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The Effects of Employment on Recidivism Among Delinquent Juveniles

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The Effects of Employment on Recidivism Among Delinquent Juveniles

A thesis

presented to

the faculty of the Department of Criminal Justice & Criminology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Criminal Justice & Criminology

by

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ABSTRACT

The Effects of Employment on Recidivism Among Delinquent Juveniles

by

G. Leigh Kassem

Current research indicates an association between intense adolescent work (twenty hours or more per week) and delinquent behavior. It has been widely speculated that this relationship is spurious, occurring only as a result of other factors which are common to both offending and intense employment. The current study attempts to fill a gap in the literature by utilizing the Pathways to Desistance dataset to examine the evolution of the relationship between work and self-reported offending in a longitudinal sample of juvenile offenders. Work intensity and consistency, social capital, and expectations for success were analyzed as potential predictors of recidivism or desistance as juvenile offenders mature into adulthood. Variations in the significance of these variables throughout the first seven waves of data collection were examined from the life course perspective. Results provide support for the theory of age graded social control and suggest that high risk youth self-select into intensive work roles as adolescents. No statistically significant differences in lifetime offending were found between respondents across varying levels of work intensity.

DEDICATION

To my Grandmother, Billie Kassem, who has supported me wholeheartedly in all of my “adventures”, including going back to school at age 32. If you have the grit to stare down a hurricane in your back yard and call it “inconvenient”, I can handle grad school. Your unwavering integrity, loyalty, empathy, courage, and patience are my inspiration. Even when you cheat at rummy. =)

Thank you.

*“We wanderers, ever seeking the lonelier way, begin no day where we have ended another day;
and no sunrise finds us where sunset left us.”*

~Khalil Gibran, The Prophet

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CHAPTER 1
INTRODUCTION

Overview of Juvenile Offending

According to the Office of Juvenile Justice and Delinquency Prevention (OJJDP) and the National Research Council, violence among juveniles rose dramatically in the mid-1980s. However, just as the overall crime rate began to drop in the early 1990s, juvenile arrest rates have also declined steadily. The juvenile arrest rate peaked in 1996 at 8476.1 per 100,000 but has continued to decrease each year since that point. In 2009, the arrest rate per 100,000 juveniles was 5343.8. By 2014, this had dropped to just over 3008 (OJJDP, 2015).

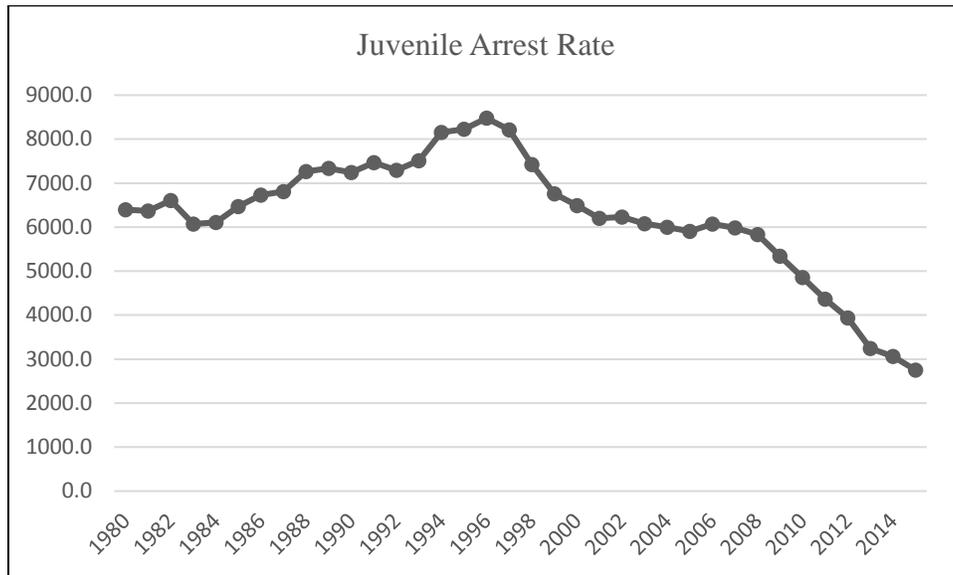


Figure 1. Juvenile Arrest Rates, 1980-2014

As with adults, juvenile arrest patterns vary by gender and race. Data for 2015 indicate an overall arrest rate of 3806.2 per 100,000 males, compared to 1651.1 per 100,000 females. Black youth experienced a higher arrest rate (5740.6 per 100,000) than white youth (2302.3 per 100,000). Violent crimes (143.3 per 100,000) were far outnumbered by property crimes (624.6 per 100,000). The most common juvenile offense in 2015 was larceny (466.9 per 100,000),

followed by simple assault (390.2 per 100,000), drug offenses (297.8 per 100,000), and disorderly conduct (212.5). Murder (2.4 per 100,000) was the least common. The FBI's definition of rape changed in 2013, therefore rape is not included in these statistics, as local agencies may be reporting based on a different definition. Violent crime indexes for Table 1 consist of murder/non-negligent manslaughter, robbery, and aggravated assault.

Table 1

2015 Juvenile Arrest Rates by Offense, Race, and Gender

	Total	Male	Female	White	Black	Native	Asian
All Crimes	2751.5	3806.2	1651.1	2302.3	5740.6	2605.7	657.1
*Violent Crime Index	143.3	225.7	57.1	86.3	459.8	86.4	31.5
Murder/Manslaughter	2.4	4.3	0.3	1.2	8.7	1.1	0.1
Robbery	55.6	97.3	12	21.8	233.1	13	12.4
Aggravated Assault	85.3	124.1	44.8	63.3	218	72.3	19
Property Crime Index	624.6	807.8	433.4	490.2	1445.2	502.9	179.4
Burglary	106.2	180.3	28.9	79	272.1	74.2	22.1
Larceny	466.9	544.6	386	374.5	1034.4	377.9	149.1
Motor Vehicle Theft	43.7	70.3	15.9	28.8	127.4	38.2	6.8
Arson	7.7	12.6	2.6	7.9	11.3	12.6	1.5
Other Assault	390.2	482	294.4	304.7	940.9	288.9	75.2
Vandalism	123.2	200.5	42.7	116.3	206	110.3	26.8
Weapons	57.4	100.2	12.8	43.3	144.7	29.4	16.4
Drugs	297.8	459.4	129.2	295.2	396.1	293.1	70.6
DUI	19.8	29.2	10	23.3	7.2	38.8	6
Liquor Law	129.7	152.6	105.7	150.3	53	290.1	30.9
Drunkenness	16.4	22.9	9.6	18	9.2	58.3	3.7
Disorderly Conduct	212.5	268.7	153.6	155.6	553.4	228.6	30.4
Curfew/Loitering	133.7	187.7	77.4	93.8	367.5	87.2	31.1

*Rape not reported

Comparing violent crime index arrest rates and property crime index arrest rates by age across 1980 and 2012 indicates that patterns in juvenile offending have changed somewhat over the last few decades. The peak ages for violent crime shifted from 17 and 18 to 19 and 20, while

the peak for property crimes shifted from 16 to 18. Although arrest rates for serious violent crime and property crime significantly decreased by the year 2012, simple assault and drug arrests increased. The peak age did not decrease for any offense (OJJDP, 2014).

Table 2

Arrests by Age, 1980-2012

	1980		2012	
	Age	Rate	Age	Rate
Violent Index	18	676.3	19	499.7
Property Index	16	3939.0	18	2151.2
Simple Assault	21	573.7	21	963.2
Drugs	18	1144.3	19	2063.2

The Age Crime Curve

It is generally accepted that criminal behavior is most common during adolescence, peaking in the late teens and declining throughout adulthood (Hirschi & Gottfredson, 1983; Quetelet, 1831; Parmelee, 1918). Hirschi and Gottfredson (1983) stated that the relationship between age and criminal behavior, also known as the age crime curve, is universal. According to this perspective, regardless of gender, race, or socioeconomic status, criminal behavior is expected to begin in early to mid-adolescence, peak in late adolescence, and decline steadily throughout adulthood, resembling a bell curve (Farrington, 1986; Hirschi & Gottfredson, 1983; Piquero, Farrington, & Blumstein, 2007). Hirschi and Gottfredson further argued that “the age distribution of crime cannot be accounted for by any variable or combination of variables currently available to criminology” (p. 554) and that “if the form of the age distribution differs from time to time and from place to place, we have been unable to find evidence of this fact” (p.555).

Other studies, however, have found that this curve does in fact vary somewhat according to offense type (Blokland & Palmen, 2012; Fagan & Western, 2005; Loeber, et al., 2012; Piquero, Hawkins, & Kazemian) and gender (Blokland & Palmen, 2012; Eliot, Pampel, & Huizinga, 2004; Farrington, 1986) as well as socioeconomic status and neighborhood characteristics (Eliot et al., 2004; Fabio, Li-Chuan, Loeber, & Cohen, 2011; Fagan & Western, 2005). Steffensmeier, Anderson, Harer, and Steiffel (1989) also rejected the idea of a universal age crime curve, finding that from 1940-1980, offending had become increasingly concentrated among the young as well as specialized by type of offense. Steffenmsmeier et al. (1989) suggested that the costs and benefits of criminal behavior become less lucrative over time as a result of age-related social control and norms. Additionally, Blumstein, Cohen, and Farrington (1988) argued that Hirschi and Gottfredson's perspective was flawed because of a lack of distinction between mere participation in crime and frequency of crime by age as well as failure to account for length of criminal careers. While the specifics of the age crime curve may not be as "universal" as Hirschi and Gottfredson claim, it cannot be disputed that criminal behavior is more common among adolescents and young adults than middle aged and elderly individuals. The big question, essentially, is *why* this is the case.

Theoretical Explanations for Juvenile Offending

This section will present a discussion of the most widely accepted theories of delinquent behavior. The key elements of each theory will be discussed along with strengths and weaknesses. In particular, the discussion will focus on the ability of each theory to address the age/crime relationship and differential levels of crime in adolescence and adulthood.

Differential Association

Sutherland (1947) proposed nine elements by which criminal behavior is learned through differential association. The first is that criminal behavior, like all behavior, is learned. Secondly, the learning process takes place through communication. Third, learning takes place primarily through intimate personal groups, such as peer associations. Fourth, the learning of criminal behavior includes techniques of crime as well as the direction of drives, motives, and attitudes. Fifth, the direction of these drives and motives is learned from favorable or unfavorable definitions of the law. Sixth, delinquency will occur when there is an excess of definitions favorable to law violation. Seventh, differential associations may vary in frequency, duration, priority, and intensity. Eighth, criminal behavior is learned through the same processes and mechanisms as noncriminal behavior. The ninth and final element of differential association is that although criminal behavior is an expression of general needs and values, it may not be explained by them; noncriminal behavior is utilized to meet the same needs and values (Sutherland, 1947).

This perspective has been widely accepted. Delinquent peer groups are frequently found to be a significant predictor of behavior and arrest (Warr, 1993, 1998). Typically, youth who report more delinquent peers are more likely to engage in delinquent behavior, whereas youth who report few or no delinquent peers are less likely. It is difficult, however, to establish a causal order for this phenomenon or to eliminate the possibility of self-selection into a delinquent or prosocial peer group. In other words, it may be the case that birds of a feather flock together as opposed to monkey see = monkey do. Differential association also fails to adequately explain desistance of individuals within high risk groups.

Strain

Strain theories focus on frustration stemming from blocked opportunity and inability to achieve goals through legitimate means. Merton (1938) identified four typologies of adaptation to social goals and means. The most common, the conformist, accepts both society's goals and the use of legitimate means. The innovator, which is the most likely to result in crime, accepts society's goals, but rejects the use of legitimate means. The retreatist and the rebel each reject both the goals and legitimate means, but differ in that the rebel seeks to change both the goals and means, whereas the retreatist merely drops out of society. The gap between goals and means leads to delinquency when goals are evenly distributed, but legitimate means are not equally distributed across classes (Merton, 1938).

Agnew (1992) revised strain theory to focus on the negative emotions resulting from strain. Crime and deviance are most likely to result when the response to strain involves anger. Stress is a universal human experience, but the emotional response and choice of criminal or noncriminal coping behavior will vary at the individual level. Agnew stated that there are distinct types of strain and specific circumstances under which strain is more likely to result in criminal behavior. According to Agnew, strain can result from not only blocked goals, but also the removal of positive stimuli or introduction of negative stimuli. Such strains are assumed to be more likely to result in crime if they are high in magnitude, viewed as unjust, or are more easily resolved through criminal coping mechanisms as opposed to prosocial alternatives.

One major criticism of the strain perspective is that it includes an underlying assumption that goals are universally shared and does not account for adjustment of goals. Additionally, although the goals/means gap may occur at any point in the life course, the age crime curve peak

does not reflect this. Strain theory also fails to adequately explain the coping mechanisms involved in desistance; although stress is universal, offending is not.

Social Control

Reiss (1951) defined social control as the ability of social institutions to make effective norms and rules, stating that conformity was either an act of acceptance or submission.

Assessment of juvenile probation revocations led Reiss to suggest that delinquent behavior could result from either the failure of internal personal control or reluctance of an individual to submit to the social control of institutions. Toby (1957) proposed that an individual's willingness to engage in delinquent behavior is determined by his or her stakes in conformity- those who are highly invested in social norms have more to lose, and are therefore less likely to commit crime.

Nye (1958) looked to the quality of family relationships to determine submission or acceptance. Reckless (1967) referred to a variety of external "push" and "pull" factors that would increase the likelihood of criminal behavior. Poverty, psychological pressure, or blocked opportunity might "push" an individual toward crime, while criminal opportunity or peer associations might "pull" an individual to commit a specific act of crime or delinquency (Reckless, 1967).

Hirschi's (1969) social bonding theory of delinquency combines elements of each of the early control theories. The four components of this social bond include attachment, commitment, involvement, and belief. According to Hirschi, strong attachment to "conventional" others encourages acceptance of conventional values, thereby deterring criminal behavior. Commitment to conventional goals and aspirations (similar to Toby's stakes in conformity) also strengthens the social bond and decreases the likelihood of delinquency. Involvement in conventional activities, such as school, church, and prosocial extracurricular organizations decreases the

likelihood of deviance by reducing the amount of free time one has to engage in delinquency.

The final element of the bond is belief in the normative values and rules of society. Hirschi suggested that those who believed rules should be followed would be less likely to deviate from them, building on Matza and Sykes' (1961) subcultural theory.

In 1961, Matza and Sykes suggested that weakened social control results in a delinquent subculture in which traditional values are replaced in the lower classes; criminal behavior is neutralized as necessary and acceptable under certain conditions. Matza's (1964) theory of drift suggested that delinquents engage in prosocial, non-criminal behaviors most of the time because of the situational strength of social controls; when these controls weaken during times of stress, crime is more likely to occur.

While most criminological theories seek to explain causes of criminal behavior, theories of social control focus instead on desistance. Assuming that people are naturally prone to crime, under what circumstances is crime *less* likely to occur? This perspective is particularly relevant to explaining why young offenders abstain from delinquency, but in its static form, it does not address why most offenders stop after adolescence or why some do not offend until adulthood. Although social control theories explain how and why individuals resist delinquency, it does not explain the initiation of delinquent behavior. Additionally, the phenomenon of the age crime curve is not adequately addressed. Moreover, how and why do career criminals fail to bond to social institutions throughout life?

Self-Control

Gottfredson and Hirschi (1990) proposed that crime and delinquency occur as a result of low self-control, which they define as a stable trait established in childhood. According to this perspective, children internalize social norms and parental expectations, either developing self-

control or remaining impulsive and therefore prone to crime. Gottfredson and Hirschi assert that this is a general theory, relevant across all circumstances, regardless of social bonds. Although there is support for the claim that offenders lack self-control, the theory is criticized for being tautological in that low self-control “causes” antisocial behavior, but is identified as a result of observing antisocial behavior. This perspective is easily criticized for not addressing desistance and the age crime curve; if self-control is a stable trait which leads to crime, how and why do most offenders cease after adolescence?

The Life Course Perspective

General Overview

The life course perspective explains prosocial and criminal behavior in terms of the relationship between social institutions and major events at key developmental life stages (Elder, 1985). Life course theories typically focus on social development relevant to major life events. Two distinct life course perspectives will be discussed: Moffit’s typologies and Sampson and Laub’s theory of age graded social control. These theories serve to fill in many of the gaps left unexplained by the static theories discussed in the previous section.

Adolescent Limited and Life Course Persistent Typologies

Research has consistently shown that a relatively small percentage of offenders is responsible for the most significant portion of criminal activity (Farrington, Ohlin, & Wilson, 1986; Loeber, 1982; Moffit, 1993; Patterson, 1982; Wolfgang, 1972). As noted by Caspi and Moffit (1995), most criminal offenders are teenagers, with a 50 percent decrease in active offenders over the age of 20 and an 85 percent decrease in active offenders over the age of 28. Moffit (1993) argued that although some offenders are “life-course persistent”, possessing certain pre-dispositional traits and neurophysiological deficits which are influenced by the

individual's environment and opportunity, the majority are "adolescence-limited", aging out of criminal behavior in early adulthood as a result of distinct criminal pathways.

According to Moffit (1993), life-course persistent offenders demonstrate an earlier onset of offending, participate in more serious delinquency, and are consistently antisocial across life domains and situations, whereas adolescent limited offenders begin offending later, participate in minor delinquent behaviors, and distinguish between prosocial and antisocial behavior based on situational reward. Moffit and Caspi (2001) note that parenting plays a role as well, finding that single parent households, maternal mental health, harsh and inconsistent discipline, neglect, family conflict, and household socioeconomic status are significant predictors of life course persistent offending. Most importantly, adolescent limited offenders tend to take advantage of prosocial alternatives and opportunities for change, whereas life course persistent offenders do not.

Adolescent limited offenders tend to engage in nonviolent delinquent behaviors which mimic adult norms (smoking, drinking, sex) and theft as a result of what Moffit termed a maturity gap, occurring as a risk-taking social interaction in peer groups (Moffit, 1993; White, Bates, & Buyske, 2000). These behaviors tend to be rebellious in nature but not inherently aggressive (Piquero & Brezina, 2001) and associated with peer delinquency (Bergman & Andershed, 2009; Farrington et al., 2009; Jeglum-Bartusch, Lynam, Moffit, & Silva, 1997; Simons, Wu, Conger, & Lorenz, 1994).

It has been suggested by many researchers that Moffit's typologies are insufficient to describe the full scope of criminal careers and their developmental pathways. Jennings, Khey, Mahoney, & Reingle (2011) questioned the relevance of "adolescent limited" offending, as many individuals continue criminal activity into the early and mid-twenties before aging out. D'Unger

et al. (1998), Nagin and Land (1993) and Nagin et al. (1995) suggested that an additional trajectory, low-level chronic offending, was necessary in order to explain the occurrence of sporadic minor criminal activity throughout adulthood. Similarly, White et al. (2001) identified a distinct trajectory of adolescents who continued to escalate their criminal behavior in adulthood despite being engaged in only minor delinquency as adolescents, calling in to question the role of neurophysiological deficits in criminal persistence.

Walters (2011) and Thornberry and Krohn (2001) have suggested that adolescent limited and life course persistent offending are not in fact, distinguished from one another by the presence or absence of neurophysiological deficits, as these traits occur on a continuum. Moffit, however, maintains that neurophysiological deficits, poor verbal skills, lower executive functioning, and cognitive motor delays continue to interact with negative social environments thereby creating snares for lifelong offending. For this small percentage of individuals, pro social opportunities are “knifed off”, leading to continued criminal activity and lack of positive response to opportunities for change.

Age-Graded Social Control

Sampson and Laub (2004) proposed a theory of age-graded social control in which criminal persistence or desistance results from social controls, routine activities, and purposeful human agency. According to Sampson and Laub (1993), informal social controls are determined by the resources gained from relationships and networks (social capital). Higher levels of social capital lead to stronger social control, thereby decreasing the likelihood of antisocial behavior.

Age graded social control suggests that institutions of social control such as employment, marriage, peer associations, etc. vary across life course, thereby influencing offending patterns in adulthood through an individual’s commitments to conformity. Age graded social control theory

is built on three key elements. First, Sampson and Laub (2003) assert that structural factors, such as poverty influence process variables, such as attachment. As such, age graded theory integrates structure and process relative to one another. Second, delinquency and early problem behavior influences long term outcomes by way of limiting pathways and opportunities. The third element is that adult behavior is influenced by the pathways of earlier choices as well as institutions of social control.

Sampson and Laub (1993) also highlighted the importance of trajectories (pathways, such as work, marriage, or parenthood) and transitions (events in the course of these pathways or trajectories) in creating turning points, or changes in life course. Laub and Sampson (2003) noted that these structural turning points serve to redirect the pathway, influenced by “situated choice”. In other words, being in the right place at the right time may create an opportunity for change, but personal agency and free will ultimately determine whether an individual will persist in criminal activity or desist. Social capital and interpersonal bonds influence the potential consequences of behavior, thereby impacting the decision-making process as life circumstances, relationships, and responsibilities change over time.

Most importantly, Sampson and Laub (2004) suggest that commitment to conformity and desistance is determined not by the existence of a relationship with social institutions, but by the quality of the relationship. The concept of social institutions such as marriage is described as a “side bet”, resulting in desistance by default, or drift, as individuals become significantly invested in prosocial pathways. In this manner, life transitions and the resulting opportunities can alter trajectories, thereby explaining why individuals from similar backgrounds can have vastly different life experiences.

Although the life course perspective is charged with explaining varying levels of offending by way of changes in commitment to social institutions such as family, school, work, and marriage, it has not yet been applied to the relationship between adolescent work and juvenile delinquency. Similarly, the possibility of a relationship between adolescent work and long term persistence or desistance has not been explored. The current study addresses this research gap.

Current Study

Traditionally, lack of legitimate employment is considered a criminogenic factor. In adult populations, unemployment has long been associated with recidivism and limited opportunity (Griggs, 2004; Nally, Lockwood, Knutson, & Ho, 2012; Pryor & Thompkins, 2013; Visher, 2007). For juveniles, however, findings are typically the opposite; adolescent work is commonly associated with delinquency. Specifically, the more hours worked per week, the greater likelihood of delinquent behavior (Agnew, 1986; Apel, Bushway, Brame, Haviland, Nagin, & Paternoster, 2007; Cullen, Williams, & Wright, 1997; Greenberger & Steinberg, 1986; Marsh & Kletman, Mihalic & Elliot, 1997).

The present literature regarding the relationship between adolescent work and delinquent behavior is generally consistent in that intense work and self-reported delinquency are significantly correlated (Agnew, 1986; Apel et.al., 2007; Bachman & Schulenberg; Carr, et al., 1996; Greenberger & Steinberg, 1986; Marsh & Kleitman, 2005; Mihalic & Elliot; 1997). However, there is no consensus as to why this is the case. In other words, it is unknown whether intense adolescent work is a predictor of offending or if this relationship emerges due to other factors which are common to both offending and intense employment.

Many criminological theories, such as differential association, strain, self-control, and social control have been used as explanations for the connection between youth employment and delinquency as well as theoretically grounded arguments against it. For example, teens who work and earn a paycheck may experience outcomes as diverse as a reduction in financial frustration and corresponding decrease in delinquency or heightened levels of stress and general frustration due to increased responsibilities (strain theory). Alternatively, an increasingly insatiable appetite and increased desire for financial attainment (as predicted by Messner and Rosenfeld's theory of institutional anomie) would suggest increased delinquent behavior among working youth, particularly those who work more hours than their peers, thereby assigning a greater importance to financial institutions. Reduced parental control and increased autonomy, association with new peer networks, and job related stress all provide support to the proposition that juvenile delinquency may be affected directly by employment.

Much of the research on this phenomenon has focused on the spuriousness of the relationship by addressing self-selection and individual differences between those who choose to work intensely, moderately, or not at all (Bachman & Schulenberg, 1993; Jessor & Jessor, 1977; Newcomb & Bentler, 1988). This thesis aims to examine the relationship between adolescent work intensity and long term outcomes from a life course perspective by assessing the role of work as a turning point or triggering event in late adolescence. Social capital and expectations of success will also be analyzed as potential predictors of recidivism or desistance in a large sample of serious juvenile offenders.

This will fill a significant gap in the current literature by examining the relationship between adolescent work intensity and persistent offending from a life course perspective. It will further seek to clarify the issue of self-selection in the relationship between work and

delinquency (are youth who work more likely to be delinquent, or are delinquent youth more likely to work) by focusing exclusively on juveniles with delinquent records, as opposed to existing literature which has focused on cross sectional samples of offending and non-offending youth. Secondary data from the Pathways to Desistance dataset will be utilized to explore the relationship between adolescent work intensity and behavior over a four-year period in a longitudinal sample of juveniles with serious misdemeanor or felony convictions, age 14-18 at the time of their offense. The purpose of the current study is to analyze the roles of race, employment, and social capital in criminal persistence or desistance among serious juvenile offenders.

Conclusion

This chapter has provided an overview of juvenile offending patterns, a discussion of the age crime curve, briefly summarized static theories of juvenile offending, and presented an overview of life course trajectory perspectives and the theory of age graded social control. The general phenomenon of youth work and delinquency was also introduced. Chapter Two will provide a review of the literature on employment and offending at two distinct points in the life course: adolescence and adulthood. Chapter Three will outline the methodology of the current study, including hypotheses, data source, and statistical analyses. Chapter Four will present the results of analyses. Chapter Five will discuss the results, implications, and limitations of the study as well as directions for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

Chapter One presented a brief overview of juvenile offending patterns, an explanation of the age crime curve, and theoretical explanations for juvenile offending. The previous chapter also introduced the relationship between adolescent employment and delinquency and provided an overview of the theoretical framework of the life course perspective. Chapter Two will discuss the literature relevant to employment and criminal behavior across the life course. This review of literature is organized into two parts. The first examines findings on the relationship between adolescent work, development, and behavior (*See Appendix for summary table of major studies*). The second discusses employment and criminal behavior in adults.

Adolescent Employment

In 1955, G. Howland Shaw, Chairman of the Youth Employment Subcommittee testified before the U.S. Senate:

Now what is the attitude of the average youngster in this upper teen group [adolescent]? He wants a job; he wants work experience, for three very clear reasons. First of all, holding down a job is a sign that he is growing up, that he has grown up to a certain extent. Secondly, it is a symbol of his emancipation from family control- and any normal upper teenager wants to get out of the family circle. And then, perhaps from a practical point of view more important, he wants to make a bit of money. He has got his eye probably on a broken-down second-hand car and he is worrying about the expenses of entertaining appropriately his girlfriend. (*Juvenile Delinquency: Youth Employment, 1955, p. 3*)

It is a long-held belief that adolescent employment provides a number of developmentally appropriate opportunities, including fostering responsibility, gaining financial independence, building experience in the labor market, and saving for college.

Research has partially supported these views. According to Steinberg, Greenberger, Garduque, and McAuliffe (1982), youth who work demonstrated higher levels of “practical

knowledge”, such as business operations, economic concepts, informed consumer practices, and consumer arithmetic when compared to non-working peers. Adolescent work also yields some long-term benefits. Mortimer and Finch (1986) found that youth who worked during high school were more likely to be employed five years later and reported higher income than those who entered the work force after high school. These findings were later supported by Carr et al., (1996) who determined that the labor force participation of working youth included more consistent employment patterns throughout adulthood as well as higher income than nonworkers.

Marsh (1991) found that working during high school was the strongest predictor of college attendance among those who reported that the purpose of the job was to save money for college, even more so than grades or involvement in school activities. Findings by Rocheleau (2015), however, indicate a significant relationship between academic goal orientation and work intensity which varies by socioeconomic status. Highly motivated, low SES youth were more likely to work intensely, whereas highly motivated upper SES youth worked fewer hours. Interestingly, the relationship was reversed for youth with low academic motivation.

Despite these potential benefits to youth work, a large body of research has identified risks associated with employment during adolescence, such as lower academic performance, substance use, and delinquency. According to the U.S. Department of Labor, over 20 million youth were employed in 2016. From April to July, almost 2 million youth entered the workforce for summer employment (U.S. Department of Labor, 2016). As over half of U.S. adolescents work part time after school or over the summer, the benefits and risks associated with adolescent work should be considered carefully. Most studies indicate that the risks associated with adolescent work increase according to hours worked, with significant negative effects associated with “intense” employment, around the mark of twenty hours per week (Agnew, 1986; Apel

et.al., 2007; Bachman & Schulenberg, 1993; Carr, et al., 1996; Gottfredson, 1985; Greenberger & Steinberg, 1986; Marsh & Kleitman, 2005; Mihalic & Elliot; 1997). Some studies indicate these effects vary according to characteristics of the job/job type (Agnew, 1986; Apel et. al, 2006; Entwisle, Alexander, & Olsen, 2005; Jessor, Donovan, & Costa, 1991; Shanahan et al 1996; Staf & Uggen, 2003).

Academic Consequences

Early research on youth employment revealed increased risks of negative academic outcomes such as poor attendance and decreased participation in extracurricular activities (Agnew, 1986; D'Amico, 1984; Finch, Shanahan, Mortimer, & Ryu, 1991; Lee & Staff, 2007; Monahan, Steinberg, & Lee; Safron, Schulenberg, & Bachman, 2001; Steinberg & Dornbusch, 1991; Steinberg, Fegley, & Dornbusch, 1993; Steinberg et. al, 1982), lower grades (Finch et al., 1991; Greenberger & Steinberg, 1986; Lee & Staff, 2007; Marsh, 1991; Mortimer & Finch, 1986; Steinberg & Dornbusch, 1991), failure to complete high school (Apel, Bushway, Paternoster, Brame, & Sweeten, 2008; D'Amico, 1984; Marsh, 1991; Mortimer & Finch, 1986), and failure to attend college after completing high school (Carr, et al., 1996; Entwisle et.al, 2005; Lee & Staff, 2007).

According to Staff and Uggen (2003), jobs which promote academic goals may be useful in preventing delinquency, but most traditional adolescent jobs displace academic goals. Interestingly, after controlling for background characteristics, Apel et al. (2008) determined that the likelihood of dropping out of school was the only significant academic outcome predicted by hours worked. Apel et al. (2008) and Mortimer et al (1996) found no significance between work and academic performance, however, according to findings by Steinberg et al., (1993), grades

may be a poor measure of overall academic engagement, as working youth frequently report choosing easier classes as a result of working in order to avoid doing poorly in school.

Substance Use and Delinquency

The second major focus of research regarding adolescent work is increased risk of substance use and delinquent behavior (Agnew, 1986; Bachman & Schulenberg, 1993; Grenberger & Steinberg 1986; Johnson, 2004; Largie et al., 2001; Mihalic & Eliot, 1997; Mortimer, 1996; Rocheleau & Swisher, 2012, 2016; Safron, Schulenberg, & Bachman, 2001; Steinberg et al., 1993; Wright, Cullen, & Williams, 1997). Agnew (1986) noted that work intensity was associated with higher rates of minor delinquency. Bachman and Schulenberg (1993) determined that both employment status and hours worked were significant to increased police interaction as well as use of alcohol, cigarettes, marijuana, and cocaine. These findings have been supported in additional studies. Largie (2001) found higher rates of smoking among working youth than their non-working peers. Higher rates of self-reported alcohol use (Mortimer, 1996; Rochelau & Swisher, 2012) as well as binge drinking (Rocheleau & Swisher, 2016) have also been linked to high intensity adolescent work.

Some studies have found that these effects are both cumulative and long lasting. Mihalic and Elliott (1997) found significant increases in substance use over time in youth who worked two years or more. According to Steinberg et al., (1993), increased substance use among high intensity workers continued even after youth stopped working. Others have determined that the relationship between work intensity and substance use varies by race (Johnson, 2004; Wright, Cullen & Williams, 1997), socioeconomic status (Rochelau & Swisher, 2016), household characteristics (Rocheleau & Swisher, 2012), and unstructured social activities (Safron, Schulenberg, & Bachman, 2001). McMorris and Uggen (2000) determined that school

misconduct, grades, and independence from parents mediated the relationship between hours worked and alcohol use.

Self-Selection

Many researchers contend that this relationship results from pre-existing individual differences between youth who self-select into intense work hours and those who do not, rather than from work itself (Apel et al., 2006, 2007; Bachman & Schulenberg, 1993; Brame et al., 2004; Cullen, Williams, & Wright, 1997; Finch et al., 1991; Gottfredson, 1985; McMorris and Uggen, 2000; Newcomb & Bentler, 1988; Paternoster et al., 2003; Ploegger, 1997; Rocheleau & Swisher, 2012; Steinberg et al., 1993). Cullen, Williams, and Wright (1997) suggested that an increased risk of delinquency among working youth is due to the influence of social capital and lack of “conventional” values among young workers. According to the theory of “precocious development” (Newcomb & Bentler, 1988), youth who are already prone to age-inappropriate “adult” behaviors, such as smoking, drinking, engaging in sexual activity, and substance use are also more likely to engage in adult work behaviors, such as longer hours. This has been supported by Finch et al., (1991), Mihalic and Elliot (1997), McMorris and Uggen (2000), and Apel et al (2006, 2007) as well as Lee and Staff (2007).

Other researchers have focused on common background demographics, such as race, gender, and socioeconomic status (Bachman & Schulenberg, 1993; D’Amico, 1984; Gottfredson, 1985). D’Amico (1984) noted that early employment was associated with class standing for white males, but not any other demographic. It was further noted that negative outcomes associated with work intensity are concentrated in minority populations, as white males tended to work shorter hours. Johnson (2004) noted that adolescent substance use and employment share

underlying factors such as gender, family characteristics, socioeconomic conditions, and school problems, suggesting a selection effect.

The relationship has also been attributed to “mixed” effects of pre-existing differences enhanced by work experience (Brame et al., 2004; Cullen, Williams, & Wright, 1997; Ploegger, 1997; Steinberg et al., 1993). Paternoster, Bushway, Brame, and Apel (2003) reduced the relationship between work and delinquency almost entirely by isolating covariates of work and offending, noting that causal inference is too ambiguous in observational studies due to unobserved heterogeneity. Entwisle et al. (2005) noted that many informal first jobs are gender based and require parental social capital as well as community networking. It was suggested that this accounts for much of the gender and race gap in youth employment, as parents tend to be more protective of daughters than sons. Additionally, minority youth tend to live in economically disadvantaged urban areas with fewer opportunities for community networking and informal employment. It was found that white youth were more likely than black youth to be employed at a young age, work fewer hours, remain consistently employed, and build social capital within the community through informal working channels. This is consistent with previous research (Coleman, 1984) indicating that white males tended to be employed younger, finish school later, and enjoy a higher overall quality of life than minority groups.

Criminogenic Factors of Adolescent Work

As a result of the types of jobs available to teenagers, working youth are often exposed to older, antisocial peers. Additionally, youth working longer hours spend more time outside of parental control, thereby increasing the likelihood of delinquent behavior. This combined social learning/social control perspective is also well supported by research (Ploegger, 1997; Wright & Cullen, 2004; Wright, Cullen, Agnew, & Brezina, 2001; Wright, Cullen, & Williams, 2002).

According to Agnew (1986), the effect of employment differs according to the type of job. “Prestigious” employment in white-collar clerical or sales jobs was found to decrease the likelihood of antisocial behavior, whereas longer hours in blue-collar service jobs resulted in lower grades and increased delinquency. In Staff and Uggen’s (2003) empirical assessment of job characteristics, twenty percent of the variation in alcohol use and twenty-five percent of the variation in school deviance was explained by a combination of employment characteristics and controls for prior behavior. Staff and Uggen (2003) also suggested that the same characteristics which make a job likely to decrease adult criminality also serve to increase rates of juvenile offending.

Ploegger (1997) found support for a differential association and social learning perspective as well as opportunity theory after controlling for self-selection. In this model, delinquent behaviors of working youth were attributed to simultaneous widening of peer networks and loosening of parental supervision, as working youth are likely to interact with more diverse groups of people than non-workers, including older, potentially delinquent coworkers in addition to increased income and decreased supervision while interacting with a new social network. Similarly, Wright, Cullen, Agnew, and Brezina (2001) argued that group differences in delinquent behavior arise not from work itself, but from varying levels of autonomy as a result of adolescent income. Whether through work or allowance, disposable income creates an opportunity for delinquency. It was found that that money was indeed correlated with increased delinquency and drug use. Interestingly, this result was the same for money earned through a job or money given as an allowance. Wright, Cullen, and Williams (2002) determined that “work embeddedness” (a combined measure of hours worked per week, days worked per week, and

wages earned per week) was significantly predicted by parental attachment and delinquent peers. This same measure predicted individual delinquency as well as peer delinquency.

Adolescent Work as a Turning Point

Thus far, only Wright and Cullen (2004) have examined the structural opportunity aspect of adolescent work as a potential turning point in the life course. According to Wright and Cullen (2004), employment may be a significant turning point in desistance as a result of widening pro-social peer networks. In this study, stable employment was found to decrease criminal behavior among young adults age 18-24. The combination of weeks worked and contact with prosocial coworkers was observed to result in reduced offending. Peer associations with pro-social coworkers were found to be the strongest predictor of desistance.

Research has yet to effectively resolve the issue of self-selection, but it appears that there is significant evidence regarding race, gender, and social capital differences in likelihood of employment, type of employment, and intensity of hours worked. Based on the type of work generally performed by youth and demographic differences in employment, the influence of pre-existing individual traits on the relationship between work and delinquency warrants further inspection. The current study will address this by examining common factors of youth who persist in offending as compared to those who desist over time.

Adult Employment

Unemployment and Crime

As discussed in Chapter One, life course and social control perspectives suggest that stable employment reduces the likelihood of criminal activity. Sampson and Laub (1993; 2003; 2005) assert that work decreases criminal behavior by promoting a commitment to conformity and prosocial values. Over time, cumulative disadvantage, including lack of opportunity, low

social capital, unstable family ties, and unstable employment, is thought to increase the likelihood of criminal behavior (Sampson & Laub, 2005). According to Wadsworth (2007), job quality is a stronger predictor of criminal activity than activity than education, income, job stability, or demographic characteristics. Conversely, Gottfredson and Hirschi (1990) propose that any link between unemployment and crime results from pre-existing differences, as unemployment and job instability occur due to low self-control. They support this claim by way of the age crime curve phenomena, as discussed in Chapter One, stating that “employment does not explain, or help to explain, the reduction in crime with age” (p. 139)..

Macro-level research has neither conclusively supported nor discounted a link between unemployment and crime. In a comparative assessment of international unemployment and crime, Krohn (1976) found that high rates of unemployment were positively related to national homicide, yet negatively related to national rates for property crime as well as overall crime. According to Chiricos (1987), the unemployment/crime relationship is conditional, with a weak effect on violent crime yet strong effect on property crime. It was also observed that the relationship is stronger when assessing lower aggregate levels, such as neighborhoods or cities as opposed to national rates, and stronger in longitudinal and cross sectional designs. Weiss and Reid (2005) examined macro level job quality by metropolitan area, finding significantly higher violent crime rates in areas which consistently demonstrated an excess of low wage service jobs compared to higher wage manufacturing jobs.

Reentry, Employment, and Adult Recidivism

Schmidt and Warner (2011) estimate that the overall employment rate for adult males in 2008 was reduced by 1.5-1.7 percent as a result of felony offenders unable to find work. This accounts for a \$57-\$65 billion loss of labor output for the economy in addition to human capital

concerns. In addition to lack of skills, the search for employment is often further derailed as a result of the stigma associated with being labeled as an offender (Arditti & Parkman, 2011; Bushway, Nieuwbeerta, & Blokland, 2011; Holzer, Raphael, & Stoll, 2006; Nally, Lockwood & Ho, 2011; Nally, Lockwood, Knutson, & Ho, 2013; Pager, 2003). Underemployment (Nally et al., 2013), job quality (Apel & Sweeten, 2010; Nally et al., 2013; Uggen, 1999) and low wages (Davies & Tanner 2013; Nally, Lockwood, & Ho, 2011; Nally et al., 2013; Peteit & Lyons, 2009; Western, 2002) are additional concerns. Lack of employment among adult offenders is commonly linked to to adult recidivism (Griggs, 2004; Nally, Lockwood et al., 2012; Nally et al. 2013; Pryor & Thompkins, 2013; Visser, 2007), although as noted by Petersilia (2004), recidivism and incarceration rates remain high, despite the fact that employment is a common parole requirement, even among the employed. As noted by Uggen & Staff (2001):

Although most theories suggest that some ex-offenders benefit from employment, their job prospects are limited by employers' preferences, low levels of education and training, and fragmented personal networks or social capital. (Uggen & Staff, 2001, p.2)

The stigma of a criminal record has been found to significantly limit employment opportunities (Apel & Sweeten, 2010; Pager, 2003,2007; Pryor & Thompkins, 2013; Schmidt & Warner, 2011) as well as earning potential (Apel & Sweeten, 2010; Davies & Tanner, 2013; Nally, Lockwood, & Ho, 2011; Nally et al., 2013; Peteit & Lyons, 2009; Western, 2002). Holzer, Raphael, and Stoll (2006) reported that 60 percent of employers indicated they would “probably not” or “definitely not” hire an individual with a criminal record. It was also found that roughly 30 percent of employers who are reluctant to hire offenders do not actually conduct pre-employment background checks. Interestingly, employers who utilized background checks in the hiring process were found to employ more minority workers than employers who did not.

Employment issues have been consistently found to have a disproportionate impact on Black offenders (Nally et al., 2013; Pager, 2003; Pryor & Thompkins, 2013; Western, 2002, 2006). Pager (2003) found that employers were more likely to hire a white applicant with a criminal record than a Black applicant with no record. White offenders also tend to have greater social capital and networking resources as compared to Black offenders (Pryor & Thompkins, 2013). In Nally et al.'s (2013) study of Indiana offenders released from prison, the majority of unemployed or marginally employed offenders were Black, whereas the majority of those earning \$40,000 per year or more were white. According to Western (2002), aggregate racial wage inequality is largely attributable to the employment issues experienced by offenders.

Davies and Tanner (2003) found that employment status, average number of weeks worked per year, and income were all significantly affected by pending criminal charges. Individuals who were convicted reported an average of \$4,000 lower income, while those sentenced to probation reported 180-460 fewer hours of work and an average income loss of \$2,700-\$3,500 per year. Incarceration resulted in an average annual income loss of 24-27%. According to Nally, Lockwood, and Ho (2011), 50% of employed offenders earn less than \$5,000 annually, concentrated primarily in temporary employment, food service, and manufacturing. Apel and Sweeten (2010) found that the formerly incarcerated experienced higher weekly wages as a result of working long hours, but 14-18% lower annual income.

The relationship between employment and recidivism has been well researched. Tripodi, Kim, and Bender (2010) did not find that employment was significant to the likelihood of reincarceration, but it did significantly delay it among a random sample of Texas parolee. Nally and colleagues conducted a five-year follow up study of offenders released in 2005 from Indiana. During this time, the highest rates of recidivism were among the unemployed (Nally et al.,

2013). These researchers attribute high levels of unemployment and recidivism to low levels of education. Unemployment and education were significant to recidivism regardless of the type of offense (Nally et al., 2014). Thirty five percent of their sample reported less than a high school education. Of these, slightly more than 59 percent were Black (Nally et al., 2012). A significant negative correlation was found between income and recidivism regardless of race. Interestingly, recidivism rates were significantly higher for all levels of education and employment during the 2008 recession (Nally et al., 2011; 2013). Uggen and Staff (2001) found Employment and work based programming have also been identified as contribute to desistance, with a particular emphasis on job quality (Uggen, 2000; Uggen & Staff, 2001). Work programs and employment have also been found to be more effective for older adults (age 27 and older) than for adolescents or young adults, offering support to the life course perspective (Uggen, 2000; Uggen & Staff, 2001).

Some researchers have argued for the importance of differentiating between reasons for unemployment, as many offenders do not actively seek work (Apel and Sweeten, 2010; Kleck & Jackson, 2016). Apel and Sweeten (2010) determined that unemployment among offenders resulted primarily from lack of participation in the labor force as opposed to employment barriers, also noting that “illegal work” results in income, but is not necessarily “employment”. Kleck and Johnson (2016) furthered this claim. Using data from the 2004 Survey of Inmates in State and Correctional Facilities, they identified four categories of joblessness: unemployed but actively seeking work, underemployed, socially acceptable unemployment (such as retirement, disability, or childcare/eldercare), and not actively seeking work. Those who were unemployed but not actively seeking work were found to be the most likely to commit burglary or robbery, while there was no significant difference between the unemployed who were seeking work and

those who were employed full time. As should be expected, age was significant to this relationship; individuals age 18-29 who were not actively seeking work were found to be four times more likely to commit burglary as compared to those age 30 and older who were not actively seeking work. According to Apel and Sweeten (2010), a significant portion of offenders have detached from the labor market as a result of long term discouragement and cumulative disadvantage. Arditti and Parkman (2011) found support for this claim in their qualitative interviews with released young offenders, identifying themes such as “going back to the old ways due to lack of employment”; “trying hard but getting nowhere”; and “family dysfunction”.

Some researchers have proposed that the relationship between recidivism and unemployment stems from pre-existing individual differences. Regardless of post-release barriers to employment, many offenders struggled with employment prior to conviction and incarceration (Apel & Sweeten, 2010; Loeffler, 2013; Nagin et al., 2009; Schmitt & Warner, 2010). Nagin, Cullen, and Jonson (2009) found that pre-existing differences predicted both unemployment and recidivism. Schmitt & Warner (2010) noted that despite post-release barriers, many offenders also struggled with employment prior to incarceration. According to Apel and Sweeten (2010), offenders tend to come from already marginalized populations and differ from non-offenders in terms of education and opportunity. Such “human capital deficits” then contribute to unemployment, crime, and reoffending. Using propensity score matching on these measures between incarcerated and non-incarcerated offenders, it was determined that incarceration had no significant effect on employment in adulthood after accounting for pre-existing differences in cumulative disadvantage. Loeffler (2013) found that although incarceration strongly and negatively predicted employment, the relationship was greatly diminished by controlling for race, gender, age, past convictions, and employment history.

Conclusion

This chapter provided a discussion of the existing literature on the risks associated with adolescent employment as well as an overview of the relationship between unemployment and criminal behavior in adults. Research in both areas remains divided between two possibilities: causation (social problems occur as a result of employment for adolescents and unemployment for adults), or self-selection (naturally high risk adolescents work too much and naturally high risk adults work too little). The current study seeks to address this by examining how work, social capital, and expectations of success impact the outcomes of seriously delinquent youth at the peak of the age crime curve. Chapter Three will present the methodology for the current study.

CHAPTER 3 METHODOLOGY

Introduction

The previous chapter discussed the literature relevant to the current study. Although a relationship between adolescent employment level and delinquent behavior is well established, it is not universally consistent. Recent research has been mixed regarding how background characteristics and self-selection into the work force may increase or decrease the risks associated with intense work among adolescents as well as how employment reduces the risk of recidivism in young adults. The current study seeks to clarify the role of work as a potential turning point in the lives of juvenile offenders. This chapter will address the methodology of the current study, including research question, hypotheses, data source and sampling techniques, measures, and statistical analyses used for each hypothesis. This chapter will also contain table three, which details the acts included in the relevant measures of self-reported offending, and table four, which details the operationalization of variables.

Research Question

The overarching research question this thesis attempts to address is: What is the nature of the relationship between demographic factors, employment, social capital, and criminal persistence/desistance among serious juvenile offenders?

Hypotheses

The hypotheses for this thesis are:

H1: Self-reported employment status and hours worked per week at the time of initial baseline interviews will vary significantly by race.

H2: Self-reported offending throughout the first 36 months will vary according to intensity of hours worked per week at the time of the initial baseline interview.

H3: Cumulative social capital and expectations will vary significantly by race.

H4: Cumulative social capital and expectations will negatively predict total self-reported offending from the time of the initial baseline interview through the 36-month follow-up.

H5: The relative influence of social capital, expectations, and work consistency on self-reported offending will fluctuate over time.

Data Source

This study utilizes secondary data from the first seven waves of the Pathways to Desistance dataset, a multisite longitudinal panel study of juvenile offenders with felony or serious misdemeanor convictions (N=1,354). The purpose of the Pathways to Desistance study was to “identify initial patterns of how serious adolescent offenders stop antisocial activity; describe the role of social context and developmental changes in promoting these positive changes; and compare the effects of sanctions and interventions in promoting these changes” (Mulvey & Schubert, 2016). The data set is publicly available and was downloaded from the Interuniversity Consortium for Political and Social Research (ICPSR) website. To date, Pathways to Desistance is the largest longitudinal study ever conducted on serious adolescent offenders.

Between November, 2000 and February, 2003 a total of 3,807 adolescent offenders met the criteria of felony or serious misdemeanor adjudication in Maricopa County, Arizona (Phoenix) and Philadelphia County, Pennsylvania. Participants were between the ages of 14 and 18 at the time of their offense. Enrollment of male drug offenders was capped at 15% of the sample. Invitations were extended to a total of 2,008 youths, resulting in a final sample of 1,354 (700 from Philadelphia and 654 from Maricopa). Baseline interviews were conducted as

participants were enrolled between November, 2000 and February, 2003. Follow-up interviews were conducted every six months for three years and annually from years four through seven. In total, over 20,000 interviews were conducted at regular intervals over a period of seven years, resulting in eleven longitudinal waves of data. The current study focuses on the first seven waves (Baseline through 48-month follow-up), collected between 2000 and 2007. At this point of data collection, the majority of the sample had reached the peak of the age crime curve (age 17-19) and entered early adulthood. Data sets for each wave were merged on key variable participant ID.

Measures

Dependent Variables

The primary dependent variable of analysis is the self-report of offending (SRO) measure, *Total Offending Variety Proportion*. This variable (included in the data set at each wave) is calculated as a proportion in which the numerator is the total number of self-reported criminal acts endorsed by the respondent and the denominator is the total number of acts for which a yes or no answer was provided. Because two items (*broke into car to steal* and *went joyriding*) were added after a significant number of baseline and six month follow up interviews had been completed, they were not included in calculating this measure. If the youth did not provide an answer or “didn’t know”, the item was not included in the proportion. For example, if the youth provided an answer for all 22 items and responded yes to 11, the proportion would be reported as 0.5. The initial baseline measure indicates if the respondent has ever engaged in the behavior.

Measures at follow-up waves indicate if the respondent has engaged in the behavior during the six-month recall period between interviews. Cumulative effects will be examined by summing the scores from each wave into an additional “lifetime” SRO variable

(*LifetimeRECODE*), allowing for assessment of long term relationships and “persistence” or “desistance” over the first seven waves. Offenses reported at each wave of interviews (*Total Offending Variety Proportion*) and cumulative offending over time (*LifetimeRECODE*) will both be analyzed. H2 and H4 will utilize the cumulative variable; H5 will utilize the responses from each wave.

Table 3: *Items Included in Self-Report Offense Measure (SRO)*

<u>Item</u>	<u>Description</u>
Destroyed/damaged property	<i>purposely destroyed or damaged property that did not belong to you</i>
Set fire	<i>purposely set fire to a house, building, car or vacant lot</i>
Broke in to steal	<i>entered or broken into a building (home or business) to steal something</i>
Shoplifted	<i>stolen something from a store (shoplifted)</i>
Bought/received/sold stolen property	<i>bought, received, or sold something you knew was stolen</i>
Used check/credit card illegally	<i>used checks or credit cards illegally</i>
Stole car or motorcycle	<i>stolen a car or motorcycle to keep or sell</i>
Sold marijuana	<i>sold marijuana</i>
Sold other drugs	<i>sold other illegal drugs (cocaine, crack, heroin)</i>
Carjacked	<i>carjacked someone</i>
Drove drunk or high	<i>driven while you were drunk or high</i>
Paid for sex	<i>paid by someone for having sexual relations with them</i>
Forced someone to have sex	<i>forced someone to have sex with you</i>
Killed someone	<i>killed someone</i>
Shot someone bullet hit	<i>shot someone (where bullet hit the victim)</i>
Shot at someone no hit	<i>shot AT someone (where you pulled the trigger)</i>

Table 3 (continued)

Took by force w/weapon	<i>taken something from another person by force, using a weapon</i>
Took by force no weapon	<i>taken something from another person by force, without a weapon</i>
In a fight	<i>been in a fight</i>
Beat someone as part of gang	<i>beaten up, threatened, or physically attacked someone as part of a gang</i>
Carried a gun	<i>carried a gun</i>
*Broke into car to steal	<i>entered or broken into a car to steal something from it</i>
Went joyriding	<i>gone joy-riding (stolen a car or motorcycle to ride around)</i>

Independent Variables

The proposed study will examine the relationship between factors of employment, social capital, expectations of success, and self-report offending outcomes.

Employment. Two baseline employment variables are of interest to the proposed study: employment status (employed/unemployed) and work intensity (hours worked per week). An additional measure of work consistency will be utilized from follow-up interviews.

Employment status. Baseline employment status (*SODEM49: S0 Income: Employed currently or before coming to facility*) is coded as Yes=1, No=0.

Work intensity. Work intensity (*SODEM51: S0 Income: Hours worked per week*) asked respondents how many hours they work per week at their current job (1-5; 6-10; 11-15; 16-20; 21-25; 26-30; 31-35; 36-40; >40; or unemployed). This measure was recoded to divide the sample into three groups based on intensity of hours worked per week (*RECODEintensity*).

Based on prior literature (Agnew, 1986; Apel et.al., 2007; Bachman & Schulenberg, 1993; Carr et al., 1996; Gottfredson, 1985; Greenberger & Steinberg, 1986; Marsh & Kleitman, 2005; Mihalic & Elliot; 1997), respondents who self-reported as unemployed are considered “non-

workers” (0), those who self-reported as working under 20 hours are considered “workers” (1), and those who self-reported as working over 20 hours are considered “intense workers” (2).

Work consistency. Consistency of work at each follow up wave is coded continuously as number of weeks worked during the six month recall period (*SIJOBAL_NWEEKSCU*). An additional cumulative work experience variable (*TotalWork RECODE*) is computed as a sum of the total weeks worked from Waves 1 through Wave 7.

Social Capital. Derived from Nagin and Paternoster’s (1994) 19-item Social Capital Inventory, questions addressing how well the youth’s parents knew his or her friends, if neighbors were willing to help one another, availability of employment opportunities, and how often neighbors attended events in the community were reported in the original data set as scaled constructs reflecting different dimensions of social capital at each wave of data collection. These included intergenerational closure (*SOSCCLINT: SO SocCap: Closure and Integration*), social integration (*SO SocCap: Social Integration*), and perceived opportunity for work (*SO SocCap: Perceived Opportunity for Work*). These measures were reported only as scaled constructs; individual items used to calculate scale scores were not provided in the data set, but Cronbach’s alpha reliability scores were detailed in the codebook for each construct.

Intergenerational closure ($\alpha = .73$) was scaled as a mean of three survey items, social integration ($\alpha = .67$) as a mean of five items, and perceived opportunity for work ($\alpha = .76$) as a mean of five items. Higher scores on these scales indicate a stronger connection to the community. Total social capital is calculated as the sum of these three scores at each wave (*RECODESocCap*); cumulative social capital is calculated as the sum of total social capital across all waves (*RECODElifetimeSocCap*).

Perceptions of Opportunity. Respondents were asked a series of questions derived from Menard and Elliot (1996) which gauged their predictions for success in adulthood across legal, family, and work domains. Each item was scored on a five point Likert scale, from 1 (poor) to 5 (Excellent). Scores were not reported for these individual items in the original data set. The original variable *SOEXPECT: SO OppSucc: Expectations to have Work, Family and Law* ($\alpha = .81$) will be used for analysis. This scale variable was computed as the mean of the following self-report items, with higher scores indicating greater levels of optimism for future outcomes:

- What do you think your chances are to have a good job or career?
- What do you think your chances are to graduate from college?
- What do you think your chances are to earn a good living?
- What do you think your chances are to provide a good home for your family?
- What do you think your chances are to have a good marriage?
- What do you think your chances are to have a good relationship with your children?
- What do you think your chances are to stay out of trouble with the law?

Table 4. *Operationalization of Variables*

Variable/Label	Description/Coding
*Baseline employment status <i>SO Income: Employed</i>	Employed/unemployed at time of baseline interview (0=unemployed; 1=employed)
Baseline work intensity <i>RECODEintensity</i>	Hours worked per week at time of baseline interview (0=unemployed; 1=employed<20 hours; 2=employed ≤ 20 hours)
*Race <i>SO DEM: Subjects Ethnicity - Recoded</i>	Race of respondent (1=white; 2=Black; 3=Hispanic; 3="other")
*Total offending variety proportion <i>SRO:TotalOffendingVarietyEver</i> <i>SRO:TotalOffendingVarietyRecall</i>	Proportion representing offenses committed at baseline and during recall periods (.0-1; higher proportion =more offenses)

Table 4 (continued)

Lifetime total offending <i>LifetimeRECODE</i>	Sum of self-reported offense measures across first seven waves (.0-7; higher proportion = more offenses)
Total social capital <i>RECODESocCap</i>	Sum of intergenerational closure ($\alpha = .73$) social integration ($\alpha = .67$), and perceived opportunity for work ($\alpha = .76$) at each wave (higher scores = greater social capital)
Cumulative social capital <i>RECODElifetimeSocCap</i>	Sum of total social capital across first seven waves
*Expectations <i>OppSucc: Expectations to have Work, Family and Law</i>	Scaled mean of responses gauging predictions of success across legal, family, and work domains ($\alpha = .81$) (higher scores = greater optimism)
Work consistency <i>TotalWork RECODE</i>	Sum of weeks worked during all recall periods at time of 48-month follow-up (higher scores = more weeks worked)

*denotes original variable provided in data set

Statistical Analysis

This thesis will use the following statistical analyses: descriptive stats, chi square, one-way ANOVA, and linear regression. Descriptive stats will be used to describe the demographics and geographic breakdown of the sample as well as frequencies of dependent and independent variables. Because the independent variable (race) and dependent variables (employment status and work intensity) are categorical, a Chi-square test will be used to assess each component of H1 (“*Employment status and work intensity will vary significantly according to race*”). A one-way ANOVA will be used for H2 (“*There will be a significant difference in lifetime total offending variety based on intensity of hours worked per week at the time of the initial baseline*”).

interview”) and H3 (“*Cumulative social capital and expectations will vary significantly by race*”) to test the significance of differences in continuous dependent variables as a function of a categorical independent variable. Linear regression will be used to test H4 (“*Cumulative social capital and expectations will negatively predict lifetime total offending variety proportion*”) and H5 (“*The relative influence of social capital, expectations, and work consistency on self-reported offending will fluctuate over time*”), as each involves multiple continuous independent variables and one continuous independent variable. For H5, beta weights for measures of total social capital, expectations, and employment consistency will be compared across seven linear regression models (baseline through 36 month follow up) to determine the relative influence of each variable changes throughout the age crime curve.

Conclusion

This chapter presented the primary research question for the current study and the five hypotheses that were tested. The source of the data and sampling techniques were described. Dependent and independent variables were explained, as were the statistical analyses used to test each hypothesis. Chapter Four will present the results of analysis for each hypothesis.

CHAPTER 4

RESULTS

Chapter Three presented the research question and methodology for the current study, including data source, hypotheses, variables of interest, and analytic strategy. This chapter will present the results of analysis, including descriptive statistics, Chi-square, one-way ANOVA, and linear regression. The following five hypotheses will be discussed:

H1: Self-reported employment status and hours worked per week at the time of initial baseline interviews will vary significantly by race.

H2: Self-reported offending throughout the first 36 months will vary according to intensity of hours worked per week at the time of the initial baseline interview.

H3: Cumulative social capital and expectations of success will vary significantly by race.

H4: Cumulative social capital and expectations of success will negatively predict total self-reported offending from the time of the initial baseline interview through the 36-month follow-up.

H5: The relative influence of social capital, expectations, and work consistency on self-reported offending will fluctuate over time.

Descriptive Statistics

The majority of the sample was male (86.4%), age 16-17 (60.9%), non-white (79.8%), and not employed at the time of the initial baseline interview (73.9%). The average age was 16 with a standard deviation of 1.143 years (*see Table 5*).

Table 5.

Baseline Sample Descriptives

	N	%
Age		
14	162	12.0
15	255	18.8
16	412	30.4
17	413	30.5
18	111	8.2
19	1	0.1
$\bar{X}=16$	$SD= 1.143$	
Race		
White	274	20.2
Black	561	41.4
Hispanic	454	33.5
Other	65	4.8
Sex		
Male	1170	86.4
Female	184	13.6
Employment Status		
Employed	354	26.1
Not Employed	1000	73.9
Work Intensity (N=1,352)		
Nonworker	1000	74
Worker	122	9
Intense Worker	230	17
Total Offending (Ever)		
Nonworker	.3199	.2106
Worker	.2988	.1918
Intense Worker	.3277	.2097

Of those who were employed (354), most reported working in excess of twenty hours per week (230). A one-way ANOVA indicated statistically significant differences in self-reported prior offenses based on level of work intensity between workers and intense workers [$F(2, 1348)=8.212, p=.000$]. Tukey's post hoc indicated significance between workers and intense workers ($p < .002$) as well as non-workers and intense workers ($p < .001$). Levene's test indicated no violations of the assumption of homogeneity of variance (*see Table 6*)

Table 6.

One-Way Analysis of Variance of Baseline Prior Offending by Work Intensity

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	.715	.357	8.212	.000
Within Groups	1346	58.573	.04		
Total	1348	59.287			

Hypothesis One

In order to test Hypothesis One (“*Self-reported employment status and hours worked per week at the time of initial baseline interviews will vary significantly by race*”), two Pearson Chi-square tests were conducted. Percentages of employed youth varied significantly by race, $X^2(3, N=1,354) = 14.021, p=.003$. The standardized residual for employed white youth (2.5) indicated overrepresentation. No other residuals were greater than critical value 1.96. Race was also significant to work intensity, $X^2(6, N=1,354) = 21.802, p=.001$. Hispanic youth were significantly underrepresented at the moderate level of employment (standardized residual= -2.2).

Table 7.

Baseline Employment Status by Race (N=1,354)

	Employed		Not Employed	
	N	%	N	%
White	93	33.9	181	66.1
Black	139	24.8	422	75.2
Hispanic	101	22.2	353	77.8
Other	21	32.3	44	67.7
<i>Total</i>	<i>354</i>	<i>26.1</i>	<i>1000</i>	<i>73.9</i>

$X^2=14.021$; $df=3$; $p=.003$

Table 8.

Baseline Work Intensity by Race (N=1,352)

	Nonworker		Worker		Intense Worker	
	N	%	N	%	N	%
White	181	66.3	33	12.1	59	21.6
Black	422	75.2	58	10.3	81	14.4
Hispanic	353	77.9	27	6.0	73	16.1
Other	44	67.7	4	6.2	17	26.2
<i>Total</i>	<i>1000</i>	<i>122</i>	<i>230</i>			

$X^2=21.802$; $df=6$; $p=.001$

Hypothesis Two

In order to test Hypothesis Two (“*There will be a significant difference in lifetime total offending variety based on intensity of hours worked per week at the time of the initial baseline interview*”), a one-way ANOVA was conducted of the Lifetime Total Offending measure by work intensity. There were no statistically significant differences between group means as determined by one-way ANOVA, $F(2, 984)=2.720$, $p=.066$. See table 9.

Table 9.

One-Way Analysis of Variance of Lifetime Offending by Baseline Work Intensity

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	1.428	.714	2.720	.066
Within Groups	984	258.362	.263		
Total	986				

Hypothesis Three

One-way ANOVA was also used to test Hypothesis Three (“*Cumulative social capital and expectations of success will vary significantly by race*”). Race, categorized as white, Black, Hispanic, and Other was found to be a significant factor in social capital $F(3, 423)=4.789$, $p=.003$. Mean cumulative social capital for Black youth was 66.5 with a standard deviation of 7.08. This was a statistically significant difference compared to Hispanic (63.25, $SD=7.91$) and white youth (63.75, $SD=7.77$). No statistically significant differences were found between other races and Hispanic or white youth. Expectations of success were also statistically significant [$F(3, 956)=8.050$, $p=.000$]. Mean expectations of white youth (30.33, $SD 4.828$) was significantly higher than that of Black (29.09, $SD 5.30$) and Hispanic (28.05, $SD 5.55$) youth. No statistically significant difference was found between white and other races. *See tables 10 & 11.*

Table 10.

One-Way Analysis of Variance of Cumulative Social Capital by Race

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	3	846.807	282.269	4.789	.003
Within Groups	423	24930.289	58.937		
Total	426	2577.096			

Table 11.

One-Way Analysis of Variance of Cumulative Expectations of Success by Race

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	3	687.241	229.080	8.050	.000
Within Groups	956	27206.353	28.459		
Total	959	27893.594			

Hypothesis Four

Simple linear regression was used to test Hypothesis Four (“*Cumulative social capital and expectations of success will negatively predict total self-reported offending from the time of the initial baseline interview through the 36-month follow-up*”). A significant linear regression equation was found [$F(2,404)=10.743$, $p<.000$], with an adjusted R^2 of 0.46. The cumulative measure of expectations for success ($\beta=-.172$, $p<.001$) predicted lifetime offending. Cumulative social capital was not significant ($\beta=-.094$, $p<.073$). See Table 12.

Table 12.

Regression Analysis of Cumulative Variables on Lifetime Offending

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	1.136	.189		5.999	.000
Cumulative Social Capital	-.005	.003	-.094	-1.797	.073
Cumulative Expectations for Success***	-.015	.005	-.172	-3.278	.001

$R^2 = 0.5$ (*adj*=.046)
 $F = 10.743$ ***

* $p<.05$; ** $p<.01$; *** $p<.001$ N=407

Hypothesis Five

A series of eight linear regressions was conducted in order to test Hypothesis Five (“*The relative influence of social capital, expectations, and work consistency on self-reported offending will fluctuate over time*”). These are detailed in Tables 13-20.

Baseline Measures. At the time of the baseline interview, both social capital ($\beta = -.083$, $p<.003$) and expectations for success significantly predicted prior offenses [$R^2=.050$, $F(2, 1337)=34.956$, $p<.000$].

Wave 1. At the first six month follow up interviews, offending during the recall period was predicted only by expectations for success ($\beta = -.214$, $p < .000$). Social capital and work consistency during the recall period were not significant [$R^2 = .049$, $F(3, 801) = 13.806$, $p < .000$].

Wave 2. As with wave one, at the time of the second follow up interview, offending during the recall period was predicted only by expectations for success ($\beta = -.218$, $p < .000$). Social capital and work consistency during the recall period were not significant [$R^2 = .055$, $F(3, 878) = 16.944$, $p < .000$].

Wave 3. By the time of the third follow up interview, social capital ($\beta = -.072$, $p < .025$), expectations for success ($\beta = -.235$, $p < .000$), and weeks worked ($\beta = -.089$, $p < .005$) were all significant indicators of offending during the recall period [$R^2 = .084$, $F(3, 936) = 28.436$, $p < .000$].

Wave 4. All three variables remained significant to offending during the recall period at the fourth follow up. The influence of social capital increased ($\beta = -.117$, $p < .000$), while both expectations for success ($\beta = -.198$, $p < .000$) decreased. Work consistency decreased in both influence and significance ($\beta = -.086$, $p < .007$). This model explained slightly less of the variance [$R^2 = .076$, $F(3, 949) = 26.062$, $p < .000$].

Wave 5. At the fifth follow up, expectations for success ($\beta = -.190$, $p < .000$) was the only significant predictor of offending during the recall period. Social capital ($\beta = -.053$, $p < .112$) and work consistency ($\beta = -.054$, $p < .094$) were no longer significant [$R^2 = .052$, $F(3, 950) = 17.259$, $p < .000$].

Wave 6. At the sixth follow up interview, all measures were again significant to recall period offending. Expectations of success remained the strongest and most significant predictor ($\beta = -.135$, $p < .000$), although social capital ($\beta = -.081$, $p < .013$) and work consistency ($\beta = -.085$, $p < .008$) also contributed to the overall model [$R^2 = .043$, $F(3, 962) = 14.560$, $p < .000$].

Wave 7. Four years after the initial baseline interview, participants ranged in age from 14-23. At this point, expectations of success ($\beta = -.170$, $p < .000$) and work consistency ($\beta = -.135$, $p < .000$) remained significant predictors of offending, but social capital ($\beta = -.050$, $p < .113$) was no longer significant [$R^2 = .064$, $F(3, 990) = 22.732$, $p < .000$].

Table 13.

Regression Analysis of Baseline Variables on Prior Offending

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.596	.037		15.953	.000
Social Capital *	-.013	.004	-.083	-3.023	.003
Expectations for Success***	-.048	.007	-.189	-6.906	.000

$R^2 = .050$ (*adj* = .048)

$F = 34.956$ ($p = .000$)

* $p < .05$; ** $p < .01$; *** $p < .001$ $N = 1340$

Table 14.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 1

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.248	.032		7.677	.000
Social Capital	-.003	.004	-.029	.806	.420
Expectations for Success***	-.036	.006	-.214	-6.001	.000
Weeks Worked	4.790E-5	.001	.003	.074	.941

$R^2 = .049$ (*adj* = .046)

$F = 13.806$ ($p = .000$)

* $p < .05$; ** $p < .01$; *** $p < .001$ $N = 805$

Table 15.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 2

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.214	.028		7.645	.000
Social Capital	-.001	.003	-.008	-.234	.815
Expectations for Success***	-.033	.005	-.218	-6.416	.000
Weeks Worked	-.001	.001	-.057	-1.733	.083

$R^2=.055$ (*adj*=.051)
 $F=16.944$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p<.001$ $N=882$

Table 16.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 3

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.231	.022		10.504	.000
Social Capital *	-.005	.002	-.072	-2.248	.025
Expectations for Success***	-.030	.004	-.235	-7.273	.000
Weeks Worked**	-.001	.000	-.089	-2.821	.005

$R^2=.084$ (*adj*=.081)
 $F= 28.436$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p<.001$ $N=940$

Table 17.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 4

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.245	.023		10.536	.000
Social Capital ***	-.009	.003	-.117	-3.650	.000
Expectations for Success**	-.025	.004	-.198	-6.130	.000
Weeks Worked**	-.001	.000	-.086	-2.724	.007

$R^2=.076$ (*adj*=.073)
 $F=26.062$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p<.001$ $N=953$

Table 18.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 5

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.160	.019		8.334	.000
Social Capital	-.004	.002	-.053	-1.592	.112
Expectations for Success***	-.020	.004	-.190	-5.649	.000
Weeks Worked	-.001	.000	-.054	-1.678	.094

$R^2=.052$ (*adj*=.049)
 $F=17.259$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p<.001$ $N=954$

Table 19.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 6

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.170	.021		7.985	.000
Social Capital *	-.006	.002	-.081	-2.493	.013
Expectations for Success***	-.016	.004	-.135	-4.075	.000
Weeks Worked**	-.001	.000	-.085	-2.650	.008

$R^2=.043$ (*adj*= .040.)
 $F= 14.560$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p=.001$ $N=966$

Table 20.

Regression Analysis of Variables on Offending, Past 6 Months: Wave 7

	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Constant	.200	.024		8.453	.000
Social Capital	-.004	.003	-.050	-1.586	.113
Expectations for Success***	-.022	.004	-.170	-5.296	.000
Weeks Worked***	-.001	.000	-1.35	-4.277	.000

$R^2=.064$ (*adj*= .062.)
 $F=22.732$ ($p=.000$)

* $p<.05$; ** $p<.01$; *** $p<.001$ $N=994$

Conclusion

This chapter presented the results of statistical analysis for each of the five hypotheses in the current study. Descriptives, chi-square, one way-ANOVA, and linear regression models were used to explore the relationship between measures of work, social capital, and self-report offending among youth with serious delinquent records over a period of two years as they

entered adulthood. Chapter Five will discuss the implications and limitations of these results as well as directions for further research in this area.

CHAPTER 5

DISCUSSION

The previous chapter presented the results of statistical analysis used to test the five hypotheses of the current study, including descriptive statistics, chi-square, one-way analysis of variance, and linear regression models. This chapter will discuss these results as well as implications, limitations, and directions for further study.

Limitations and Strengths

The first major limitation of the current study is lack of overall predictive value in the regression models. The purpose of the study was merely to determine the nature of the relationship between work and recidivism among serious juvenile offenders. Although all models were statistically significant, R^2 values indicate that 92-95% of the variance in offending was unexplained by the measures included in the present analysis. Additionally, the consistent predictive value of expectations for success should be interpreted with caution, as it is highly possible that this variable may have been influenced by the study design. It is unlikely that participants would respond with unrealistic optimism or pessimism across work, family, and legal domains after providing such a detailed account of experiences in the past six months. It seems reasonable, however, to assume that participants adjusted their self-reported long term goals after responding to other items.

As with any longitudinal design, missing data and selective attrition are concerns. Unfortunately, the individuals most likely to be persistent offenders are generally least likely to fully participate in long term research. It is certainly possible that there are unknown yet significant differences between those who participated in all waves of data collection and those who did not. Additionally, the current analysis did not control for opportunity, as measures of “street time” vs time spent in a facility were not included. Generalizability is also a concern, as

the sample included the worst of the worst as opposed to more “typical” juvenile offenders, although this is also a strength in that past behavior is essentially controlled, allowing for assessment of self-selection into intense work hours. Large sample size is an additional strength.

Implications

Four major implications emerge from this research. The first is a lack of long-term effects of intense work among serious juvenile offenders, as there were no significant differences in long term outcomes based on hours worked. The second is support for self-selection into intense work. Third, the effects of work, social capital, and expectations for success on offending are to age-graded. Fourth, stable work appears to serve as a turning point in the lives of serious juvenile offenders.

Results support Hypothesis One (“*Self-reported employment status and hours worked per week at the time of initial baseline interviews will vary significantly by race*”). Consistent with past research, a higher percentage of white youth were employed as compared to minority youth (D’Amico, 1994; Entwisle et al., 2000; Johnson, 2004). Specifically, white youth were overrepresented among the employed and Hispanic youth were underrepresented among those working moderate hours. In other words, Hispanic youth were significantly more likely to be unemployed or working past the high risk mark of twenty hours than to be working under twenty hours. It is contradictory to past research, however, to not find Black and Hispanic youth significantly overrepresented among those working intense hours. This may result from fundamental differences between the current sample of serious offenders and cross-sectional samples in prior studies (D’Amico, 1994; Entwisle et al., 2000; Johnson, 2004), and the fact that Black and Hispanic youth made up the majority of the sample for this study.

No support was found for Hypothesis Two (*Self-reported offending throughout the first 36 months will vary according to intensity of hours worked per week at baseline interview*).

Lack of any statistically significant differences in long-term offending based on hours worked is contradictory to past research indicating that risks associated with intense work hours are cumulative and long lasting (Mihalic and Elliot, 1997; Steinberg et al., 1993). This suggests two distinct (although not mutually exclusive) possibilities:

- 1.) There are fundamental differences between the current sample of serious offenders and cross-sectional samples used in past research.
- 2.) Intense working hours are a symptom of delinquency, as opposed to a contributing factor.

In other words, intense adolescent work and serious delinquency share common causes, such as single parent homes and poverty.

Although most youth in the sample did not report employment at the time of the baseline interview, the majority of those who were employed reported working in excess of twenty hours per week. Additionally, mean self-report measures of prior offending differ significantly by work intensity, with intense workers reporting the highest levels of prior offending. This is particularly relevant as the current sample differs from past research by only examining serious juvenile offenders. These youths had established patterns of delinquency and substance use prior to working long hours. This finding provides support for the perspective of self-selection, particularly the precocious development thesis (Bachman & Schulenberg, 1993; Krohn, Lizotte, & Perez, 1997; Thornberry & Krohn, 2001), and existence of the temporary maturity gap proposed by Moffit (1993).

Results provide support for Hypothesis Three (“*Cumulative social capital and expectations of success will vary significantly by race*”). Racial disparity in social capital was expected, but in the opposite direction. Black youth reported the highest levels of social capital ($\bar{X}=66.5$ SD=7.08) of any racial group. This finding may be attributable to the inclusion of the “intergenerational closure” scale, which would artificially inflate social capital scores among high risk youth raised by grandparents or other extended family compared to those in traditional households. No significant differences were found between social capital scores of Hispanic, white, and other races. Expectations of success, however, were highest among white youth ($\bar{X}=30.33$, SD 4.83), followed by other racial groups ($\bar{X}=29.61$, SD 6.24), Black youth ($\bar{X}=29.09$, SD 5.30), and Hispanic youth ($\bar{X}=28.05$, SD 5.55). Post hoc tests indicate statistically significant differences between white and Black youth as well as white and Hispanic youth. The difference between Black and Hispanic youth approached significance. This finding provides support to the perspective of individual differences and the role of background characteristics in life course outcomes.

Hypothesis Four (“*Cumulative social capital and expectations of success will negatively predict total self-reported offending from the time of the initial baseline interview through the 36-month follow-up*”) was partially supported. Expectations of success significantly and negatively predicted offending, but the cumulative measure of social capital was not statistically significant. The implications of this will be explained further during discussion of Hypothesis Five.

The most complicated analysis in the current study was a wave by wave assessment of the predictive value of social capital, expectations for success, and work consistency in order to test Hypothesis Five (“*The relative influence of social capital, expectations, and work*

consistency on self-reported offending will fluctuate over time”). A linear regression model of these three measures on recall period self-report offending scores was tested for each wave of data collection from the initial baseline interview through the 48 month follow up. Results fully support this hypothesis and provide further support for the theory of age-graded social control.

At the time of the initial baseline interview, respondents ranged in age from 14-19. According to linear regression analysis, self-reported prior offenses were significantly and negatively predicted by measures of social capital and expectations of success; youth with higher levels of social capital and greater expectations reported fewer past offenses during the baseline interview. This lends support to a social bond perspective. Higher scores on the social capital measure indicated stronger ties to the community; higher scores for expectations of success indicated how likely the youth felt he or she was to enjoy long term success in education, career, and family as well as stay out of trouble. As expected, youth who were more strongly attached to their community and felt optimistic about the future reported fewer antisocial behaviors.

Offending during the first year after the initial baseline interview was significantly and negatively predicted by expectations for success, although there was no significance between measures of social capital or consistency of work during this time period. In other words, youth were no more or less likely to engage in delinquency as a result of work from the ages of 15-20. Eighteen months to two years after the initial baseline interview, all measures significantly and negatively predicted self-report offending during the recall period. Expectations of success continued to be the strongest predictor of offending. Wave 3 yielded the most robust model of the study, explaining just over eight percent of the variance with three variables. At this point, youth in the study ranged from ages 15-21; the majority were entering late adolescence/early adulthood (age 17-18). Thirty months after the baseline interview, respondents ranged from age

16-22. Expectations for success remained the only significant predictor for this time period. Three years after the baseline interview, when respondents were approaching or had reached early adulthood, all three measures significantly and negatively predicted offending, with expectations of success remaining the strongest predictor. Four years after the baseline interview, when respondents ranged from age 18-23, work consistency and expectations of success were significant negative predictors of offending, yet social capital was no longer significant. Expectations of success remained the strongest predictor throughout all recall periods.

Variation in the significance of these measures over time (particularly Waves 3, 4, and 6) supports age graded social control and suggests that cross sectional research designs are not sufficient to explain the relationship between age, social control, and criminal behavior. Age graded significance of the relationship between work and offending provides support for work as a turning point in the lives of young offenders. The results of the current study do not indicate any harmful outcomes of adolescent work among serious offenders. Although the majority of working youth in the sample reported intense hours and higher levels of prior offending than their peers who worked more moderate hours, work was not associated with an increase in offending at any point after the initial baseline interview and negatively predicted offending at Waves 3, 4, 6, and 7.

Future Research

Future research should consider focusing on what factors may be used to predict expectations for success, how juvenile work histories are impacted by severity of offense, and how the trajectories of juvenile offenders may differ based on education and work experience. Additional environmental and social learning variables, such as peer associations, education, family

relationships, marital status, and job characteristics should be used to build a more predictive model. The role of expectations and goals should also be examined more closely. Further, the work/desistance relationship should be examined across racial categories as well as by offense type and severity of sentence. Finally, the role of social capital should be examined more closely, including a comparison of various measures across family, community, and social networks.

Conclusion

This thesis has contributed to the literature on youth employment and delinquency by examining the relationship between of race, social capital, and expectations for success as well as the changing role of work in a longitudinal sample of serious juvenile offenders approaching adulthood. Results suggest support for self-selection and individual differences as well age graded social control. Findings also lend support to the role of work as a turning point in the lives of young offenders. Theoretical implications, limitations, and future directions for research were also discussed.

REFERENCES

- Agnew, R. (1986). Work and delinquency among juveniles attending school. *Journal of Crime and Justice*, 9(1), 19-41.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1), 47-88.
- Agnew, R., & White, H. R. (1992). An empirical test of general strain theory. *Criminology*, 30, 475.
- Apel, R., Paternoster, R., Bushway, S.D., & Brame, R. (2006). A job isn't just a job: The differential impact of formal vs. informal work on adolescent problem behavior. *Crime & Delinquency*, 52(2), 333-369.
- Apel R. & Sweeten, G. (2010). The impact of incarceration on employment during the transition to adulthood. *Social Problems*, 57(3), 448-479.
- Apel, R., Bushway, S., Brame, R., Haviland, A.M., Nagin, D.S., & Paternoster, R. (2007). Unpacking the relationship between adolescent employment and antisocial behavior: A matched samples comparison. *Criminology*, 45(5), 67-97.
- Apel, R., Bushway, S.D., Paternoster, R., Brame, R., & Sweeten, G. (2008). Using state child labor laws to identify the causal effect of youth employment on deviant behavior and academic achievement. *Journal of Quantitative Criminology*, 24(4), 337-362.
- Arditti, J. & Parkman, T. (2011). Young men's reentry after incarceration: A developmental paradox. *Family Relations*, 60(2), 2025-220.
- Bachman, J. G., & Schulenberg, J. (1993). How part-time work intensity relates to drug use, problem behavior, time use, and satisfaction among high school seniors: Are these consequences or merely correlates?. *Developmental Psychology*, 29(2), 220.
- Bachman, J. G., Staff, J., O'Malley, P. M., & Freedman-Doan, P. (2013). Adolescent work intensity, school performance, and substance use: links vary by race/ethnicity and socioeconomic status. *Developmental psychology*, 49(11), 2125.
- Bartusch, D. R. J., Lynam, D. R., Moffitt, T. E., & Silva, P. A. (1997). Is age important? Testing a general versus a developmental theory of antisocial behavior. *Criminology*, 35(1), 13-48.
- Bergman, L. R., & Andershed, A. K. (2009). Predictors and outcomes of persistent or age-limited registered criminal behavior: A 30-year longitudinal study of a Swedish urban population. *Aggressive Behavior*, 35(2), 164-178.
- Blokland, A., & Palmén, H. (2012). Criminal career patterns. *Persisters and desisters in crime from adolescence into adulthood: Explanation, prevention and punishment*, 13-50.
- Blumstein, A., Cohen, J., & Farrington, D. P. (1988). Criminal career research: Its value for criminology. *Criminology*, 26(1), 1-35.

- Brame R., Bushway, S.D., Paternoster, R., & Apel, R. (2004). Assessing the effect of adolescent involvement in criminal activity. *Journal of Contemporary Criminal Justice*, 20(3), 236-256.
- Bushway, S.D., Nieuwbeerta, L., & Blokland, A. (2011). The predictive value of criminal background checks: Do age and criminal history affect time to redemption? *Criminology*, 49(1), 27-60.
- Carr, R. V., Wright, J. D., & Brody, C. J. (1996). Effects of high school work experience a decade later: Evidence from the National Longitudinal Survey. *Sociology of Education*, 69(1), 66-81.
- Caspi, A., & Moffitt, T. E. (1995). The continuity of maladaptive behavior: from description to understanding in the study of antisocial behavior.
- Chiricos, T.G. (1987). Rates of crime and unemployment: An analysis of aggregate research evidence. *Social Problems* 34(2) :187-21
- Cullen, F. T., Williams, N., & Wright, J. P. (1997). Work conditions and juvenile delinquency: is youth employment criminogenic?. *Criminal Justice Policy Review*, 8(2-3), 119-143.
- D'amico, R. (1984). Does employment during high school impair academic progress?. *Sociology of Education*, 57(3)152-164.
- Davies, S. & Tanner, J. (2003). The long arm of the law: Effects of labeling on employment. *Sociological Quarterly*, 44(3), 385-404.
- D'unger, A. V., Land, K. C., McCall, P. L., & Nagin, D. S. (1998). How many latent classes of delinquent/criminal careers? Results from mixed poisson regression analyses. *American Journal of Sociology*, 103(6), 1593-1630.
- Elder, G. H., Jr. (Ed.). (1985). *Life course dynamics: Trajectories and transitions, 1968-1980*. Ithaca, NY: Cornell University Press.
- Elder, G.H. Jr. (1994). Time, human agency, and social change: Perspectives on the life course *Social Psychology Quarterly*, 57(1) 4-15.
- Elliott, D. S., Pampel, F., & Huizinga, D. (2004). *Youth violence: Continuity and desistance*. A supplemental report to *Youth Violence: A report of the Surgeon General*. Boulder, CO: Center for the Study and Prevention of Violence, Institute of Behavior Science, University of Colorado.
- Entwisle, D. R., Alexander, K. L., & Olson, L. S. (2005). Urban teenagers: Work and dropout. *Youth & Society*, 37(1), 3-32.
- Fabio, A., Tu, L. C., Loeber, R., & Cohen, J. (2011). Neighborhood socioeconomic disadvantage and the shape of the age-crime curve. *American Journal of Public Health*, 101(S1), S325-S332.

- Fagan, A. A., & Western, J. (2005). Escalation and deceleration of offending behaviours from adolescence to early adulthood. *Australian & New Zealand Journal of Criminology*, 38(1), 59-76.
- Farrington, D. P., Ohlin, L. E., & Wilson, J. Q. (1986). Understanding and Controlling Crime-Toward a New Research Strategy.
- Farrington, D.P., "Age and Crime," in *Crime and Justice: An Annual Review of Research*, vol. 7, eds. Michael Tonry and Norval Morris, Chicago, Ill.: University of Chicago Press, 1986: 189-250.
- Finch, M.D., Shanahan, M.J., Mortimer, J.T., & Ryu, S. (1991). Work experience and control orientation in adolescence. *American Sociological Review*, 56(5), 597-611.
- Gottfredson, D. C. (1985). Youth employment, crime, and schooling: A longitudinal study of a national sample. *Developmental Psychology*, 21(3), 419.
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.
- Greenberger, E., & Steinberg, L. (1986). *When teenagers work: The psychological and social costs of adolescent employment*. Basic Books.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley, CA: University of California.
- Hirschi, T., & Gottfredson, M.R. (1983). Age and the explanation of crime. *American Journal of Sociology*, 89(3), 552-584.
- Holzer, H.J., Raphael, S., & Stoll, M.A. (2007). The effect of an applicant's criminal history on employer hiring decisions and screening practices: Evidence from Los Angeles. (National Poverty Center Working Paper Series #04-15). National Poverty Center.
- Holzer, H.J., Raphael, S., & Stoll, M.A. (2006). Perceived criminality, criminal background checks, and the racial hiring practices of employers. *The Journal of Law and Economics*, 49(2), 451-480.
- Jennings, W. G., Khey, D. N., Mahoney, M., & Reingle, J. (2011). Evaluating the continuity of offending from adolescence to emerging adulthood and its effect on academic failure among college student arrestees: A research note. *Journal of Criminal Justice Education*, 22(4), 578-592.
- Jessor, R., Donovan, J.E., & Costa, F.M. (1991). *Beyond adolescence: Problem behavior and young adult development*. Cambridge University Press.
- Johnson, M. K. (2004). Further evidence on adolescent employment and substance use: Differences by race and ethnicity. *Journal of Health and Social Behavior*, 45(2), 187-197.
- Juvenile Delinquency (youth employment): Hearings before the Subcommittee to Investigate Juvenile Delinquency of the Committee on the Judiciary, United States Senate; 84th Cong. 1(1955) (Testimony of G. Howland Shaw).

- Kleck G. & Jackson, D. (2016). What kind of joblessness affects crime? A national case-control study of serious property crime. *Journal of Quantitative Criminology*, 32(4), 489-513.
- Krohn, M.D. (1976). Inequality, unemployment, and crime: A cross-national analysis. *Sociological Quarterly*, 17(3), 303-313.
- Largie S., Field, T., Hernnade-Reif, M., Sanders, C.E., & Diego, M. (2001). Employmnt during adolescence is associated with depression, inferior relationships, lower grades, and smoking. *Adolescence*, 36(142), 395-401.
- Lee, J. C., & Staff, J. (2007). When work matters: The varying impact of work intensity on high school dropout. *Sociology of Education*, 80(2), 158-178.
- Lockwood, S., Nally, J.,Knutson, K., & Ho, T. (2012). A comprehensive study of post-release employment among offenders in Indiana. *Corrections Compendium*, 37(1), 1-7.
- Loeber, R. (1982). The stability of antisocial and delinquent child behavior: A review. *Child Development*, 1431-1446.
- Loeber, R., Menting, B., Lynam, D. R., Moffitt, T. E., Stouthamer-Loeber, M., Stallings, R., & Pardini, D. (2012). Findings from the Pittsburgh Youth Study: Cognitive impulsivity and intelligence as predictors of the age–crime curve. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51(11), 1136-1149.
- Loeffler, C.E. (2013). Does imprisonment alter the life course? Evidence on crime and employment from a natural experiment. *Criminology*, 51(1), 137-166.
- Marsh, H.W. & Kleitman, S. (2005). Consequences of employment during high school: Character building, subversion of academic goals, or a threshold? *American Educational Research Journal*, 42(2), 331-369.
- Marsh, H. W. (1991). Employment during high school: Character building or a subversion of academic goals?. *Sociology of Education*, 172-189.
- Matza, D. (1964). *Delinquency and drift*. New York, NY: John Wiley & Sons, Inc.
- Matza, D., & Sykes, G. M. (1961). Juvenile delinquency and subterranean values. *American Sociological Review*, 712-719.
- McMorris, B.J. & Uggen, C. (2000). Alcohol and employment in the transition to adulthood. *Journal of Health and Social Behavior*, 41(3), 276-294.
- Merton, R. K. (1938). Social structure and anomie. *American sociological review*, 3(5), 672-682.
- Mihalic, S.W., & Elliott, D. (1997). Short and long-term consequences of adolescent work. *Youth & Society*, 28(4), 464-498.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological Review*, 100(4), 674.

- Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology*, 13(02), 355-375.
- Monahan, K.C. Lee, J.M., & Steinberg, L. (2011). Revisiting the impact of part-time work on adolescent adjustment: Distinguishing between selection and socialization using propensity score matching. *Child Development*, 82(1), 96-112.
- Mortimer, J.T. & Finch, M.D. (1986). The effects of part-time work on adolescent self-concept and achievement. In K. Borman & J.Reisman (Eds.) *Becoming a worker*, (66-89). Norwood, N.J.: Ablex.
- Mortimer, J.T., Finch, M.D., Ryu, S., Shanahan, M.J., & Call, K. T. (1996). The effects of work intensity on adolescent mental health, achievement, and behavioral adjustment: New evidence from a prospective study. *Child Development*, 67, 1243-1261.
- Nagin, D.S., Cullen, F.T., & Jonson, C.L. (2009). Imprisonment and reoffending. *Crime and Justice*, 38(1), 115-200.
- Nagin, D. S., & Land, K. C. (1993). Age, criminal careers, and population heterogeneity: Specification and estimation of a nonparametric, mixed Poisson model. *Criminology*, 31(3), 327-362.
- Nagin, D. S., Farrington, D. P., & Moffitt, T. E. (1995). Life-course trajectories of different types of offenders. *Criminology*, 33(1), 111-139.
- Nagin, D.S. & Waldfogel, J. (1995). The effects of criminality and conviction on the labor market status of young British offenders. *International Review of Law and Economics*, 15(1), 109-126.
- Nally, J.M., Lockwood, S.R., Ho, T., & Knutson, K. (2014). Post-release recidivism and employment among different types of released offenders: A 5-year follow-up study in the United States. *International Journal of Criminal Justice Sciences*, 9(1), 16-34.
- Nally, J.M., Lockwood, S.R., & Ho, T. (2011). Employment of ex-offenders during the recession. *Journal of Correctional Education*, 62(2), 47-61.
- Nally, J.M., Lockwood, S.R., Ho, T., & Knutson, K. (2012). The post release employment and recidivism among different types of offenders with a different level of education: A 5 year follow-up study in Indiana. *Justice Policy Journal*, 9(1),
- Nally, J.M, Lockwood, S.R., Knutson K., & Ho, T. (2013). The marginally employed offender: A unique phenomenon among released offenders. *The Journal of Correctional Education*, 64(1), 50-68.
- Newcomb, M.D. & Bentler, P.M. (1988). *Consequences of adolescent drug use: Impact on the lives of young adults*. Sage Publications.

- Nye, F. I. (1958). *Family relationships and delinquent behavior*. New York, NY: Wiley.
- Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology*, 108(5), 937-975.
- Pager, D. (2007). The use of field experiments for studies of employment discrimination: Contributions, critiques, and directions for the future. *The Annals of the American Academy of Political and Social Science*, 609(1), 104-133.
- Parmelee, M. (1918). *Personality and conduct*. Moffat, Yard.
- Paternoster, R., Bushway, S., Brame, R., & Apel, R. (2003). The effect of teenage employment on delinquency and problem behaviors. *Social Forces*, 82(1), 297-335.
- Petersilia, J. (2005). Hard time: Ex-offenders returning home after prison. *Corrections Today*, 67(2), 66-71.
- Pettit, B. & Lyons, C. (2009). Incarceration and the legitimate labor market: Examining age-graded effects on employment and wage. *Law & Society Review*, (43)4, 725-756.
- Piquero, A. R., & Brezina, T. (2001). Testing Moffitt's account of adolescence-limited delinquency. *Criminology*, 39, 353.
- Piquero, A. R., Farrington, D. P., & Blumstein, A. (2007). *Key issues in criminal career research: New analyses of the Cambridge Study in Delinquent Development*. Cambridge University Press.
- Piquero, A.R., Hawkins, J.D., & Kazemian, L. (2012). Criminal career patterns. In (Rolf Loeber and David P. Farrington, eds.), *From Juvenile Delinquency to Adult Crime: Criminal Careers, Justice Policy, and Prevention*. New York: Oxford University Press
- Ploeger, M. (1997). Youth employment and delinquency: Reconsidering a problematic relationship. *Criminology*, 35(4), 659-676.
- Pryor, M. & Thompkins, D.E. (2013). The disconnect between education and social opportunity for the formerly incarcerated. *American Journal of Criminal Justice*, 38(3), 457-479.
- Quetelet, A. (1831). *Research on the propensity to crime of different ages*. Brussels: Hayez.
- Reckless, W. C. (1967). *The crime problem*. Englewood Cliffs, N.J.: Prentice-Hall.
- Reiss, A. J. (1951). Delinquency as the failure of personal and social controls. *American Sociological Review*, 16(2), 196-207.
- Rocheleau, G.C., (2015). Pathways to work: Social structural differences in the relationship between college expectations, planfulness, and intense adolescent work. *Work and Occupations*, 42(1), 103-131.
- Rocheleau, G. C., & Swisher, R. R. (2012). Adolescent work and alcohol use revisited: Variations by family structure. *Journal of Research on Adolescence*, 22(4), 694-703.

- Rocheleau, G. C., & Swisher, R. R. (2016). Adolescent work and alcohol use: Moderation by neighborhood context and the role of peers. *Deviant Behavior*, 1-15.
- Safron, D.J., Schulenberg, J.E., & Bachman, J.G. (2001). Part-time work and hurried adolescence: The links among work intensity, social activities, health behaviors, and substance use. *Journal of Health and Social Behavior*, 42(4), 425-449.
- Sampson, R.J. & Laub, J.H. (1993). Structural variations in juvenile court processing: Inequality, the underclass, and social control. *Law and Society Review*, 27(2), 285-311.
- Sampson, R.J. & Laub, J.H. (2003). Life-course desisters? Trajectories of crime among delinquent boys followed to age 70. *Criminology*, 41(3), 555-592.
- Sampson, R.J. & Laub, J.H. (2005). A life-course view of the development of crime. *The Annals of the American Academy of Political and Social Science*, 602(1), 12-45.
- Sampson, R.J. & Laub, J.H. (2005). When prediction fails: From crime-prone boys to heterogeneity in adulthood. *The Annals of the American Academy of Political and Social Science*, 602(1), 73-79.
- Schmidt, J. & Warner, K. (2011). Ex-offenders and the labor market. *Working USA: The Journal of Labor and Society*, 14, 87-109.
- Simons, R. L., WU, C. I., Conger, R. D., & Lorenz, F. O. (1994). Two routes to delinquency: Differences between early and late starters in the impact of parenting and deviant peers. *Criminology*, 32(2), 247-276.
- Staff, J. & Uggen, C. (2003). The fruits of good work: Early work experiences and adolescent deviance. *Journal of Research in Crime and Delinquency*, 40(3), 263-290.
- Steffensmeier, D. J., Allan, E. A., Harer, M. D., & Streifel, C. (1989). Age and the distribution of crime. *American journal of Sociology*, 94(4), 803-831.
- Steinberg, L.D., Greenberger, E., Garduque, L., & McAuliffe, S. (1982). High school students in the labor force: Some costs and benefits to schooling and learning. *Educational Evaluation and Policy Analysis*, 4(3), 363-372.
- Steinberg, L., & Dornbusch, S. M. (1991). Negative correlates of part-time employment during adolescence: Replication and elaboration. *Developmental Psychology*, 27(2), 304.
- Steinberg, L., Fegley, S., & Dornbusch, S. M. (1993). Negative impact of part-time work on adolescent adjustment: Evidence from a longitudinal study. *Developmental Psychology*, 29(2), 171.
- Sutherland, E. H. (1947). *Principles of Criminology*. Philadelphia: J. B. Lincott.
- Thornberry, T. P., & Krohn, M. D. (2001). The Development of Delinquency. In *Handbook of youth and justice* (pp. 289-305). Springer US.

- Tripodi, S.J., Kim, J.S., & Bender, K. (2010). Is employment associated with reduced recidivism? The complex relationship between employment and crime. *International Journal of Offender Therapy and Comparative Criminology*, 54(5), 706-720.
- Toby, J. (1957). Social disorganization and stake in conformity: Complementary factors in the predatory behavior of hoodlums. *Journal of Criminal Law, Criminology, and Police Science*, 48(1), 12-17
- U.S. Department of Justice, National Center for Juvenile Justice. (2014). *Age specific arrest rates* (OJJDP Statistical Briefing Book. Online.). Retrieved from <https://www.ojjdp.gov/ojstatbb/dat.html> on April 12, 2017.
- U.S. Department of Justice, National Center for Juvenile Justice. (2017). *Juvenile arrest rates by offense, sex, and race, 1980-2015* (Filename: JAR_2015.xls.). Retrieved from <https://www.ojjdp.gov/ojstatbb/crime/data.html#downloadable> on March 28, 2017.
- U.S. Department of Labor (2016). *Employment and unemployment among youth-Summer 2016*. Retrieved from www.bls.gov/news.release/pdf/youth.pdf on May 25th, 2017.
- Uggen, C. (1999). Ex-offenders and the conformist alternative: A job quality model of work and crime. *Social Problems*, 46(1), 127-151.
- Uggen, C. & Staff, J. (2001). Work as a turning point for criminal offenders. *Corrections Management Quarterly*, 5(4), 1-16.
- Uggen, C. (2000). Work as a turning point in the life course of criminal offenders: A duration model of age, employment, and recidivism. *American Sociological Review*, 65(4), 529-546.
- Visher, C.A. (2007). Returning home: Emerging findings and policy lessons about prisoner reentry. *Federal Sentencing Reporter*, 20(2), 93-60.
- Wadsworth, T. (2006). The meaning of work: Conceptualizing the deterrent effect of employment on crime among young adults. *Sociological Perspectives*, 49(3), 343-368.
- Walters, G. D. (2011). The latent structure of life-course-persistent antisocial behavior: Is Moffitt's developmental taxonomy a true taxonomy?. *Journal of Consulting and Clinical Psychology*, 79(1), 96.
- Weiss, H.E. & Reid, L.W. (2005). Low quality employment concentration and crime: An examination of metropolitan labor markets. *Sociological Perspectives*, 48(2), 212-232.
- Western, B. (2002). The impact of incarceration on wage mobility and inequality. *American Sociological Review*, 67(4), 526-546.
- Western, B., Kleykamp, M., & Rosenfeld, J. (2006). Did falling wages and unemployment increase U.S. imprisonment? *Official Forces*, 84(4), 2291-2311.
- Wright, J.P. & Cullen, F.T. (2004). Employment, peers, and life-course transitions. *Justice Quarterly*, 21(1), 183-205.

- Wright, J.P., Cullen, F.T., Agnew, R. S., & Brezina, T. (2001). "The root of all evil?" An exploratory study of money and delinquent involvement. *Justice Quarterly*, 18(2), 239-268.
- Wright, J. P., Cullen, F. T., & Williams, N. (1997). Working while in school and delinquent involvement: Implications for social policy. *NCCD news*, 43(2), 203-221.
- Wright, J. P., Cullen, F. T., & Williams, N. (2002). The embeddedness of adolescent employment and participation in delinquency: A life course perspective. *Western Criminology Review*, 4(1), 1-19.

APPENDIX

Summary of Youth Employment Studies

<u>Year</u>	<u>Author</u>	<u>Sample</u>	<u>Main Findings</u>
1982	Steinberg et al.	Orange County California Public School N=531	<ul style="list-style-type: none"> • Hours worked significant to decreased academic investment • Significant GPA decline at 15 hours for 10th graders, 20 hours for 11th graders • Part time work increases “practical knowledge” (business operations, economic concepts, informed consumer practices, and consumer arithmetic)
1984	D’Amico	National Longitudinal Survey of Youth (1979-1982) N=5,014	<ul style="list-style-type: none"> • Youth employment status related to decreased school involvement but not academic performance; effects varied by race/gender • Low and moderate intensity work beneficial or insignificant; intense work problematic
1985	Gottfredson	OJJDP Alternative Education Initiative (1981-1983) N=2,145	<ul style="list-style-type: none"> • Background characteristics (race, gender, SES) related to employment and intensity • Hours worked per week significantly & positively correlated with self-reported delinquency • Differential levels of delinquency determined by pre-existing differences in groups, not work intensity
1986	Agnew	Youth in Transition (1978) N=1,886	<ul style="list-style-type: none"> • Relationship between work and delinquency varies by job type and characteristics (pay/hours worked, prestige, satisfaction, and length of employment) • Hours worked negatively associated with school commitment, most strongly associated with minor delinquency • Lowest delinquency among white collar workers, short hours/low pay

1986	Greenberger & Steinberg	N/A	<ul style="list-style-type: none"> • High intensity work related to decreased academic performance • Pseudo maturity/high risk behavior (drinking, smoking, early sexual activity) • Hours worked per week related to decreased school satisfaction, homework, peer relationships, family relationships; increased materialism, cynicism, acceptance of unethical practices • “Most youth can profit, presumably, from good work experience in suitable amounts. None will profit from an overdose of low-quality work experience that deprives them of their full measure of identity development” (p.9)
1986	Mortimer & Finch	Youth in Transition (1978) N=843	<ul style="list-style-type: none"> • Youth employment negatively associated with high school educational attainment; positively associated with employment status and income five years later • Work autonomy significant to self-esteem
1988	Newcomb & Bentler	Los Angeles County Public Schools (1976-1989) N=654	<ul style="list-style-type: none"> • Work, substance use, independence from parents, and minor delinquency results from “precocious development” • Common trajectories for substance use and work <ul style="list-style-type: none"> ○ Those more likely to engage in substance use and delinquency are more likely to take on other “adult” responsibilities, such as work
1991	Finch et al.	St. Paul Minnesota Public Schools (N/A) N= 1.139	<ul style="list-style-type: none"> • Support for self-selection into work environment • Goal orientations (ambitious or limited) condition the relationship between work hours and academic success • Conflict between school and work has more detrimental effect on youth who lack strong academic goals

1991	Jessor, Donovan, & Costa	Colorado Public Schools (1980-1984) N=384 (grades 7-12) N=184 (college)	<ul style="list-style-type: none"> • Age graded effect of work variables on problem behavior (high school → college) <ul style="list-style-type: none"> ○ Work satisfaction ○ Perceived social control of coworkers/peers; pressure from coworkers ○ Income/job prestige ○ Frequency of supervisor dissatisfaction
1991	Marsh	High School and Beyond (1980-1984) N=10,613	<ul style="list-style-type: none"> • Hours worked per week significantly & positively correlated with dropping out and problem behaviors; negatively correlated with academic performance • Effects limited to work during school year; summer work not significant • Reason for working matters (college savings vs. fun money)
1991	Steinberg & Dornbusch	Public high school survey, California/Wisconsin (1987-1988) N=3,989	<ul style="list-style-type: none"> • Hours worked significant to low academic achievement, substance use, delinquency, and psychological distress
1993	Bachman & Schulenberg	Monitoring the Future (1985-1989) N=71,863	<ul style="list-style-type: none"> • Background characteristics (race, gender, SES) related to employment and intensity • Employment status and hours worked significantly related to increases in substance use (cigarettes, alcohol, marijuana, cocaine), interpersonal aggression, victimization, police interaction, family arguments, lack of sleep, and dating behaviors • Decreases in life satisfaction and self-esteem

1993	Steinberg, Fegley, & Dornbusch	Public high school survey, California (1987-1989) N= 1,800	<ul style="list-style-type: none"> • Employment status and work intensity related to poor attendance, homework completion, attitudes toward school, and substance use • Hours worked had no effect on grades; Intense workers reported taking easier courses to avoid negative impact • Mixed selection effect: Intense workers have poorer academic records than moderate workers or non-workers prior to employment; no significant difference in substance use prior to employment • Substance use continues after employment ceases
1996	Carr, Wright, & Brody	National Longitudinal Survey of Youth (1979) N= 2,716	<ul style="list-style-type: none"> • Significant negative effect on educational attainment; positive effect for long term labor force participation, employment, and income
1996	Mortimer et al.	St. Paul Minnesota public school survey (1988-1991) N= 892	<ul style="list-style-type: none"> • Hours worked significant to alcohol use; insignificant to academics and mental health
1996	Shanahan et al.	Iowa Youth and Families Project (1989-1992) N=385 families	<ul style="list-style-type: none"> • Earnings, spending patterns, hours, and job demand characteristics condition effect of work hours on behavior and parental attachment
1997	Cullen, Williams, & Wright	National Youth Survey (1979-1980) N=1,725	<ul style="list-style-type: none"> • Prior delinquency/delinquent peers were strongest predictors of behavior, but hours worked positive and significant to self-reported delinquency • Threshold effect (18 hours per week)

1997	Mihalic & Elliot	National Youth Survey (1977-1992) N=1,725	<ul style="list-style-type: none"> • Higher levels of pre-employment substance use among intense workers • Significant increase in substance use among youth who worked 2 years or longer during adolescence
1997	Ploegger	National Youth Survey (1977-1979) N=1,725	<ul style="list-style-type: none"> • Relationship between work and delinquency explained by combined effects of background characteristics and exposure to delinquent peers; parental influence not significant • Working youth report wider range of delinquency than non-workers • Larger peer network of working youth increases opportunity for delinquent behavior
1997	Wright, Cullen, & Williams	National Survey of Families (1988) N=1,775	<ul style="list-style-type: none"> • Hours worked per week significant to self-reported delinquency; increased effect among high risk males
2000	McMorris & Uggen	Youth Development Survey (1988-1995) N=780	<ul style="list-style-type: none"> • School misconduct, grades, and independence from parents mediated relationship between hours worked and alcohol use • Support for “precocious development” thesis
2001	Largie et al.	South Florida public school survey (N/A) N=89	<ul style="list-style-type: none"> • Working associated with higher rates of depression, lower grades, poor relationships with family and friends, higher rates of smoking

2001	Safron, Schulenberg, & Bachman	Monitoring the Future (1991-1998) N=380,000	<ul style="list-style-type: none"> • Intense work hours reduced extracurricular activities, increased unstructured social activities • Relationship between work intensity and substance use mediated by unstructured social activities
2002	Wright, Cullen, & Williams	National Longitudinal Survey of Youth (1988-1992) N=1,526 Northeast Tennessee Public High schools N=436	<ul style="list-style-type: none"> • Parental attachment and delinquent peers predict work embeddedness (hours worked per week, days worked per week, and money earned per week) • Work embeddedness significantly predicted individual delinquency as well as that of co-workers • Work embeddedness increased likelihood of materialistic attitude lower conventional goals, and increased cynicism toward work
2003	Paternoster et al.	National Longitudinal Survey of Youth (1997-1999) N=6,666	<ul style="list-style-type: none"> • Relationship between work hours and delinquency is spurious and explained by pre-existing differences between those who work intense hours and those who do not
2003	Staff & Uggen	Youth Development Study (1988-1992) N=652	<ul style="list-style-type: none"> • Academic goals supported by some jobs, displaced by others • Age graded effect of job characteristics on self-reported delinquency

2004	Brame et al	National Longitudinal Survey (1997) N=4,168	<ul style="list-style-type: none"> Relationship between work and delinquency is partially explained by background and demographic propensity.
2004	Johnson	National Longitudinal Study of Adolescent Health (1994-1996) N=7,678	<ul style="list-style-type: none"> Race moderated relationship between work intensity and substance use over time <ul style="list-style-type: none"> increased alcohol, tobacco, and marijuana for whites alcohol only for Hispanics no effect for Black/Asian
2004	Wright & Cullen	National Youth Survey (1981-1984) N= 1,725	<ul style="list-style-type: none"> Stable employment decreases criminal behavior in young adulthood (18-24) Peer associations/prosocial co-workers strongest predictor of desistance Work serves as a turning point by way of peer networks
2005	Entwisle, Alexander, & Olson	Beginning School Study, Baltimore (1992-1993) N=639	<ul style="list-style-type: none"> Significance between job type (“teen jobs” vs “adult jobs”) and educational attainment <ul style="list-style-type: none"> varies by age order of transition between job type matters Adult jobs at 15 → increased risk of drop out; age 16→ decreased risk Increased risk of drop out for disorderly pattern (adult job followed by teen job)

2006	Apel et al.	National Longitudinal Survey (1997) N= 7,467	<ul style="list-style-type: none"> • Higher rates of substance use and delinquency among intense workers results from self-selection • Substance use/delinquency not increased by intense formal work during school year • Informal work (babysitting, lawns, etc) increased substance use/delinquency • “Summer only” work increased substance use/delinquency
2007	Apel et al	National Longitudinal Survey of Youth (1997) N=1,131	<ul style="list-style-type: none"> • Pre-existing differences/developmental trajectories of delinquency and substance use (conformists, low-level risers, high level risers, and decliners) • Effects of work hours vary across trajectory groups (reduced substance use and delinquency among decliners and high level risers working intense hours)
2007	Lee & Staff	National Educational Youth Survey (1988-1994) N=13,203	<ul style="list-style-type: none"> • Work intensity varies by aspirations, SES, and academic performance • Hours worked per week significantly & positively correlated to dropping out • Effect of work intensity on dropping out vary according to pre-existing characteristics
2008	Apel et al	National Longitudinal Survey of Youth (1997) N= 2,224	<ul style="list-style-type: none"> • Child labor laws significant to hours worked per week • Work intensity significant to high school drop-out rate • No significance for delinquency, arrest, substance use, or grades • Drop-out rate negatively associated with delinquency

2011	Monahan et al	Steinberg et al 1993	<ul style="list-style-type: none"> • Supported results from Steinberg 1993 • Students working 20+ hours per week reported taking easier courses to avoid poor grades
2012	Rocheleau & Swisher	National Longitudinal Study of Adolescent Health (1994-1996) N=12,620	<ul style="list-style-type: none"> • Hours worked per week positively & significantly related to alcohol use • Effect eliminated by controlling for pre-existing individual • Effects mediated by household characteristics; negative relationship for single parent households
2015	Rocheleau	National Longitudinal Study of Adolescent Health (1994-1996) N= 8,836	<ul style="list-style-type: none"> • Strong relationship between long term academic goals and hours worked during school year; varies by SES
2016	Rocheleau & Swisher	National Longitudinal Study of Adolescent Health (1994-1996) N=4,826	<ul style="list-style-type: none"> • Relationship between work intensity and binge drinking varies by neighborhood disadvantage; stronger effect for more advantaged youth • Differences across advantage levels explained by perception of peer substance use

VITA

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- Education: Bristol Tennessee High School, 1998
- A.S., Psychology/Sociology, Northeast State Community College, 2013
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- Professional Experience: Instructor, University of Florida Department of Sociology/Criminology & Law, 2017
- Graduate Teaching/Research Assistant, University of Florida Department of Sociology/Criminology & Law, 2017
- Graduate Teaching/Research Assistant, East Tennessee State University Department of Criminal Justice/Criminology, 2015-2017
- Instructor, East Tennessee State University Department of Criminal Justice/Criminology, 2016-2017
- Research Assistant, East Tennessee State University Associative Pharmacology Lab, 2014-2015
- Research Assistant, East Tennessee State University Behavioral Neuroscience Lab, 2013-2015
- Summer Intern to Assistant Attorney General, First Judicial District, 2015
- Presentations: Academy of Criminal Justice Sciences, Kansas City, MO., 2017
- American Society of Criminology, New Orleans, LA., 2016
- Appalachian Student Research Forum, Johnson City, TN., 2014-2017
- Academy of Criminal Justice Sciences, Denver, CO., 2016
- American Society of Criminology, Washington, D.C., 2015

Society for Neuroscience, Chicago, IL., 2015

College on Problems in Drug Dependence, Phoenix, AZ., 2015

Symposium for Young Neuroscientists and Professors of the Southeast, Asheville, NC, 2014

Awards/Honors:

2016 Appalachian Student Research Forum, Second Place Poster Presentation (Master's Candidates): Society, Behavior, and Learning

2015 Appalachian Student Research Forum, First Place Poster Presentation (Master's Candidates): Social and Behavioral Sciences

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