, $p < 0.05$) and out of the labor force ($r = 0.076$, $p < 0.05$). This further supports that blacks are more likely to be unemployed and out of the labor force. The correlation regarding race shows support that race is a factor when looking at arrests and incarcerations compared to employment status.

Arrest Regression

Table 3. Ordinal Logistic Regression of OLF with Arrests and Controls

Variable	Model A		Model B	
	Beta	Std. Error	B	Std. Error
Ever Arrested 2003	0.459***	0.051	0.253***	0.061
Marital Status 2004	--	--	0.031	0.073
Male	--	--	0.475***	0.051
Age 2004	--	--	-0.135***	0.018
Black (vs. White)	--	--	0.263***	0.058
Hispanic (vs. White)	--	--	0.001	0.064
Highest Degree 2003	--	--	-0.665***	0.056
/cut 1	0.714	0.025	-3.416	-1.874
/cut 2	2.54	0.041	-1.350	0.191
Number of observations	N = 8,984		N = 7,119	

Note: white is the reference category

Note: + if p < 0.10, * if p < 0.05, ** if p < 0.01, *** if p < 0.001

Table 3 shows the results from an ordinal logit regression of out of labor force weeks with arrests. Model A shows the regression without control variables, and Model B shows the regression with control variables. This table shows the chance of an increase to the next category.

The out of labor force variable was recoded to be grouped into three numbers. The first category (0) represents those who identified as out of the labor force for 0-4 weeks. The second category (1) represents those who identified as out of the labor force for 5-48 weeks. The third category (2) represents those who identified as out of the labor force for 49-52 weeks. When looking at this regression (Model A), for those who have prior arrests, they have a beta of 0.459 ($p < 0.001$), or 45.9% chance the respondent will be out of the labor force for 0-4 weeks. When moving to the next category (cut 1), those out of the labor force for 5-48 weeks, there is a beta of 0.714, or 71.35% increase of chance of being out of the labor force. When looking at those with arrests who have been out of the labor force for 49-52 weeks (cut 2), there is a 2.54, or 254% increase. This shows that there is a very strong correlation with arrests and being out of the labor force.

Model B shows similar results to Model A, but instead includes the control variables. Model B shows the impact of arrest decreasing my almost half (Model A beta = 0.459, $p < 0.001$; Model B beta = 0.253, $p < 0.001$), but shows that there is still significance from the regression. The sample size from Model A to Model B decreases from 8,984 to 7,119 respondents because of listwise deletion on control variables. White is not included as a control because white is used as a reference category. The only two negative relations are through age in 2004 and highest degree earned in 2003. This is logical, as someone is older or has a higher degree would be more likely to not be out of the labor force, explaining the negative relationships. In Model B, Black is also a significant control variable, with a beta of 0.263 ($p > 0.001$). This supports the need to understand the impact of race on arrests and out of the labor force.

Incarceration Regression

Table 4. Ordinal Logistic Regression of OLF with Incarcerations and Controls

Variable	Model A		Model B	
	Beta	Std. Error	B	Std. Error
Ever Incarcerated 2003	1.125***	0.105	0.747***	0.130
Marital Status 2004	--	--	0.036	0.073
Male	--	--	0.462***	0.050
Age 2004	--	--	-0.143***	0.018
Black (vs. White)	--	--	0.260***	0.058
Hispanic (vs. White)	--	--	-0.004	0.064
Highest Degree 2003	--	--	-0.670***	0.056
/cut 1	0.652	0.023	-2.869	0.395
/cut 2	2.489	0.039	-0.799	0.395
Number of observations	N = 8,984		N = 7,119	

Note: white is the reference category

Note: + if p < 0.10, * if p < 0.05, ** if p < 0.01, *** if p < 0.001

Table 4 is similar to Table 3, but instead compares incarceration with out of labor force weeks. Model A shows the regression without control variables, and Model B shows the regression with control variables. This table shows the chance of an increase to the next category.

As Model A shows, there is a much higher beta (1.125, $p > 0.001$) with being incarcerated and out of labor force weeks than there was with arrests and out of labor force weeks in Table 3 (0.459, $p > 0.001$). When looking at those incarcerated and out of the labor force for 5-48 weeks, there is an 65.2% (0.652) increase in chances of being out of the labor force. For those with prior incarceration and being out of the labor force for 49-52 weeks, there is a 248.9% (2.489) increase in chances of being out of the labor force. This drastically high percentage demonstrates the impact of incarceration on being out of the labor force.

Model B shows a similar regression to Model A, but also incorporates the control variables included in the study. Similarly, to Table 3, the sample size from Model A to Model B decreases from 8,984 to 7,119 respondents because of listwise deletion on control variables. The control variables in Table 4 all have the same direction as Table 3, and are all very similar to the values in Table 3's

regression. Echoing similarity to Table 3, age in 2004 and highest degree in 2003 are both negative. This supports the idea that the older someone is and the higher degree, the less likely they are to have a prior incarceration and be out of the labor force. In Model B, Black is also a significant control variable, with a beta of 0.260 ($p > 0.001$). This supports the need to understand the impact of race with incarcerations and out of the labor force.

Moderation Analyses of Race

From Table 2, 3, and 4, there are strong indications that race has an impact on arrests and incarcerations, as well as employment status. These tables do not specifically look at the impact of race, but instead use race as a control variable.

Table 5 and Table 6 compare both arrests and incarcerations (respectively) with out of the labor force weeks, moderating by race. For both tables, there are focuses on only white participants, and only black participants. Creating sub-analyses of race was important for this research to show the different impacts of race. If race was calculated and analyzed in only one table, the results would average out and not show the true differences. Both tables show the analysis of each race individually: Model A without the control variables, and Model B with the control variables (similar to Tables 3 and 4). It is important to notice the varying sample sizes for Tables 5 and 6. More whites were surveyed through the NLSY97, which leads to 4,665 respondents for both Whites Model A. There were about half as many blacks surveyed who were able to have responses for the sub-analyses of race, leading to 2,418 respondents for blacks. When factoring controls into both Model Bs, the participant numbers drop even more. This decrease is from not all respondents having responses and information regarding the control variables.

Table 5. Moderation Analysis of Impact of Race and Arrests

Variable	Whites Model A		Whites Model B		Blacks Model A		Blacks Model B	
	Beta	Std. Error	B	Std. Error	Beta	Std. Error	B	Std. Error
Ever Arrested 2003	0.348***	0.074	0.158+	0.086	0.669***	0.896	0.426***	0.110
Marital Status 2004	--	--	0.046	0.099	--	--	0.009	0.179
Gender	--	--	0.353***	0.071	--	--	0.447***	0.096
Age 2004	--	--	-0.152***	0.027	--	--	-0.091+	0.033
Highest Degree 2003	--	--	-0.607***	0.086	--	--	-0.718***	0.099
/cut 1	0.841	0.036	-3.050	0.565	0.487	0.048	-1.960	0.717
/cut 2	2.767	0.063	-0.917	0.566	2.281	0.072	0.697	0.716
Number of observations	N = 4,665		N = 3,664		N = 2,418		N = 1,950	

Note: + if p < 0.10, * if p < 0.05, ** if p < 0.01, *** if p < 0.001

Table 5 provides a comparison of whites and blacks with the impact of arrests and out of the labor force weeks. As Whites Model A shows when compared to Whites Model B, there is a stronger beta without the control variables in Model A (Model A: 0.348, $p < 0.001$; Model B: 0.158, $p < 0.10$). When looking at those arrested and out of the labor force for 5-48 weeks in Model A, there was an 84.1% (0.841) increase in the chance of being out of the labor force. If someone has a prior arrest and is out of the labor force for 49-52 weeks, there is a 276.7% (2.767) chance of being out of the labor force. When looking at Blacks Model A, their chances of being out of the labor force are slightly higher when compared to Whites Model A, with a slightly higher beta (0.669, $p < 0.001$). When including the controls for Blacks in Model B, the beta is slightly lower when compared to Blacks Model A (0.426, $p < 0.001$). Even though there is a decrease when including the controls, the beta in Blacks Model B (0.426, $p < 0.001$) with controls is still higher than the beta in Whites Model A (Model A: 0.348, $p < 0.001$) without controls. This shows support for the impact of race through arrests and out of the labor force.

The initial beta for Blacks in Model A is almost double (0.669, 0.348) the initial beta for Whites in Model A. When looking at both Whites and Blacks Model Bs, the beta for Blacks in Model B is three and a half times the beta for Whites in Model A. This further shows the significance of race and arrests, specifically comparing whites and blacks.

Table 6. Moderation Analysis of Impact of Race and Incarcerations

Variable	Whites Model A		Whites Model B		Blacks Model A		Blacks Model B	
	Beta	Std. Error	B	Std. Error	Beta	Std. Error	B	Std. Error
Ever Incarcerated 2003	0.570**	0.169	0.304	0.204	1.600***	0.168	1.211***	0.212
Marital Status 2004	--	--	0.043	0.099	--	--	0.042	0.179
Gender	--	--	0.34***	0.070	--	--	0.425***	0.093
Age 2004	--	--	-0.153***	0.027	--	--	-0.105**	0.033
Highest Degree 2003	--	--	-0.621***	0.085	--	--	-0.727***	0.097
/cut 1	0.783	0.032	-3.120	0.569	0.395	0.043	-2.338	0.717
/cut 2	2.706	0.060	-0.987	0.569	2.224	0.068	-0.288	0.716
Number of observations	N = 4,665		N = 3,664		N = 2,418		N = 1,950	

Note: + if p < 0.10, * if p < 0.05, ** if p < 0.01, *** if p < 0.001

Table 6 provides a comparison of whites and blacks with the impact of incarceration and out of the labor force weeks. Table 5 is similar to Table 6, except focuses on the impact of incarceration instead of arrests. Whites Model A shows when compared to Whites Model B, there is a stronger beta without the control variables in Model B (Model A: 0.570, $p < 0.01$; Model B: 0.304). The beta for Whites Model B also loses its significance when compared to Whites Model A, showing the lack of a strong relationship with incarceration. When looking at those arrested and out of the labor force for 5-48 weeks in Model A, there was an 78.3% (0.783) increase in the chance of being out of the labor force. If someone has a prior arrest and is out of the labor force for 49-52 weeks, there is a 270.6% (2.706) chance of being out of the labor force. When looking at Blacks Model A, their chances of being out of the labor force are almost three times as high (1.600, $p > 0.001$) compared to Whites Model A. When including the controls for Blacks in Model B, the beta (1.211, $p > 0.001$). is slightly lower than the beta for Blacks Model A, but is four times as high as the beta for Whites in Model B. This shows the incredibly strong significance of blacks and incarceration, especially when compared to whites with prior incarcerations.

When comparing Table 5 and Table 6, Table 6 supports the hypothesis of incarcerations having stronger effects than arrests. This is supported by the theory that an incarceration will have a larger impact because it is a more serious, permanent mark of a criminal record when compared to an arrest. The beta's in Table 5 and Table 6 suggest that incarcerations are much more likely to lead to being out of the labor

force, especially for those who identify as black. The largest effect is observed from those who are black and incarcerations, as this provides the highest betas.

Chapter 6

Discussion and Future Research

Discussion

Overview

This research further develops an understanding of how criminal justice contact is related to employment status. Understanding this relationship matters in today's society due to the large number of individuals with a criminal record. In 2018, there were 2.3 million inmates in the United States (Wagner & Sawyer 2018). With 95% of inmates released, there is a growing society of individuals with criminal records (Pager 2003). With over 500,000 releases per year, it is crucial to understand the impact the incarcerated population has on the labor force. With unemployment at a low, there are numerous available jobs (Bureau of Labor Statistics 2018). When unemployment is at a high, it is easy for employers to ignore individuals with a record for their open jobs. With low unemployment, there is a demand to fill these jobs.

The current study supported all proposed hypotheses. This research emphasizes how different types of criminal justice contact, both arrests and incarcerations, are related to individuals in the labor market. The research draws attention to how different types of records impact employment, and shows evidence how those with a record are more likely to be unemployed or not searching. Additionally, this research shows support for racial disparities against blacks with criminal justice contact when compared to the labor market.

When looking at the three types of employment status (employed, unemployed, out of the labor force), this study emphasizes unemployment and being out of the labor force. Out of the labor force

represents the discouraged worker, someone who is not looking for work at all. This research focuses on those who are unemployed, those who are unemployed and searching for work, and the discouraged worker, those who are unemployed and not searching for work. The analyses in this study show support for arrests and incarcerations having a negative relationship with employment. Therefore, this research suggests those with prior arrests and incarcerations are more likely to be unemployed or out of the labor force.

Different Impacts of Arrests and Incarcerations

A key focus of this study is the emphasis of the different relationships of both arrests and incarcerations, rather than just overarching criminal justice contact. By looking at the different influences of arrests and incarcerations, and comparing the differences, this study allowed for an understanding of the associations of each type of contact. Prior studies have focused on overarching criminal justice contact, instead of the specific, individualized relationships of arrests and incarcerations. Overall, reporting a prior incarceration shows a negative relationship with employment status more than reporting a prior arrest. In the context of this study, this means an individual with a self-reported incarceration was more likely to be out of the labor force than someone with a self-reported arrest. Both an arrest record or incarceration record have detrimental, long-lasting impressions on employment abilities. This shows how those with criminal records are affected by the labeling theory, as those with criminal records are labeled as deviant. Once an individual is labeled, they are only seen as an individual with a record, rather than their other prior work experiences. Those with records will face difficulty entering the labor market with their "deviant" label. This supported both hypothesis 1 and 2, by showing the negative relationships of both arrests and incarcerations.

Discouraged Workers

Discouraged workers are a focus of this study. Those with criminal records often become discouraged from not being able to find work. As previously stated, discouraged workers are "marginally attached…who want and are available for work" and have searched for a job within 12 months, but were not identified as unemployed because they had not searched in the 4 weeks prior to the survey" (Bureau of Labor Statistics 2019, n.p.). Discouraged workers often expect discrimination from the labor market, such as expecting less (such as a lower salary) to improve their chances of being offered a job (Orazem et. al. 2003). Expecting discrimination or lack of finding a job can lead individuals to stop searching.

Since 2010, the number of discouraged workers has increased by 15% (Hinkes-Jones 2016). Through empirical evidence, research suggests discouraged workers have been found to move in and out of the labor force following the business cycle (Benati 2000). This means the discouraged worker is looking for jobs when they are available, and give up during recessions, when jobs are less likely (Benati 2000). With a significant number of discouraged workers in the United States, this can have a strong impact on the labor market. It can also have an impact on these discouraged workers, as when there is a recession, they are more likely to be out of work (Benati 2000). Workers tend to be discouraged from the costs of searching. This study is fundamental because it focuses on discouraged workers. An additional study found that at least 6.2% of all individuals are discouraged from the costs of actively searching for a job (Blundell, Ham, & Meghir 1997). Prior studies tend to focus on the unemployed worker, rather than the discouraged worker. It is important to focus on discouraged workers because there is a growing population of individuals with criminal justice contact, and they have an impact on the labor market. This study is crucial to the economics of work, as it focuses on discouraged workers, while also looking at their discouragement route issues from a criminal justice contact perspective.

Additionally, there has been research to show the detrimental, long-term effects for those who are discouraged workers. Those who are unemployed have a lower self-esteem (Prause & Dooley 1997).

Individuals who are out of the labor force as discouraged workers show larger gaps in self-esteem than those who are unemployed (Prause & Dooley 1997). Having a low self-esteem can decrease self-value, and lead to additional issues such as depression, stress, or anxiety (The University of Texas at Austin n.d.). Low self-esteem can also cause problems with relationships, impact academic and job performance, and potentially lead to drug and alcohol abuse (The University of Texas at Austin n.d.). The lasting impact of the decreased self-esteem of a discouraged worker can lead to detrimental impacts.

One theory specifically connected the discouraged worker is the stigma effect. The stigma effect means "a firm is less inclined to hire a worker with a longer unemployment duration" (Vishwanath 1989). While criminal justice contact is often used for discrimination from the labor market, having a long unemployment history can also be a ground for inapplicable discrimination from the labor force (Vishwanath 1989). Therefore, the longer a potential employee is out of the labor force, the more difficult it could be for them to find a job. This can lead to the discouraged worker, who becomes discouraged and frustrated with the inability to find a job.

Age as a Key Factor

This research also highlights the severe impact a reported arrest or incarceration can have on an individual early in one's life. This study focused on individuals aged 20-24. This added to the uniqueness of this study. No similar, prior studies have focused on age, specifically for those in early adulthood. This study focuses on how criminal justice contact that occurs during childhood can affect someone when they are older, specifically regarding employment. Age of a first crime can lead to different "developmental trajectories", as seen through this study with employment and labeling theory (Loeber & Farrington 2014, n.p.). Early adulthood can be a pivotal time frame for someone's future. Criminal justice contact during early adulthood can affect an individual's employment ability long-term by developing a "life-long" label.

A lasting label can cause difficulties in the future with entering the workforce. These added difficulties can lead to becoming a discouraged worker, and developing self-esteem issues from lack of employment.

Severity of Incarceration

By focusing on how both self-reported arrests and incarcerations impact employment, this study shows that reported incarcerations have strong relations with employment. This is intuitive because incarcerations lead to a permanent criminal record. No matter how minor an infraction may be, having an incarceration is a record of criminal justice contact and a status of prior imprisonment. In society, incarcerations can be viewed as more serious because they show that an individual was imprisoned, while an arrest may or may not. It is possible to be arrested and not incarcerated, such as if someone is charged and found not guilty, which additionally illustrates the severity of an incarceration.

There can also be stronger stigmas associated with those with incarceration records because they have spent time in jail. Spending time in jail could suggest that the individual has been out of the labor force for a certain amount of time, and would inhibit them from being a good employee. This difference shows that no matter how minor of an infraction, an incarceration will likely impact employment abilities. The labeling theory shows that incarceration records have a stronger effect on employment status when compared to arrest records. Findings suggest that those with incarceration records tend to be labeled as "more deviant", preventing them from finding work, as evidenced in the more severe results through out of the labor force weeks. Individuals with an incarceration record are labeled as a criminal from their incarceration, no matter how long the incarceration may have been. This shows support for hypothesis 3, showing how an incarceration record has a harsher effect on one's employment status when compared to an arrest record.

Impact of Race

This study also showed the drastic impact of race in both criminal justice contact and employment status. This research supported prior theories that blacks have a larger disadvantage than whites. The study shows if a black person had a prior arrest or incarceration, the respondent was significantly more likely to be out of the labor force. This is consistent with prior findings that studied similar trends with criminal contact, but this study shows evidence that this bias occurs for both arrests and incarcerations. As seen with prior research, blacks often face a double disadvantage, as they experience more criminal justice contact than other races. Blacks are arrested at 5 times the rate of whites (National Association for the Advancement of Colored People n.d.). Blacks also face trouble in the labor market, as the hiring rates for blacks have not changed in over 25 years (Quillian et. al. 2017). Part of the reason blacks may face difficulty entering the labor market is because they are seen as more criminological, even if they may not have a record. Employers can create their own assumptions about applicants based on other factors, such as assuming a black applicant is a criminal because of his skin color and the race's high arrest rates (Agan & Starr 2016). Not only is the potential applicant labeled from their record, but are also labeled through their race, leading to further discrimination. This double disadvantage can harm blacks in the labor market, which can result to them being unable to find a job, possibly resorting to a life of informal or illegal work. These findings support hypothesis 4, showing the impact of race in the labor market.

Policy Implications

There are many policy implications of this research. While this research suggests disadvantages in the labor market, there are numerous actions that can be taken to work towards positively changing and correcting these disadvantages. These examples include increased government action, increased

development of work programs, awareness of job search strategies, and the eliminating the ban the box initiative.

Government Action

A criminal record can have a lasting impact on employment. In the future, governments have the potential to suggest legislation to support these potential applicants, and strategies for companies to also work with these employees who might have prior criminal records. Some states are aware of this issue and are working on assisting certain populations with arrest records. In 2013, thirteen states enacted laws to "expunge and seal low-level offenses after a discrete number of years (Solomon 2012). Three states passed laws to limit the liability of employers that hire people with criminal records" (Solomon 2012). These policies are a proactive approach towards protecting those with arrest or incarceration records to allow potential employees to have their records sealed. This effort gives those with low-level offenses a chance to be hired based on their true skill set, and not just their past record.

When low-level records are not expunged or sealed, it is important to decrease the stigma associated with a record. Decreasing stigmas leads to employers as more likely to look at individual circumstances, such as discounting minor offenses. (Uggen et. al. 2014) This is a similar concept to some states sealing low-level offense records, but instead, it is up to the business owner. In the United States society, there tends to be a disconnect with businessowners having a fearful stigma of hiring those with records.

Work Programs

As of September 2018, the state of Maine had a recidivism rate of around 70% (Sharon 2018). With efforts to reduce their recidivism rate and meet their workforce demand, Maine developed a work

release program for their minimum-security prisons (Sharon 2018). Some of Maine's prisons are partnering with employers to fill their jobs, while also giving low-risk inmates early release (Sharon 2018). This program allows for companies to recruit from the prison and has shown promised success (Sharon 2018). The employers who have used the program have been pleased with their new employees, while the released inmates are grateful to have a job and end their sentence early (Sharon 2018). While Maine originally created this program to fill their labor shortage, it also gives their inmates a chance to be released and have a job waiting for them. This is a simple, yet effective strategy other states could implement. The inmates receive the positive externality from Maine's labor shortage, as they are able to have a job upon release. Maine is not expunging or sealing the records, but instead, is choosing to proactively work to decrease the stigma associated with criminal records by creating this work program, and encourage the hiring of their state inmates.

Maine is just one example of successfully reintegrating those with records back into the workforce. It is important to be aware of the public perception, and understand what is happening to current the labor force. The American Enterprise Institute points out "labor force participation rates have declined precipitously from 96 percent in 1967 to only 88 percent in 2016 (and 83 percent among those with only a high school degree or less education)", showing there is a decline in those participating in labor (Doar, Holzer, & Orrell 2017, p. 1). One suggested cause is from the drastic rise in American incarceration rates. "The [United States] has the highest rates of incarceration in the developed world, with 458 prisoners for every 100,000 residents", showing the staggering rise of incarceration rates (Doar et. al. 2017, p. 13). When it comes to hiring those with prior records, employers remain cautious. Employers are reluctant to hire those with prior records to work in most jobs, including "those involving direct contact with cash, customers, or vulnerable populations" (Doar et. al. 2017, p. 13). Employers also worry about wrongful hiring liabilities, such as someone who was convicted previously stealing or creating violence (Doar et. al. 2017). In reality, research shows "if offenders go 5-10 years without a recurrence of their crime, their odds of committing a crime in the future are no higher than those of non-

offenders" (Doar et. al. 2017, p. 13). While there are concerns, employers are not allowed to officially discriminate against hiring those with a criminal record through a policy. There may not be policies in place, but those with records are still discriminated against in the workforce, as this research supported. The US Department of Labor has experimented with pre- and post-release programs over the past 10 years, similar to the program Maine has developed (Doar et. al. 2017). These programs often have an emphasis of "returning citizens to community-based organizations (CBOs) that help manage reentry and act as employment intermediaries" (Doar et. al. 2017, p. 13). Similarly, the Department of Labor has been working to create work within the prisons to prepare inmates for release (Doar et. al. 2017).

While these programs are a step in the right direction, they could be stronger and more plentiful. There is a lack of data sharing between these programs and organizations (Doar et. al. 2017). This can cause for reoccurring issues, as well as an inability to learn from the strengths and downfalls of other programs. There is also a lack of "pilot and demonstration programs that focus on creating and strengthening links between prisons and jails and the employment-focused reentry programs that serve citizens in the community" (Doar et. al. 2017, p. 14). This lack of connection between programs again shows a lack of continuous structure. If one program is successful, there are not means in place to allow for successful collaboration of their tactics to make other programs as successful.

As described with Maine's program, there is a strong chance of success for the state's employment and productivity levels, as well as the inmates' reentry success. As noted, there are other reentry programs in place throughout the country. A lack of collaboration and data sharing within programs creates a strain on having a consistent and strong process to give better chances at successful reentry and employment opportunities. In the future, it is crucial to develop a way to collaborate and share data from these programs. This can lead to changes in programs that are not successful, and implementing ideas from successful programs to create better chances for successful reentry.

Job Search

Job search strategies and methods are important to help find employment, specifically for those with prior criminal justice contact. There is a strong emphasis on social networks for prior offenders. Prior research suggests that those with records found employment through different, informal avenues. Interestingly, this can vary by race. Sullivan found that whites and Hispanics with prior records often found employment through use of social networks, while blacks did not benefit from using social networks for employment (Sullivan 1989). While blacks with a record might not have success through social networks, they have been cited to have job search success through minority business owners (Uggen et. al. 2014). Specifically, minority business owners have been found to be more willing to hire ex-offenders (Uggen et. al. 2014). This is on the premise that blacks are more likely than whites to have exposure to incarceration, therefore reducing their stigma associated with hiring those with a criminal record (Uggen et. al. 2014). In simple terms, minority business owners seem to understand the difficulty blacks with criminal justice contact face when trying to find employment, and are more willing to hire them. This decreased stigma also leads to employers being more likely to focus on individual circumstances, such as discounting minor offenses, rather than just turning away someone with a criminal record (Uggen et. al. 2014).

Additionally, prior research suggests a benefit related to personal contact with potential employees are searching for jobs. Research has found that having a brief social interaction with a potential employer can provide more information about an applicant (such as soft skills) and increase chances for callbacks (Pager et. al. 2009). Personal contact can lead to a decrease in employer discrimination, specifically racial discrimination in the hiring process (Uggen et. al. 2014). By having personal contact, employers are able to learn more about the potential employee, increasing comfort levels (Pager 2009). Personal contact has been found to decrease criminal record effects by up to 15% (Pager 2009). For example, a potential employee could have a conversation with a potential manager

explaining that their record was from a minor drug use incident (Pager 2009). The employer can understand the issue, learning that it was a "stupid mistake", and choose to hire someone that seems willing to work hard and re-enter society, rather than labeling the individual (Pager 2009).

Ban the Box

As previously mentioned, Ban the Box policies are efforts to reduce discrimination in the job search. The Ban the Box policy bans the "box" on a job application asking about an applicant's criminal history or record. This initiative intends to reduce discrimination of those applicants with a criminal record. It is assumed that if employers don't ask about a criminal record, they would not discriminate based on a criminal record, because they would have no way of knowing if an applicant had a record (Agan & Starr 2016). While this policy makes sense in theory, it actually tends to lead to employers making their own assumptions about criminal records (Agan & Starr 2016). Employers tend to make their own assumptions if an applicant has a criminal record or not, mostly based on an applicant's race (Agan & Starr 2016). Ban the Box strategies are developed on the right concepts but have unintended consequences, specifically against minorities, leading to statistical discrimination. One study found when companies used Ban the Box policies, their white callback rate increased from 7% to 45%. This means that whites were 45% more likely to receive a callback than similar black applicants when there was no "box" to say if applicants had a criminal record (Agan & Starr 2016). This supports that getting rid of the box actually harms applicants, especially those that might not even have a record. These results suggest that without the box, employers are discriminating against applicants based on other assumptions. This research on Ban the Box policies suggest that they are actually harmful to applicants. Ban the Box policies are meant to avoid criminal discrimination, but instead, allow for overt discrimination based on employer's individual assumptions.

It is important to work towards finding ways reduce discrimination and disadvantages within our society, especially once people have already served their time. The labeling theory shows the lasting impact of a criminal record. There is potential for effective policy changes to make sure those with prior records have equal chances at employment, such as through affirmative action with those with prior records and convictions. One way this could possibly work would be for those who had low-level records to be sealed or expunged from their permanent record. Another is to follow the process Maine and other groups are using by creating programs meant to specifically hire those with records. Additionally, those with criminal records can be aware of different job search strategies to assist them with finding a job. Lastly, it is important to get rid of policies like Ban the Box that eliminate the criminal record "box" on applications. By eliminating this option, employers are actually discriminating even more.

Limitations

As with any research, there are limitations. This study found interesting results, but there were limits to the data, methods, and strategies used.

While this data was a nationally represented sample, this was only a sample. The NLSY97 consists of about 9,000 respondents, accounting for about .0028% of the United States population. The NLSY97 was used because it was a large, nationally represented sample, but, if done again, ideally, there would be a much larger sample available. While there are about 9,000 initial respondents, there were smaller sub-sets and variations of this sample used for the different analyses performed. This shrinking number was based on the valid responses to the questions this study focused on. This study is not able to be generalized to a population because this research uses a specific sub-set from the NLSY97. The study is also not generalizable to the public because there are missing values and control variables from the specific sub-set, which lead to an inability to generalize to the overall public. Even without the ability to generalize to the public, the study shows relationships between criminal justice contact and employment

status. Ideally, there would be a larger sample used to help more accurately capture the overarching public opinion.

Another limitation was the limit on age. While the sample limited the age, and age was an important focus on the study, this could be expanded in future research. This sample intentionally focused on age being a crucial and pivotal time in someone's life when looking at criminal justice contact and entering the labor market. The research specifically only looked at two rounds of research, naturally limiting the age of the respondents to 20 to 24 years old. Another iteration of the study could focus on following the sample for a longer period of time to see if there are different impacts over a longer period of time. By completing a longitudinal study over multiple years (more than 20 years), researchers could see if there truly are different developmental trajectories based on age of first crime, and identify the impact it has on employment status past young adulthood. The labeling theory suggests there are different developmental trajectories, and a comprehensive longitudinal study could find evidence to support, or refute, this trajectory approach (Loeber & Farrington 2014).

This study is novel because it focuses on the specific impact of arrests and incarcerations, not just overall criminal justice contact. A large limitation of this study is that both the arrests and incarcerations were both self-reported. Self-reporting allows for the possibility for bias and inaccurate results. The NLSY97 collects data from survey methods, with interviews with respondents. While it provided the ability to look at arrests and incarcerations, it was still self-reported. If this study was to be conducted again, it would be important to find or create a data source that uses official criminal records. This would avoid relying on self-reported criminal records. By conducting this research using official criminal records, there would be a stronger understanding and definitive conclusion about the true impact of arrest records and incarceration records.

When considering this research topic, the initial thought was to focus on the impact of type of crimes, specifically contrasting the different impacts of a felony compared to a misdemeanor. If this research were to be completed again, it would be beneficial to create or use a dataset that uses official

crime records, identifying the specific type of crime. This would allow for further understanding of the label of a criminal record, and identify the impact of different types of crimes. Similarly, the NLSY97 limits the research with the incarceration variable as well. From the survey questions, it is impossible to know how many days respondents are incarcerated. When focusing on incarceration, the NLSY97 responses are: "R not incarcerated in this month and not incarcerated in a previous month", "R was incarcerated during all or some of this month", and "R incarcerated previously but not in this month". This does not account for days incarcerated, meaning a respondent who was incarcerated for one day or the entire month would respond with "R was incarcerated during all or some of this month". As previously stated, the stigma effect shows "a firm is less inclined to hire a worker with a longer unemployment duration" (Vishwanath 1989, p. 488). This could potentially be studied through incarceration. For example, new research could focus if an incarceration has a negative impact on employment, or if it is dependent on the number of days an individual is incarcerated.

Another limitation of this study was the lack of testing mechanisms. This study showed the relation between criminal justice contact and employment status, but did not test any mechanisms related to this. While this research focused on those typically not captured in audit studies, the research did not examine why respondents were out of the work force. This research could have gone further to see if the respondents chose to not participate in the labor force, or were intentionally left out of the labor force at the employers' discretion. Potential mechanisms that could have been added to this research include discrimination, labeling theory, and the choice to not participate. If this study was to be replicated, it would be important to understand the impact of these mechanisms and set up the research methods accordingly.

Chapter 7

Conclusion

This study supports what prior experimental design studies found: those with criminal justice contact face disparities in the employment market. Particularly, this study shows there are disadvantages in the workplace for individuals with either arrests and incarcerations, with more detriments against those who have been incarcerated when compared to those who have been arrested. Additionally, this study found evidence that, when focusing on self-reported criminal justice contact, blacks face additional disparities and disadvantages in the labor market when compared to whites.

Using data from a nationally represented survey for those aged 20-24, this study is able to provide additional value to this topic. By focusing on this age demographic, this study highlights how criminal justice contact can be pivotal for employment. This study shows that disadvantages in the labor market against those with prior arrests or incarcerations start early in life, and once someone has a record, it can be difficult to get away from the scarlet letter branding of the past. The scarlet letter of a criminal record can have lasting, negative impacts, which can lead to informal or illegal methods of work.

In the future, it is important to proactively prevent disadvantages against those with criminal records, especially after they have been found not guilty or already served their time. To prevent the lasting impact of a criminal record, governments can make conscious efforts to create legislating to seal records or prevent this discrimination. Additionally, employers can make conscious efforts and develop programs to hire those with records. Employees can also implement job search strategies to increase their chances of finding employment. Lastly, it is important to remove Ban the Box policies, as they encourage discrimination, rather than eliminate it.

Appendix A

Recoding Variables

Dependent Variables

To determine employment status, I used the variable "EMP_STATUS_2004" from Round 7 (2004). The question asks the respondent's weekly employment status for each week of the year. The question "EMP_STATUS_2004" is asked 52 times, one time for each week of the year. The question is the same each time, except it is asking about a different week, from the first week of the year to the 52nd week of the year. The answers to the question are as follows: "no information reported to account for week, job dates indeterminate" (0), "not associated with an employer, not actively searching for an employer job" (1), "not working (unemployment vs. out of labor force cannot be determined)" (2), "associated with an employer, periods not working for the employer are missing" (3), "unemployed" (4), "out of the labor force" (5), "active military service" (6), and then various options for being on the employer's roster. The options for being on am employer's roster ranged from 9701 to 201599.

These responses were grouped to categorize into three new variables: employed, unemployed, and OLF (out of labor force). These variables are crucial to identifying the employment status throughout the entire year.

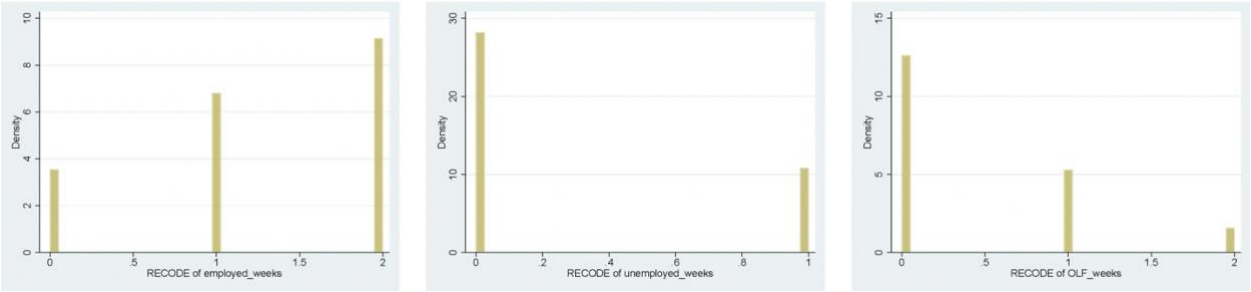
To start the recoding process to get to the dependent variables, the first recode was to group the responses by employed, unemployed, out of the labor force, or missing. The values for "no information reported to account for week, job dates indeterminate" (0), "not working (unemployment vs. out of labor force cannot be determined)" (2), "associated with an employer, periods not working for the employer are missing" (3), were all coded as missing values. These were coded as missing values, as they did not clearly align with employed, unemployed, or out of the labor force. The response "not associated with an employer, not actively searching for an employer job" (1) was not included in the recode, because

respondents never answered with this (at least not during the time this research focuses on). Value 4 "unemployed" remained as unemployed, and was recoded as value 1, to represent those who responded with as unemployed. Value 5 "out of the labor force" remained as out of the labor force, and was recoded as value 2, to represent those who responded as out of the labor force. The value 6 represented those serving in active military service. Values 9701 to 201599 represented different employers on the NLYS97 roster. Each employer is associated with a unique ID between 9701 to 201599. For this study, there was only a focus on employment as a whole, not the specific type of employment or employer. To represent employment as a whole, value 6 and values from 9701 to 201599 were grouped and recoded to represent employment, as value 3.

After grouping the variables to create three options to represent the employment status (employed, unemployed, out of the labor force), I needed to create dummy variables to represent their work status from week 1 to week 52 within the year 2004. This was done on a weekly basis. To create the new employment variable for week 1 (and the following weeks), employment in week one from the newly grouped variables was coded as a 1, and everything else was coded as not 1. This was done for each week with employed (52 dummy variables for employment). This was also done in a similar method for both unemployed (52 dummy variables for unemployment) and out of the labor force (52 dummy variables for out of the labor force). In conclusion, there were 156 dummy variables to represent the different employment statuses for the year of 2004 (3 options for each week, 52 weeks within the year). This was done to create binary results for each week, showing if each respondent was employed or not employed, unemployed or not unemployed, or out of the labor force or not out of the labor force.

This created a distribution of those who were each type of employment status in 2004 by each week. The results by week can be seen in the below histograms. The histograms from the Dependent Variables section show the distribution for each of the binary variables that were created.

Figure 4. Recoded Dependent Variables



To use a logit regression, the variables needed to be recoded again to group them ordinally. Employed is recoded by number of weeks employed: 0-4 weeks coded as 0, 5-48 weeks coded as 1, 49-52 weeks coded as 2. This was done because of the bimodal distribution, as if it was forced into a binary result, it would not accurately capture the results. The specific distribution by weeks is to capture the bimodal distribution, but also represent full-time employment, with value 2 representing 11-12 months of employment within the year interviewed. The employed variable represents the number of weeks (by the grouping) the respondent was employed. Similarly, the same strategy is used for unemployed and out of the labor force. For unemployed, if the respondent had 0 weeks of unemployment throughout the year, it is represented by 0. If the respondent had 1-52 weeks of unemployment, this was represented by a 1. This means if someone was unemployed at least one week of the year, they were coded to be unemployed by a 1. This was done based on the distribution being unimodal, and to make it binary. For out of the labor force, this was broken down by the number of weeks the respondent was out of the labor force: 0-4 weeks coded as 0, 5-48 weeks coded as 1, 49-52 weeks coded as 2. This was done similarly to the employed variable, because the original distribution was bimodal. The new breakdown from the final recoding can be seen in the histograms below.

Independent Variables

The two independent variables for this study are ever arrested and ever incarcerated. They are both used to understand the impact on employment status.

Ever Arrested 2003

To account for the respondents' lives and arrests prior to the start of the survey, it is important to use the variable "YSAQ-439". This variable asks "Have you ever been arrested by the police or taken into custody for an illegal or delinquent offense (do not include arrests for minor traffic violations)?". This variable is used in different rounds, but for this analysis, I will only use the results from Round 1 (1997), at the start of the survey. During Round 1 of "YSAQ-439", 729 respondents answered "yes", with 8,228 responding "no". The 729 respondents who answered yes are then asked YSAQ-441 in Round 1 (1997), asking "How old were you the first time you were arrested?", and it is measured by recoding the respondents' age. Of the 729 responses, 725 provided an age, 2 refused, and 2 responded with "don't know". In Round 1 in 1997, the survey question for YSAQ-441 accounts that this is the first round and it cannot ask about arrests since the date of the last interview, because there was no prior interview.

The previous two variables account for the respondents' lives before the survey. For this study, the focus is on all prior arrest behavior before 2004, so it is important to also account for any arrest activity after the start of the survey until 2004 (Round 7). To measure arrest after the start of the survey, I continued to use the variable "YSAQ-441". After Round 1, the wording of this variable changes to account for the interview starting. This variable asks if the respondent has been arrested "SDLI" (since date of last interview). The question asked is "Since the date of last interview on [date of last interview], have you been arrested by the police or taken into custody for an illegal or delinquent offense (do not include arrests for minor traffic violations)?". The responses are either yes or no. For "YSAQ-441", it is

important to use the results from this question for Round 2 (1998) to Round 6 (2003). I have already accounted for the Round 1 data from this variable, as it accounts for the age of their first arrest, if they had been arrested prior to the start of the survey. The variable YSAQ-439B was also asked in the survey years of Round 2 (1998), Round 3 (1999), and Round 4 (2000). This variable asked "Have you ever been arrested by the police or taken into custody for an illegal or delinquent offense (do not include arrests for minor traffic violations)?". This question was only asked if the respondent did not answer if they had been arrested at the date of last interview. There were usually not many respondents asked this question (only 24 respondents asked in 1998, 2 in 1999, and 1 in 2000), but it is still important to include them to have an accurate representation of those who were arrested. While this specific study has a focus on the year 2004, it is important to account for any arrests that may have occurred before these rounds, as the arrest could still impact them.

From these variables and responses, the variables needed to be recoded to account for if the respondent was ever arrested as of 2003. All of these variables were recoded to be missing if they did not answer yes or no, as it would have skewed the data to include any other responses. Then, any time the respondent answered yes (already coded as 1 in the original question), was grouped and recoded to be coded as a 1 or a yes in the new variable for ever arrested in 2003. The same was done for those who answered no (already coded as a 0 in the original question). These values were used to recreate one new variable to measure if the respondent had ever been arrested prior to 2004. By using both variables and creating a recoded variable for ever arrested, this provides a comprehensive understanding of the respondents' arrest history for their entire life until Round 6, in 2003.

Ever Incarcerated 2003

The second independent variable is incarceration status. In NLSY97, this is measured by the variable "INCARC_STATUS_[YEAR].[MONTH]". There are many versions of the incarceration

variable, as it is asked every single month for each year. This question starts by asking incarceration status in January 1992 "INCARC_STATUS_1992.01". The question is asked to respondents beginning in the month that they turn twelve years old. For example, if a respondent turned 12 in March 1992, this will be the first time they are asked this question. Anyone who is not yet 12 years old is counted as a valid skip until they turn 12 years old. For this analysis, I will use the variable from January 1992 (INCARC_STATUS_1992.01) to December 2003 (INCARC_STATUS_2003.12) to account for if the respondent was ever incarcerated.

The incarceration variable measures the respondent's monthly incarceration status in the respective year and month. The respondent is asked their monthly incarceration status, calculated for each month. The following responses are available: "R not incarcerated in this month and not incarcerated in a previous month" (0), "R was incarcerated during all or some of this month" (1), and "R incarcerated previously but not in this month" (99). These options remain the same throughout the months and years this question is asked.

This was recoded to create one variable to represent if a respondent was ever incarcerated before 2004, which is the main focus year for employment in this study. To recode all of the months of responses of incarceration (from January 1992 to December 2003), a new variable was created to identify if the respondent was ever incarcerated. If the respondent ever answered to "R was incarcerated during all or some of this month" (1) or "R incarcerated previously but not in this month" (99), this was recoded to a yes (1) for the new variable. This was done for every month to give an accurate representation if someone was ever incarcerated, they would be accounted for.

Control Variables

During this analysis, it is important to control for certain variables. For this analysis, I will be controlling for sex (KEY!SEX), age (KEY!BDATE_Y), race (KEY!RACE_ETHNICITY), marriage

(CV_MARSTAT and CV_MARSTAT_COLLAPSED), and education (CV_HIGHEST_DEGREE_0304).

Gender

The sex variable used the variable "KEY!SEX" from the survey. Sex was a recoded variable to change the numbers associated with each gender. Male was recoded from 1 to 0, and female was recoded from 2 to 1. No one answered with no information, which was originally coded as 0, so this value was dropped. This recode was created to use the values 0 and 1 instead of 0 to 2.

Age

The age variable used the variable "KEY!BDATE_Y" from the survey. This survey asked the respondent their year of birth. This age variable is created my subtracting the birth year from the year 2004. This generated an age for each respondent in the year 2004 based on their birth year. Month was not included in the variable of age.

Race

The race variable used the variable "KEY!RACE_ETHNICITY" from the survey. Race was recoded to regroup the races based on what we planned to analyze. Instead of 4 answers for race, this was recoded to have only 3 responses for race. "Non-black/non-Hispanic" was recoded as a 0, to be assumed as white respondents. "Black" and "mixed race (non-Hispanic) were recoded as a 1, to represent blacks. These two values were grouped together because mixed race could not be Hispanic because it said non-Hispanic, and was assumed to not be grouped with white because it was mixed race. Hispanic stayed as

Hispanic and kept the value of 2. This allowed for a range of values from 0 to 2, instead of 1 to 4, while also clarifying and simplifying the races.

Martial Status 2004

Marriage is measured using the variables "CV_MARSTAT" and "CV_MARSTAT_ COLLAPSED" from the survey. Marriage is measured by asking the marital or cohabitation status on the survey date for each round, but the focus for this study only used Round 7 (2004) responses. The responses for this variable (CV_MARSTAT) are: "never married, cohabiting" (1); "never married, not cohabiting" (2); "married, spouse present" (3); "married, spouse absent" (4); "separated, cohabiting" (5); "separated, not cohabiting" (6); "divorced, cohabiting" (7); "divorced, not cohabiting" (8); "widowed, cohabiting" (9); and "widowed, not cohabiting" (10). The NLSY97 also automatically collapses this information, through the collapsed variable (CV_MARSTAT_ COLLAPSED). This is also provided for Round 7. The categories for this variable are represented by: "never-married" (0), "married" (1), "separated" (2), "divorced" (3), and "widowed" (4). To control for marital status in this survey, the collapsed version is used. This variable was also recoded to simplify the responses. The value married (1) remained as a 1, and the rest of the variables were consolidated to represent not married, as a value of 0. The purpose of the control variable was to identify if the respondent was married or not, which led to the recode, as it was recoded into a binary variable.

Highest Degree 2003

The highest degree completed is measured using the variable "CV_HIGHEST_DEGREE_0304", which measures the "highest degree received prior to the start of the 2003/2004 academic school year". The options include: "none" (0), "GED" (1), "high school diploma (regular 12 year program)"(2),

"associate/junior college (AA)" (3), "bachelor's degree (BA, BS)" (4), "master's degree (MA, MS)" (5), "PhD" (6), or "professional degree (DDS, JD, MD)" (7). This variable was recoded to group the education into smaller categories, and what would be logical for the respondents at the time based on their ages ranging from 20 to 24. The original variable was recoded to simplify the options for highest education, breaking it into through less than high school or GED (0), completed high school or GED (1), and greater than high school or GED (2). To create these new options, none remained a 0, GED and high school diploma were grouped and recoded to create the new value of completed high school or GED (1), and the remaining values were grouped and recoded to create the new value of more than high school or GED (2).

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SAMANTHA E. SCHMITT

EDUCATION

The Pennsylvania State University | Schreyer Honors College — **University Park, PA**
Smeal College of Business | Bachelor of Science in Finance, Two-Piece in Organizational Leadership — *Class of May 2019*
College of the Liberal Arts | Bachelor of Arts in Sociology

International Studies Institute — **Florence, Italy**
Integrated Supply Chain and History of Italian Culture Summer Study Abroad Program — *May 2017—June 2017*

RELEVANT EXPERIENCE

Deloitte Consulting — **Chicago, IL**
Human Capital Summer Scholar — *June 2018—Aug 2018*
- Developed and delivered rigorous, comprehensive 2-week Care Management training program to 14 participants including in-classroom instruction, job shadowing, simulated application, and final capstone
- Managed $14,000 logistics budget across 3 teams, while coordinating with 8 team members
- Produced per-unit cost analysis to present to client CEO of a large integrated health system
- Interacted with 72 delivery leads over 9-week timeframe to create deliverable materials and 80 hours of curriculum
- Analyzed training feedback from delivery leads and participants to provide improvements for future iterations
- Created alumni database and growth strategy for internal, international skills-based service program

Nittany Consulting Group — **University Park, PA**
Executive Board | Director of Penn State Consulting — *Apr 2017—Dec 2017*
- Established and developed relationships with 10 student organizations to create a pipeline for future projects
- Directed 3 project teams to deliver creative solutions to Penn State student organizations for recruitment, retention, fundraising, promotional initiatives, and organization plan development

Consultant Training Program Mentor — *Jan 2018—Apr 2018*
- Mentored 3 different teams of 4 students through a 10-week training program to improve consulting skills; develop business acumen, presentation skills, case knowledge; and provide general support

Engagement Manager — *Jan 2017—May 2017*
- Managed a team of 3 consultants to restructure the executive board of a student organization from 14 to 8 positions to streamline communication and identify clear roles and responsibilities to increase organizational efficiency

Aldi Grocery Stores — **Center Valley, PA**
District Manager Intern — *June 2016—Aug 2016*
- Supervised 50 employees at 4 stores in the Philadelphia area, each grossing over $500,000 of sales per month
- Researched better methods to track and improve out-of-stock processing to be implemented in over 100 stores

LEADERSHIP EXPERIENCE

Sapphire Leadership Academic Program — **University Park, PA**
Distinguished Sapphire Leader — *Aug 2015—May 2019*
- Recruited into a cohort to represent the top 5% academically in Smeal's incoming class of students
- Earned highest honors by fulfilling over 24 hours of professional and leadership development activities each semester
- Engaged in academically rigorous, Sapphire-specific courses to replace the general business curriculum courses

Smeal College of Business — **University Park, PA**
Smeal Integrity Advocate — *Sept 2018 – May 2019*
- Organized integrity efforts throughout the Smeal College of Business to increase ethical awareness for 5,500 students
- Created bylaws for organization to develop processes for attendance, participation, leadership, and future growth

Penn State Panhellenic Council — **University Park, PA**
Executive Board | Vice President of Standards — *Nov 2017—May 2019*
- Directed over 80 sorority representatives to maintain safety and rule-following for over 5,000 Panhellenic women
- Revitalized the Panhellenic standing rules, bylaws, code of ethics, and recruitment rules to preserve integrity
- Investigated rule violations by working with chapter representatives, conduct office, and university officials

Alpha Delta Pi | Delta Kappa Chapter — **University Park, PA**
Executive Board | Director of Standards and Ethics — *Nov 2016—Dec 2017*
- Ensured the compliance of the national code of conduct and bylaws by enforcing rules for over 200 members
- Improved retention and participation at chapter events by 30% by redefining chapter rules and excuses policy

Scholarship Chair — *Jan 2016—Dec 2016*
- Increased chapter GPA of over 200 members from 3.30 to 3.37 within one semester by evaluating and monitoring study hour attendance while creating and implementing incentive programs for high grades on exams
- Decreased members on academic probation by 50% through individualized meetings, study hours, and grade reports