Cumulative Disadvantage and Shifting Norms: The Effects of Criminal Justice Involvement on Mental Health

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Abstract

This study explores how one's socio-criminal background moderates the long-term effect of criminal justice involvement on self-feelings in young adulthood. We test two competing hypotheses: 1) the cumulative disadvantage hypothesis that predicts that the harmful effects of criminal justice involvement are stronger with additional disadvantage present (socio-criminal background), and 2) the normalizing hypothesis that predicts having a socio-criminal background normalizes, and thus, weakens the effect of criminal justice involvement on negative self-feelings. We use multigenerational, longitudinal data (KLAMS) that follows the respondents from their adolescence (11-14 years old) into young adulthood (20-24 years old). We find that both neighborhood criminality and personal network criminality moderate the effect of criminal justice involvement on negative self-feelings, but not on college attendance. Partial support for a normalizing effect for arrests and for convictions is also found. However, police contact's effect on self-derogation is best explained by the cumulative disadvantage hypothesis.

Keywords: Criminal justice involvement, neighborhood criminality, negative self-feelings, criminality of personal networks

Introduction

The aim of this paper is to understand the effect that criminal justice involvement has on the self-feelings of youth transitioning from adolescence to young adulthood. Studies on deviance and criminal justice involvement have focused on external attainment outcomes, such as status, education, and employment (Hagan, 1991; Hagan & Foster, 2012; Western, 2006; Pager, 2003; Hjalmarsson, 2008; Apel & Sweeten, 2010; Davies & Tanner, 2003). We take a more social psychological approach, assessing the impact of criminal justice involvement on internal outcomes such as one's self-feelings and how one's socio-criminal background moderates that relationship. By taking this perspective we employ a framework that emphasizes a mental health outlook on deviance and criminal justice involvement.

Understanding self-feelings as an outcome is important. Self-feelings are shown to have a strong impact on later life, including on deviance (Kaplan & Lin, 2000, 2005; Pals & Kaplan, 2013) and on attainment (Liu, Kaplan, & Risser, 1992). According to Kaplan's general theory of deviant behavior (Kaplan, 1986), the experience of negative self-feelings motivates one to reduce negative feelings and restore self-esteem. Without effective, conventional means to achieve conventional goals associated with self-esteem, the person adopts a deviant identity that allows the person to avoid, attack, or substitute new deviant patterns as a response to the distressful, self-rejecting feelings generated by their environment (Kaplan, 1986).

Socio-criminal background includes neighborhood criminality (Leventhal & Brooks-Gunn, 2000) and criminal peer and family associations (Giordano, 2010). To explore how socio-criminal background moderates the effect of criminal justice involvement on self-feelings we state two competing hypotheses. The first hypothesis is based on the concept of cumulative

deprivation, which states that disadvantage cumulates across different domains. Therefore, we expect criminal justice involvement to have a stronger effect on self-feelings for someone with a socio-criminal background. The second competing hypothesis employs the concept of normalization. We expect to find that one's socio-criminal background moderates the effects of criminal justice involvement on changes in self-feelings by normalizing the experience. Additionally, we suggest that for those with no criminal or deviant associations with either family or peers and who reside in an environment with few criminogenic features, the effect of criminal justice involvement on self-derogation and educational aspirations should be stronger.

To test these relationships, we use adolescent (11-18 years old) and young adulthood (19-26 years old) data from generation 2 of Kaplan's Longitudinal and Multigenerational Study (KLAMS). We measure criminal justice involvement between adolescence and young adulthood. This affords us with a baseline measure of self-feelings in adolescence before the involvement in criminal justice system. We re-measure self-feelings in young adulthood. We measure socio-criminal background using subjective measures of neighborhood criminality and respondents' association with criminal peers and relatives in adolescence.

To develop our argument about the moderating effect of socio-criminal background, we first give an overview of previous research focusing on how criminal justice involvement affects external attainment outcomes (such as school completion, employment, and income). Then we discuss the studies that focus on social psychological outcomes.

Criminal Justice Involvement and External Attainment Outcomes

Criminal justice involvement can affect status attainment through the life course for individuals by impacting external attainment outcomes such as school completion, employment, and income

(Kirk & Sampson, 2013). A large body of research examines the effect of education on criminal justice involvement (Lochner, 2004; Kling, 2006; Liberman, Kirk, & Kim, 2014; Aizer & Doyle, 2015). Fewer studies focus on the effect of criminal justice involvement on educational outcomes (Lopes, Krohn, Lizotte, Schmidt, Vásquez, & Bernburg, 2012). For instance, studies have found support that criminal justice involvement negatively influences high school completion (i.e., Bernburg & Krohn, 2003; Hannon, 2003; Sweeten, 2006; Hirschfield, 2009).

One common explanation of why criminal justice involvement affects educational outcomes is the effect of labeling. Specifically, arrested youth become labeled or "marked" as criminal (Pager, 2003); thus, they are stigmatized through the educational system and pushed out of school or into school tracts not conducive to continuing education (Kirk & Sampson, 2013). As a result, studies consistently show that youth who are incarcerated are more likely to become re-arrested, more likely to drop out of high-school, and less likely to enroll in a four-year college (i.e., Rumberger & Lim, 2008).

Focusing on high school completion, Hjalmarsson (2008) found that only incarceration had a detrimental effect; charges and convictions did not. Although arrests initially appeared to affect educational attainment, only incarceration had a causal effect. Despite this finding, other researchers have found an effect of different levels of criminal justice involvement on educational attainment. For example, Sweeten (2006) found that court involvement following an arrest has been a stronger predictor for dropping out of school than the arrest itself. Lopes and colleagues (2012) also found that police interactions predicted lower educational attainment. Furthermore, Lochner (2004) shows a decline in both employment and earnings following an arrest or prison term.

In the era of mass incarceration (spanning the 1980s and 1990s) wage inequality increased, particularly among disadvantaged young men with little education (Western, 2006; Freeman, 1992). Grogger (1998) using a California police records and earnings longitudinal data, also found a negative effect on earnings, although the effect was moderate and short-lived. Western, Kling, and Weiman's (2001) discussed that serving time in prison diminished individual earnings 10-30%, providing possible evidence in favor of a human capital theory of crime. Additionally, Waldforel (1994) found that first-time conviction had a significant negative effect on income (30%), as well as reduced employment probabilities.

While studies support the idea that diminished earnings may be related to changes in human capital during imprisonment, researchers suggest that the causal relationship is unclear (Wildeman & Western, 2010). Even though, many researchers suggest that after incarceration individuals are less likely to be legally employed (Holzer, 1996; Pager, 2003; Stoll & Bushway, 2008), other researchers disagree. For example, Kling (2006) no evidence of a negative effect of incarceration length on employment or earnings in any of his analyses, controlling for observable factors, pre-existing differences, or the use instrumental variables for sentence length based on randomly assigned judges. Yet audit studies reveal that the social stigma of a criminal record elicits in employers a strong negative reaction toward job applicants, which may indeed affect their employment and earnings. Pager (2003) gives a comprehensive summary of studies using experimental methods (e.g., audit studies) to investigate employment discrimination based on criminal justice involvement. In many states within the United States, job applicants are required to check a box on employment applications indicating whether they have been convicted of a felony. Checking of this box is in effect a scarlet letter that affects employers' decisions on

whether they should hire that individual, regardless of the employer's prior stated attitudes on hiring someone with a record (Pager & Quillian, 2005).

Apel and Sweeten (2010) go in more detail to understand whether it is the effect of incarceration or propensity of being incarcerated and thus their inherent criminality that affects employment. They argue that it is not correct to compare the employment of those who are not incarcerated and those who are to understand the effect of incarceration. Instead, one has to compare those who are incarcerated against those at risk of incarceration. By matching propensity scores, they found that when compared to individuals who were not incarcerated but were convicted, those who were incarcerated were significantly less likely to be employed. Although they agree with past researchers (Holzer, 1996; Pager, 2003; Stoll & Bushway, 2008) that social stigma from being incarcerated influences this relationship, they conclude that human capital (i.e., not attempting to find legal work; instead working "underground" with their network of connections) also helps explain this relationship.

Criminal Justice Involvement and Internal Outcomes

While the evidence of criminal justice involvement effect on external attainment outcomes (such as education, income, and employment) is quite clear, researchers have found inconsistent evidence assessing whether criminal justice involvement leads to negative internal outcomes (such as different types of mental health outcomes). Furthermore, there is a large body of research examining the effect of self-esteem on criminal justice involvement (i.e., Kaplan, 1986; Trzesniewski, Donnellan, Moffitt, Robins, Poulton, & Caspi, 2006) and on deviance (Kaplan, 1986), there is limited research assessing self-esteem as an outcome of criminal justice system involvement.

In 1940, Clemmer first explained the process of "prisonization" as attempting to dehumanize incarcerated individuals and separate them from the outside world. Sykes (1958) describes this dehumanization as pains of imprisonment where incarcerated individuals are deprived of liberty, autonomy, and security, and that, due to the severity of these deprivations, prisoners experience psychological distress. Schnittker, Massoglia, and Uggen (2012) have found that incarcerated individuals reveal more depressive symptoms than those not involved with the criminal justice system. However, other studies suggest that demographic and economic measures can account for the presence of those depressive symptoms. Furthermore, individuals are more likely to endure negative feelings (such as alienation, depression, and self-derogation) upon re-entry (Irwin, 1970; Ekland-Olson, Supancic, Campbell, & Lenihan, 1983), become dependent on institutional structure and contingencies, experience psychological distancing and post-traumatic stress reactions (Haney 2003), and feel like "outcasts" of society (Uggen, Manza, & Behrens, 2004).

Recent research has found no evidence that arrests and police contact affect long-term health outcomes (Vermeiren, Jones, Ruchkin, Deboutte, & Schwab-Stone, 2004), however stress has been shown to mediate the effect of incarceration on depression (Clemens, 2016).

In conclusion, the previous literature is quite clear about the effects of criminal justice involvement on external attainment outcomes such as school completion, employment, and income. Due to stigma, labeling, and changes in social capital, the involvement with the criminal justice system has a negative effect on external attainment outcomes. However, there has been less investigation related to the criminal justice involvement's effect on internal outcomes. Even though, the general stigma in the society would predict that involvement in criminal justice system affects also self-feelings negatively.

H1: Criminal justice involvement in transition to adulthood has a negative effect on internal outcomes (i.e., increasing negative self-feelings such as self-derogation, depression, and anxiety).

Socio-Criminal Background and Cumulative Disadvantage

We propose that one of the reasons for inconsistent results in predicting internal social psychological outcomes using criminal justice involvement might be the use of socio-demographic risk factors. Most research on criminal justice system involvement focuses on developmental (Geller, Cooper, Garfinkel, Shwartz-Soicher, & Mincy, 2012) or structural outcomes (Lochner & Moretti, 2004) using socio-demographic risk factors as controls. We propose that socio-demographic risks can actually moderate the effect of criminal justice involvement on internal social-psychological outcomes such as self-derogation, depression, and anxiety. However, it would not moderate the effects of criminal justice involvement on external outcomes. This is because the stigma of criminal justice involvement affects those involved at an institutional level. For example, the record of arrest or conviction comes up on job search no matter your socio-demographic background. We argue that the same is not true for internal outcomes. As such, we use the idea of socio-criminal background to moderate the effect of criminal justice system involvement on one's self-feelings. Socio-criminal background refers to criminality in one's immediate social environment: whether one perceived a lot or a little criminality in one's immediate social environment. We set up two alternative hypotheses: 1) a cumulative disadvantage hypothesis, and 2) a normalizing hypothesis.

While, based on deterrence theory principles, "tough on crime" proponents argue that punishment deters juvenile delinquency and crime, and reduces recidivism (Tonry, 2008), others

counter that "formal" interventions (e.g. by school or police officials) transform minor problems into bigger ones that potentially impact the rest of one's life (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Braithwaite, 1989; Jensen & Rojek, 1992; Heimer & Matsueda, 1994). School sanctioning, for example, can encourage the adoption of a deviant label (Becker, 1963; Matza, 1969; Kaplan, 1986), increasing the likelihood of deviant/criminal behavior by creating social obstacles that lead to stigma, potentially decreasing, or limiting, an individual's participation in civic life (Ascani, 2012).

Research on crime rates shows criminal justice involvement is stratified by race and class (Western, 2006). Studies on social inequality attribute the relationship to the stratifying effects of social institutions such as the criminal justice and educational systems (Wakefield & Uggen, 2010). When these systems encourage punitiveness, the less advantaged are disproportionately affected, "severing an already marginalized subpopulation from institutions that are pivotal to desistance from crime and their own integration into broader society" (Brayne, 2014).

These studies are related to the cumulative disadvantage hypothesis that states that disadvantage on different domains tends to accumulate to create more negative results. However, the literature has mainly applied this principle on criminal justice involvement's effect on external attainment outcomes (such as education, employment, and income). Our first competing hypothesis attempts to apply this principle on criminal justice involvement's effect on internal social psychological outcomes. We contend that one's socio-criminal background (criminality in one's immediate social environment) can act as a cumulative disadvantage by strengthening the effect of criminal justice involvement on self-feelings.

H2a: Criminality in one's immediate environment strengthens the effect of criminal justice involvement on negative self-feelings (e.g. self-derogation, depression, and anxiety).

Normalizing Effect of Socio-Criminal Background

Self-enhancement theorists might argue that because individuals recently involved with the criminal justice system believe they are social "outcasts" from conventional society, they will be more likely to seek social environments that enhance their self-esteem and restore a positive identity (i.e., Kaplan, 1986). Kaplan (1986) hypothesizes that stigmatized individuals pursue situations which will enhance or protect their self-esteem. For example, these individuals might seek a social environment with deviant networks to alleviate their negative feelings of stigmatization. Therefore, self-enhancement theorists might argue that the social psychological effects of criminal justice involvement might be lessened due to the deviant properties of the social environment pursued. For these individuals, criminal justice involvement becomes the norm in their environments. By exploring individuals with criminal justice involvement, we will better examine and understand the mechanisms affecting the relationship between criminal justice involvement and psychological processes.

Therefore, alternative to the cumulative disadvantage hypothesis, socio-criminal background might normalize the effect of criminal justice involvement on internal social psychological outcomes. The principle of normalization focuses on the idea that society constantly defines meanings and in different settings, different ideas become defined as "normal", thus, creating somewhat different rules and standards to compare against.

This logic coincides with the model Kelley (1967) suggested for attribution theory. If one lives in a criminal neighborhood, the connections an individual has to others with criminal justice involvement increases (high *consensus*) and the individual's friends engage in greater frequency of criminal justice involvement (high *consistency*), ultimately resulting in reduced noticeability of your own criminal justice involvement (low *distinctiveness*). Thus, the individual will attribute criminal justice involvement to external factors (blaming the criminal justice system itself). Additionally, if one lives in a non-criminal neighborhood, the fewer associations an individual has with others involved with the criminal justice system (low *consensus*), the less frequent their friends have criminal justice involvement (low *consistency*), reducing the noticeability of one's own criminal justice involvement (high *distinctiveness*). Thus, in non-criminal neighborhoods the individual will attribute criminal justice involvement to personal characteristics (the individual is at fault for their own criminal justice involvement).

In addition to attribution theory, legal cynicism might also explain this normalization effect. Legal cynicism, or "anomie" of the law (Sampson & Bartusch, 1998), is a cultural orientation in which the law and the agents of its enforcement are viewed as illegitimate, unresponsive, and ill-equipped to ensure public safety (Kirk & Matsuda, 2011). According to Kirk and Matsuda (2011), in neighborhoods characterized by high levels of legal cynicism, crimes are much less likely to lead to an arrest than in neighborhoods where citizens view the police more favorably. Thus, individuals in high crime neighborhoods characterized by legal cynicism may attempt to protect themselves or personal networks using alternative (typically unlawful) means, thereby leading them into criminal justice involvement.

A meta-analysis conducted by Fowler and colleagues (2009) finds a moderate effect size between community violence exposure and externalizing problems (aggression and deviance) of

adolescents. One possible reason for this outcome is due to the normalization of deviance in the community. Garbarino (1995, 2001) argues that violence becomes normalized in "socially toxic environments." He proposes that youth who are immersed in an environment with continuous violence become desensitized to its psychological effects; however, they are more likely to engage in deviant behavior.

In light of this research, we theorize that, the more criminality there is in one's immediate social environment, the more accustomed one might become to criminal justice involvement. For example, if one knows a lot of people in his or her own personal network who have at some point in their lives been arrested, one's own arrest might not so severely affect their self-feelings. However, if criminal justice involvement is not common in one's personal networks, then one's own arrest might have a strong impact on self-feelings.

H2b: Criminality in one's immediate environment weakens the effect of criminal justice involvement on negative self-feelings (e.g. self-derogation, depression, and anxiety).

While we expect the moderating effect of socio-criminal background on internal outcomes, we do not expect it for external outcomes such as education, employment, or income. This is because a lot of the labeling effects that affect external attainment outcomes are institutional and, therefore, apply regardless of one's socio-criminal background.

Data

The Kaplan Longitudinal and Multigenerational Study (KLAMS) began in 1971, attempting to collect data from all 9,335 seventh graders in 18 randomly selected middle schools (out of 36 schools) in the Houston Independent School District. This resulted in 7,618 participants in the

first wave of data. Over the course of 27 years, these participants were interviewed six additional times, creating seven waves of data with the first generation of KLAMS participants.

The data used in this research were collected from the children of parents who began participating in the KLAMS in 1971 (Kaplan, Liu, & Kaplan, 2005; Pals & Kaplan, 2012; a more detailed description can be found in Kaplan & Lin, 2005 or Chen, Liu, & Kaplan, 2008 or Pals & Kaplan, 2013B). A total of 7,519 children of the original participants were first interviewed from 1994-2002 and ranged in age from 11-37 years old. A subset of these participants who were 11-14 years old (the same age as their parents when they began participation in the study) during T1 were selected to be re-interviewed at T2 and T3. The final wave (T3) of data collected responses from 1,629 participants who were 20 to 24 years old at the time of interviews between 2003 and 2008 (Pals & Kaplan, 2013A).

The data for the present analysis were derived from the 1,629 participants interviewed in both the first and last waves of the second-generation study. Less than 150 participants were dropped from the analysis due to item non-response (N=1,484). The home interviews consisted of a self-administered questionnaire covering, among others, topics like self-attitudes, other social-psychological factors, deviant behavior, and interactions and experiences with school, family, and peers (Kaplan, Liu, & Kaplan, 2005).

We measure control variables and initial level of negative self-feelings in the first wave of the study when respondents are 11-14 years old. We measure the external and internal outcomes (education and negative self-feelings) in the last wave of the study when the respondents are 20-24 years old. Finally, we measure the criminal justice involvement as occurring between the first and the last wave of the study.

Measures

We control for race (white, black, Hispanic, and other), gender, and age. In addition, by using responses from the final wave of the first generation's study, we control for parental education and income for the parents of the second-generation participants. Years of parental education ranges from "some junior high" to "A post-graduate degree" and parental income ranges from "under $3,000" to "More than $75,000."

Our sample is majority white (61%), a quarter of the sample is black, and about 13% of the respondents are Hispanic. The average age in young adulthood is 21 and half years old (the age in young adulthood ranges from 19 to 26, with majority of people in ages 20-24). Respondent's parent has on average 13.7 years of education and earns 53 thousand dollars annually as household income.

Criminal Justice Involvement. Criminal justice involvement (CJI) is a six-category construct that measures respondent's level of criminal justice involvement between T1 and T3. First, we separate out those who have had criminal justice involvement (have had something to do with police; been arrested; convicted; or been in prison, jail or juvenile detention) prior T1 interview (about 7% of the sample). Second, among those who had not had any CJI prior to T1, we measure the level of criminal justice involvement between T1 and T3. CJI is constructed from four questions in T3 asking the respondent the age in which they first had any police interaction, were arrested, were found guilty of a criminal offence, and were sentenced to prison, jail, or juvenile detention. Responses indicating an age of first CJI occurring after T1 are placed into one of four categories exclusive of each other and in this priority – sentenced to incarceration, found guilty of a criminal offence, arrested, and encountered police interaction. Due to a relatively low number of respondents in the guilty and prison categories, these two CJI

levels are then combined. The remaining participants who indicated not have any CJI after T1 were separated into two categories – those who did not have CJI but displayed deviant behavior and those who did not have CJI and displayed no deviant behavior. Deviant behavior is measured by whether respondent engaged in any of the 12 different deviant behaviors (for example, did you sell illegal drugs or started a fist fight). About 35% of the respondents have not been deviant and have never had experience with criminal justice system (see Table 1 for descriptive statistics). About 24% of the sample has been deviant without having any experience with criminal justice system. Finally, 16% of the sample has had something to do with police, 6% have been arrested, and 13% have been convicted for a crime or been to prison between T1 and T3. About 7% have had criminal justice involvement prior to first interview. We measure criminal justice involvement this way to accomplish two goals: 1) we want to be able to compare those involved in criminal justice system to those who are deviant, and 2) we hope that separating out those with prior CJI allows us to see the effect of the first CJI on increase in negative self-feelings from T1 to T3.

[Table 1 about here]

Self-Feelings. We measure self-derogation, depression, and anxiety both in the first wave of the study (ages 11-14) and in the last wave of the study (ages 20-24) using the same items. Self-derogation is an additive score composed of six dichotomous items, such as "I feel I do not have much to be proud of" and "At times I think I am no good at all," designed to measure the respondents negative affect towards the self. The concept of depressive symptoms is an additive score of six items, two measuring the depressed affect ("Do you wish you could be as happy as others seem to be" and "Would you say that most of the time you feel in good spirits?") and four measuring physiological symptoms of depression indicating trouble concentrating, sleeping, and

sitting still. The measure of anxiety is a count of six items measuring anxious behavioral reactions to stressful events (such as "Do you often bite your finger nails" and "Are you often bothered by nervousness?") and physiological anxiety symptoms, such as sweaty hands and pains in the head. The overall level of negative self-feelings is higher in adolescence than in young adulthood.

Socio-Criminal Background. Socio-criminal background is measured with two variables: the criminality of neighborhood and the criminality of personal networks, both measured in adolescence. The criminality of neighborhood counts how many different types of criminal activity a respondent perceives to occur in his or her neighborhood. Criminal activities include people using illicit substances, physical and sexual assaults, burglaries and thefts, organized crime activity, and gang activity. Because of the high proportion of respondents living in non-criminal neighborhoods (52%), we use two different forms of this variable in analysis: 1) dichotomous, separating those who live in criminal neighborhoods (48%) and those who do not (52%), and 2) a continuous variable measuring the extent of criminality in neighborhood.

The measure of criminality of personal networks measures the criminality of friends and relatives. It is constructed from four sets of questions asking: 1) about the deviance of one's best friends (most of my good friends are the kinds of kids who get into trouble a lot and most of my good friends use drugs); 2) count of different deviant acts that a good friend has taken part in (a total of 11 deviant acts, including stealing, breaking into, stolen a car, shoplifted, taken narcotics, beaten someone up); 3) count relatives who have engaged in different deviant acts (such as drinking alcohol excessively, using illegal drugs, committed violent acts), and 4) whether one's friend has been shot or stabbed. The Kuder-Richardson Reliability Coefficient (equivalent to Cronbach alpha for dichotomous items) for this measure is .73. To generate the final measure,

we count how many times respondent has answered positively to these questions. The final measure ranges from 0 to 17. Because of high number of zeros (31%), i.e., high number of people with non-criminal networks, we use two different versions of this variable in analysis: 1) dichotomous version separating out those who have criminal networks (69%) and those who do not (31%), and 2) continuous variable that measures the amount of criminality in one's network.

Educational Outcome. To confirm the results from previous studies focusing on external attainment outcomes, we use educational attainment as one of our dependent variables. We measure whether or not the respondent has gone to college by the time of their last interview when they are 20-24 years old. Both receiving college degree and having some college education indicate attendance at college. About 67 percent of the sample has attended college by the time of the last interview (ages 20-24).

We do not use employment or income as external outcomes in this study due to the age of our respondents. Our respondents are still in the young age where many of them are in the school either getting their higher education degree or their vocational degrees. This, however, would bias the measure of their income as the income of the respondents who are still at school might not be as high as the income for those respondents who have finished school earlier. But this income advantage for those with less education is short-term and would not adequately reflect the life-long chances for employment and income.

Analysis

We use linear regression with ordinary least squares estimators to conduct our analysis predicting negative self-feelings and the binary logistic regression models to predict whether the respondent has entered college. We start with the models predicting external attainment outcome

(college entry) and follow with models predicting internal outcomes (negative self-feelings). In all models predicting negative self-feelings, we control for adolescent negative self-feelings, which, essentially, means that we model the change in negative self-feelings between adolescence and young adulthood. We first test the main effect of criminal justice involvement. As a second step, we use interaction effects between neighborhood criminality and criminal justice involvement; and personal network criminality and criminal justice involvement to see whether the effect of criminal justice involvement depends on the level of socio-criminal background. To better understand the interaction effects, we graph the predicted self-feelings based on the model with interaction effects to show the differences in self-feelings by the type of criminal justice involvement and level of socio-criminal background. We also vary the reference category for the criminal justice involvement (not shown here, but is available from authors upon request) to estimate the significance levels for different comparisons (i.e., comparing the effect of arrest to the effect of being deviant and not having criminal justice contact versus comparing the effect of arrest to the effect of having police contact).

Results

Table 2 presents the main effect of criminal justice involvement on college attendance and self-feelings in young adulthood. The results in this table test whether our results correspond with previous results in literature regarding education and test the hypothesis 1 that states that criminal justice involvement increases one's negative self-feelings in young adulthood. We use the category of no criminal justice involvement and no deviance as the reference category and estimate four models: one for college attendance and three each predicting a different component of negative self-feelings (self-derogation, depressive symptoms, anxiety) while controlling for

the level of this particular component of negative self-feelings in adolescence. We also control for race, gender, age, parental education and income. First, focusing on education, we find that the college attendance chances are highest for those who are not deviant and have not had any criminal justice involvement. Except for police contact, all other deviance and criminal justice involvement categories lower one's chances of attending college. We also find that all types of criminal justice involvements increase self-derogation, depression, and anxiety as compared to those who are not deviant and have no criminal justice involvement. The only outlier is having been arrested, which does not increase depression and anxiety as compared to those who are not deviant and have no criminal justice involvement. Also, prior CJI does not increase self-derogation as compared to those not deviant and with no CJI. However, similarly to Apel and Sweeten's (2010) insight about improper comparison of those who have been imprisoned and those who have not, we believe that when we compare those who have had criminal justice contact to those who have never been deviant and have not had criminal justice contact, we are not really measuring the effect of criminal justice contact.

[Table 2 about here]

Next, we use the "deviant, but no criminal justice involvement" as the reference category because we want to know whether criminal justice involvement and not deviance affects college attendance and self-feelings (see Table 3). It is likely that those who have had criminal justice involvement have also been deviant, thus, comparing the criminal justice involvement to those with no criminal justice involvement and no deviance combines the effects of both deviance and criminal justice involvement. This means, we do know whether the effect is because of deviance or because of criminal justice involvement. By comparing all types of criminal justice involvement to those deviant with no criminal justice involvement separates out the effect of

criminal justice involvement from the effect of deviance. However, doing so, the results are much less dramatic. For college attendance, only conviction or imprisonment and prior CJI decrease the chances of attending college over and above the effect of being deviant. Arrests and police contact does not influence the college attendance. The results are even less dramatic for the internal outcomes – none of the criminal justice involvement types differ from the effect of just being deviant. Negative self-feelings are lower for those who are not deviant and have not been involved in criminal justice system. The seemingly conflicting results in Table 3 and Table 4 in terms of the effect of criminal justice involvement might be one reason for the inconsistent results in the literature when predicting social psychological outcomes.

[Table 3 about here]

However, as predicted by our hypotheses H2a and H2b it is also possible that the lack of effect of criminal justice involvement on internal outcomes is because criminal justice involvement affects internal outcomes differently depending on their socio-criminal background. Thus, we continue investigating whether the effect of criminal justice involvement varies based on socio-criminal background. To test this, we model the interaction effects between socio-criminal background and criminal justice involvement. We, again, employ the deviant, but no criminal justice involvement category as the reference category to allow us to estimate the effect of criminal justice involvement independent from the effect of deviance. We first estimate these interaction effects when predicting college attendance. Because the effect of criminal justice involvement on external attainment outcomes is institutional, we do not expect socio-criminal background to moderate the effect of criminal justice involvement on college attendance. As expected, none of the interaction terms between criminal justice involvement and socio-criminal background are significant, confirming our expectation that the effect of criminal justice

involvement on external outcomes does not depend on socio-criminal background (detailed results available from authors upon request). The results for internal outcomes are shown in Tables 4, 5, 6, and 7.

Both socio-criminal background variables have a skewed distribution where a large number of respondents have a value 0 (no criminal background). About half of the respondents live in neighborhoods where they do not perceive any crime and about third of the respondents do not have any criminality in their personal networks. To separate out those respondents who have no socio-criminal background, we first use the dichotomous version of each moderator separating those with socio-criminal background and those without (see Table 4 and 6). Second, we use the continuous measure of each to see whether the extent of criminality in one's background matters (see Table 5 and 7).

[Table 4 about here]

Table 4 presents the results using dichotomous neighborhood criminality as the moderator. The main effects of criminal justice involvement now show the effect of criminal justice involvement in neighborhoods with no crime perceived. None of the interaction effects predicting depression or anxiety are important. This means, the difference between living in neighborhood with no crime and living in neighborhood with crime does not change the effect of criminal justice involvement on depression and anxiety. When predicting self-derogation, the interaction effect with arrest is significant. Having been arrested increases one's self-derogation in young adulthood if one lives in neighborhood with no crime (.07, $p<.05$), but it does not affect one's self-derogation in neighborhoods with crime (-.05, $p>.10$). This follows our normalization hypothesis – that the arrest is normalized in neighborhoods with crime and thus has less effect on self-feelings than arrest in neighborhoods with no crime.

[Table 5 about here]

Next, we use the continuous neighborhood measure as a moderator to see whether the extent of neighborhood criminality moderates the effect of criminal justice involvement (Table 5). Similarly to table 4, the neighborhood does not moderate the effect of criminal justice involvement on depression and anxiety. However, for self-derogation, the interaction effect with police contact is significant ($p<.05$). Police contact does not affect self-derogation in neighborhoods without crime (-.03, $p>.10$). However, the effect of police contact is stronger the more crime one perceives in their neighborhood. Each additional crime perceived increases the effect of police contact by .03 ($p<.05$). Thus, in the neighborhoods with 8 different crimes perceived (the maximum in our data) police contact considerably increases one's self-derogation (.25, $p<.01$). The effect of police contact follows the cumulative disadvantage hypothesis prediction, but we believe that there is more than cumulative disadvantage at play here. It is possible that the meaning of police contact is opposite in "good" neighborhoods and in "bad" neighborhoods. A person in "good" neighborhood has usually police contact because police is helping them (hence, there should be no negative effects on mental health). While a person in "bad" neighborhood is likely to have police contact that is accusative in nature (hence, a strong effect on self-derogation).

[Table 6 about here]

Next, we turn to criminality of personal networks as the moderator for the effect of criminal justice involvement. Table 6 presents the results from the interaction effects between the dichotomous criminality of personal networks and criminal justice involvement. Here the criminal justice involvement effect does not vary across different levels of network criminality when predicting self-derogation (even though the interaction effect for police contact is

significant, the police contact does not influence self-derogation for those with no criminal network nor for those with criminal network). For depressive symptoms, the effect of conviction/incarceration varies based on personal network criminality. Guilty conviction or incarceration increases depression among those with no deviant network (.15; p=.001). However, conviction or incarceration does not increase depression if one has deviant network (-.01; p>.10). We see a similar difference for anxiety. Conviction or incarceration does increase anxiety among those without any deviant network (.06, p<.01). But it does not affect anxiety among those with deviant network (-.05; p>.10). In addition, the effect of arrest varies for anxiety. Having been arrested increases anxiety for those with noncriminal network (.09, p<.01), but does not for those with criminal network (-.02, p>.10).

Similar effect is also seen in Table 7 where we use the continuous indicator for personal network criminality. Conviction/incarceration increases one's depression if one does not have criminal network, but the effect is reduced as the network becomes more criminal. The same applies to conviction/incarceration and for arrests predicting anxiety. Thus, conviction/incarceration for both depressive symptoms and for anxiety and the arrest for anxiety follows the prediction by the normalization hypothesis.

[Table 7 about here]

Discussion

This paper investigates the effect of criminal justice involvement on internal social psychological outcomes during the transition to adulthood. Using longitudinal data, we can control for base level self-feelings when predicting self-feelings in young adulthood, after their criminal justice involvement experience. We propose that the inconclusive results of prior literature predicting

self-esteem and other social psychological outcomes might be partly due to the differences in meaning that people give to criminal justice involvement due to their social environment. We propose two competing hypotheses: 1) the cumulative disadvantage hypothesis states that criminal justice involvement has more detrimental effects on mental health outcomes in more disadvantageous environments, and 2) the normalization hypothesis suggests that criminal justice involvement has more detrimental effects on mental health outcomes in less disadvantageous environments, because in the disadvantageous environments criminal justice involvement is more normalized. Specifically, we use neighborhood criminality and personal network criminality to moderate the effect of criminal justice involvement on negative self-feelings. We also propose that while this moderating effect is present for internal outcomes such as negative self-feelings, it should not be present for external attainment outcomes (such as college attendance) because criminal justice effects on external attainment outcomes are often institutionalized.

We find that, while conviction/incarceration does lower the chance of college attendance, it does not affect internal outcomes without taking into account the criminality of social environment. If compared to those who have not engaged in deviance and have not experienced criminal justice system, all different types of contacts with criminal justice system increase self-derogation, depressive symptoms, and anxiety over time. However, when compared to those who have been deviant, but have not been involved in criminal justice system, the different types of criminal justice system contacts do not increase negative self-feelings. Therefore, involvement with criminal justice system does not increase one's negative self-feelings over and above the increase generated by deviant behavior itself.

However, the results are different if we take into account the criminality of one's social environment. When using criminality of neighborhood as a moderator, we find that contact with police follows the cumulative disadvantage hypothesis. Contact with police leads to much higher level of self-derogation in neighborhoods with high crime than in neighborhoods with no crime. We speculate that this might be because the meaning of police contact is different in non-criminal neighborhoods and in highly criminal neighborhoods. People in non-criminal neighborhoods tend to have police contact that is helpful in nature while the people in criminal neighborhoods tend to have police contact that is threatening in nature (the person is assumed to be at fault). Arrests, however, do not follow the cumulative disadvantage hypothesis. Quite the opposite, the people in non-criminal neighborhoods who experience arrests have much higher self-derogation than people in criminal neighborhoods who experience arrests. Thus, the higher the neighborhood criminality, the lower the effect of arrest on self-derogation. This supports the normalizing hypothesis: criminal justice involvement is normalized in neighborhoods with crime and thus, it affects self-derogation less in criminal neighborhoods.

We see a similar normalizing effect for depressive symptoms and anxiety when taking into account personal network criminality. Being convicted/ incarcerated does not affect depressive symptoms and anxiety if one has criminal personal networks. However, conviction/incarceration does increase depressive symptoms and anxiety for those who have no criminal networks. Similar effect can be seen with arrest effect on anxiety. While having been arrested increases anxiety for those with no criminal networks, it does not increase anxiety if one has criminal personal networks. We can explain this with the normalizing hypothesis: conviction/incarceration and arrests are not normalized in non-criminal networks and therefore increase one's depressive symptoms and anxiety.

In conclusion, by taking into account the criminality of one's social environment, we start to better understand the effect of criminal justice involvement on internal social psychological outcomes. Without taking into account the criminality of one's social environment the criminal justice involvement seemingly does not affect one's negative self-feelings. However, this is because the effect of criminal justice involvement is different in different socio-criminal contexts. We did find support for the normalizing hypothesis for the effect of arrests based on neighborhood criminality and for the effect of conviction/incarceration, and arrests based on personal network criminality. The police contact effect based on neighborhood criminality is indicating the different nature of police contact, rather than just a simple cumulative disadvantage idea. Future research needs to focus on why the neighborhood criminality moderated the effect of criminal justice involvement on self-derogation while the personal network criminality moderated the effect of criminal justice involvement on depression and anxiety. It is possible that this difference is because the personal criminal network acts also as a social support, while the neighborhood does not.

Our current analysis ignores race differences. As a next step in our exploration of the criminal justice effect on youth, we plan to explore whether there are racial differences in the moderating effect of socio-criminal background. Researchers have found evidence that individuals of color are most likely to be at risk of being pushed out of school (Hirschfield 2009), and being charged with a drug crime, regardless of whether their white counterparts commit the same criminal infraction (Western, 2006; Witt, 2007). The consequences for status attainment outcomes derived from criminal justice involvement are overwhelming, and include social, political, and economical restrictions (Heitzeg, 2009). The impact of criminal justice involvement on the current and future lives of children and youth is alarming. Furthermore, as

adults, the stigma associated with criminal involvement not only restricts access to future education, but also prevents the attainment of legal employment vital in the accumulation of human and social capital. Lacking human and social capital can potentially encourage participation in illegal activity (i.e. drug dealing, robbery, thieving, etc.) in order to meet economic demands (Western, 2006). It is this racial disparity in the experience of criminal justice system leading us to explore whether one's socio-criminal background moderates the effect of criminal justice involvement on internal social psychological outcomes in a similar manner for different racial groups.

References

Aizer, A., & Doyle Jr., J.J. (2015) Juvenile Incarceration, Human Capital, and Future Crime. *The Quarterly Journal of Economics*, 130(2),759-803.

Apel, R., & Sweeten, G. (2010) The Impact of Incarceration on Employment during the Transition to Adulthood. *Social Problems*, 57(3),448-479.

Ascani, N. (2012) Labeling Theory and the Effects of Sanctioning on Delinquent Peer Association. *Sociological Perspectives: University of New Hampshire*:80-84.

Becker, H.S. (1963) *Outsiders: Studies in the Sociology of Deviance*. NY: Macmillan.

Bernburg, J.G., & Krohn, M.D. (2003) Labeling, Life Chances, and Adult Crime. *Criminology*, 41(4),1287-1318.

Braithwaite, J. (1989) *Crime, Shame, and Reintegration.* Cambridge: Cambridge University Press.

Brayne, S. (2014) Surveillance and System Avoidance. *American Sociological Review*, 79(3),367-391.

Castillo, J. (2014) Tolerance in Schools for Latino Students. *Harvard Journal of Hispanic Policy,* 26:43-58.

Chen, Z., Liu, R.X., & Kaplan, H.B. (2008) Mediating Mechanisms for the Intergenerational Transmission of Constructive Parenting. *Journal of Family Issues,* 29(12),1574-1599.

Clemens, W.M. (2016) *Criminal Justice Involvement and Self-Reported Health and Depression* (master's thesis). Department of Sociology, Bowling Green State University.

Clemmer, D. (1940) *The Prison Community*. New York: Holt, Rinehart, and Winston.

Davies, S., & Tanner, J. (2003) The Long Arm of the Law. *Sociological Quarterly,* 44:385–404.

Ekland-Olson, S., Supancic, M., Campbell, J., & Lenihan, K.J.. (1983) Postrelease Depression and the Importance of Familial Support. *Criminology,* 21(2), 253-275.

Freeman, R.B. (1992) *Crime and the Employment of Disadvantaged Youths*. Cambridge, MA: National Bureau of Economic Research.

Fowler, P.J., Tompsett, C.J., Braciszewski, J.M., Jacques-Tiura, A.J., & Baltes, B.B. (2009) Community Violence. *Development and Psychopathology,* 21(1),227-259.

Garbarino, J. (1995) *Raising Children in a Socially Toxic Environment.* San Francisco: Jossey-Bass.

--------- (2001) Lost Boys: Why our Sons Turn Violent and How We Can Save Them. *Smith College Studies in Social Work,* 71(2),167-181.

Geller, A, Cooper, C.E., Garfinkel, I., Shwartz-Soicher, O., & Mincy, R.B. (2012) Father Absenteeism. *Demography,* 49(1),49-76.

Giordano, P.C. (2010) *Legacies of crime*. New York: Cambridge University Press.

Grogger, J. (1998) Market Wages and Youth Crime. *Journal of Labor Economics,* 16(4), 756-91.

Hagan, J. (1991) Destiny and Drift. *American Sociological Review,* 56(5),567-82.

Hagan, J., & Foster, H. (2012) Intergenerational Educational Effects of Mass Imprisonment in America. *Sociology of Education,* 85(3),259–86.

Haney, C. (2003) The Psychological Impact of Incarceration: Implications for Post-Prison Adjustment. In J. Travis & M. Waul (Eds.), in *Prisoners Once Removed: The Impact of Incarceration and Reentry on Children, Families, and Communities (*pp. 33-66). Washington D.C.: The Urban Institute.

Hannon, L. (2003) Poverty, Delinquency, and Educational Attainment. *Sociological Inquiry,* 73(4),575-594.

Heimer, K & Matsueda, R.L. (1994) Role-Taking, Role Commitment, and Delinquency. *American Sociological Review* 59:365-90

Heitzeg, N. (2009) Education or Incarceration. *Forum on Public Policy* 2009(2),1-21.

Hirschfield, P. (2009) Another Way Out. *Sociology of Education,* 82(4),368-393.

Hjalmarsson, R. (2008) Criminal Justice Involvement and High School Completion. *Journal of Urban Economics,* 63(2),613-630.

Holzer, H.J. (1996) *What Employers Want*. New York: Russell Sage Foundation.

Irwin, J. (1970) *The Felon*. Englewood Cliffs, N.J.: Prentice Hall.

Jensen, G.F. & Rojek, D.G. (1992) *Delinquency and Youth Crime. 2nd Ed.* Prospect Heights, IL: Waveland.

Kaplan, D.S., Liu, R.X., & Kaplan, H.B. (2005) School Related Stress in Early Adolescence and Academic Performance Three Years Later. *Social Psychology of Education,* 8:3-7.

Kaplan, H.B. (1986) *Social Psychology of Self-Referent Behavior*. New York: Plenum Press.

Kaplan, H.B. & Lin, C.H. (2000) Deviant Identity as a Moderator of the Relation between Negative Self-Feelings and Deviant Behavior. *The Journal of Early Adolescence,* 20(2),150-177.

--------- (2005) Deviant Identity, Negative Self-Feelings, and Decreases in Deviant Behavior. *Psychology, Crime and Law,* 11(3),289-303.

Kelley, H.H. (1967) Attribution Theory in Social Psychology. Pp. 192–238 in *Nebraska Symposium on Motivation,* edited by D. Levine. NE: University of Nebraska Press.

Kirk, D.S. & Matsuda, M. (2011) Legal Cynicism, Collective Efficacy, and the Ecology of Arrest. *Criminology,* 49(2),443-72.

Kirk, D.S. & Sampson, R.J. (2013) Juvenile Arrest and Collateral Educational Damage in the Transition to Adulthood. *Sociology of Education,* 86(1),36-62.

Kling, J.R. (2006) Incarceration Length, Employment, and Earnings. *The American Economic Review,* 96(3),863-76.

Leventhal, T. & Brooks-Gunn, J. (2000) The Neighborhoods They Live in. *Psychological Bulletin,* 126(2),309-337.

Liberman, A.M., Kirk, D.S., & Kim, K. (2014) Labeling Effects of First Juvenile Arrests. *Criminology,* 52(3),345-370.

Link, B.G., Cullen, F.T., Struening, E., Shrout, P.E., & Dohrenwend, B.P. (1989) A Modified Labeling Theory Approach in the Area of Mental Disorders. *American Sociological, Review* 54:100-123.

Liu, X, Kaplan, H.B., & Risser, W. (1992) Decomposing the Reciprocal Relationships between Academic Achievement and General Self-Esteem. *Youth and Society,* 24(2),123-148.

Lochner, L. (2004) Education, Work, and Crime. *International Economic Review,* 45(3),811-43.

Lochner, L., & Moretti, E. (2004) The Effect of Education on Crime. *American Economic Review,* 94(1),155-189.

Lopes, G., Krohn, M.D., Lizotte, A.J., Schmidt, N.M., Vásquez, B.E., & Bernburg, J.G. (2012) Labeling and Cumulative Disadvantage the Impact of Formal Police Intervention on Life Chances and Crime during Emerging Adulthood. *Crime and Delinquency,* 58(3),456-488.

Matza, D. (1969) *Becoming Deviant*. Englewood Cliffs, N.J: Prentice Hall.

Pager, D. (2003) The Mark of a Criminal Record. *American Journal of Sociology,* 108:937–75.

Pager, D., & Quillian, L. (2005) Walking the Talk? *American Sociological Review,* 70(3),355-80.

Pals, H., & Kaplan, H.B. (2013a) Cumulative and Relative Disadvantage as Long-Term Determinants of Negative Self-feelings. *Sociological Inquiry,* 83(1),130-53.

Pals, H., & Kaplan, H.B. (2013b) The Roles of Internal Locus of Control and Neighborhood Affluence in Predicting the Continuity of Negative Self-Feelings from Adolescence to Young Adulthood. *Journal of Adolescence,* 36:807-14.

Rumberger, R.W., & Lim, S.A. (2008) Why Students Drop Out of School. *California Dropout Research Project Report* 15:1-130.

Sampson, R.J., & Bartusch, D.J. (1998) Legal Cynicism and Subcultural Tolerance Deviance. *Law & Society Review,* 32(4),777-80.

Schnittker, J., Massoglia, M., & Uggen, C. (2012) Out and Down Incarceration and Psychiatric Disorders. *Journal of Health and Social Behavior,* 53(4),448-464.

Stoll, M.A. & Bushway, S.D. (2008) The Effect of Criminal Background Checks on Hiring Ex-Offenders. *Criminology and Public Policy,* 7:371-404.

Sweeten, G. (2006) Who will graduate? *Justice Quarterly, 23*(4),462-480.

Sykes, G.M. (1958) *The Society of Captives.* Princeton, NJ: Princeton University Press.

Tonry, M. (2008) Learning from the Limitations of Deterrence Research. *Crime and Justice,* 37(1),279-311.

Trzesniewski, K.H., Donnellan, M.B., Moffitt, T.E., Robins, R.W., Poulton, R., & Caspi, A. (2006) Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. *Developmental Psychology,* 42:381–390.

Uggen, C., Manza, J., & Behrens, A. (2004) Less than the Average Citizen. In S. Maruna & R. Immarigeon (Eds.), *After Crime and Punishment* (pp. 258-290). Cullompton, Devon, UK: Willan Publishing.

Vermeiren, R., Jones, S.M., Ruchkin, V., Deboutte, D., & Schwab-Stonem M. (2004) Juvenile Arrest: A Cross-Cultural Comparison. *Journal of Child Psychology and Psychiatry,* 45:567–576.

Wakefield, S., & Uggen, C. (2010) Incarceration and Stratification. *Annual Review of Sociology,* 36:387-406.

Waldfogel, J. (1994) The Effect of Criminal Conviction on Income and the Trust 'Reposed in the Workmen. *Journal of Human Resources,* 29(1),62-81.

Western, B. (2006) *Punishment and Inequality in America*. NY: Russell Sage Foundation.

Western, B., Kling, J.R., & Weiman, D.F. (2001) The Labor Market Consequences of Incarceration. *NCCD News,* 47(3),410-27.

Wildeman, C., & Western, B. (2010. Incarceration in Fragile Families. *The Future of Children,* 20(2),157-77.

Witt, Howard. (2007) School discipline tougher on African Americans. *Chicago Tribune*, Sept 25, p.1A.

Table 1. Descriptive Statistics

	Mean	Standard Deviation
Dependent Variables		
T3 Self-derogation	.13	.21
T3 Depression	.33	.27
T3 Anxiety	.17	.20
T3 Attended College	.67	
Independent Variable		
Criminal Justice Involvement (CJI)		
Prior CJI	.07	
Not deviant, no CJI	.35	
Deviant, no CJI	.24	
Police contact	.16	
Arrest	.06	
Guilty/Prison	.13	
Moderator Variables		
Neighborhood Criminality Perception		
Continuous measure (0-8)	.54	
Dichotomous: Criminal neighborhood	.47	
Personal Network Criminality		
Continuous measure (0-17)	1.65	
Dichotomous: Criminal network	.68	
Control Variables		
T1 Self-derogation	.17	.21
T1 Depression	.36	.29
T1 Anxiety	.26	.24
Female	.53	
Age	21.52	.97
Race		
Black	.25	
Hispanic	.13	
Other race	.01	
Parental…		
Years of education	13.69	2.21
Income	53.16	23.98

Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)

Table 2. Criminal Justice Involvement's Effect on College Attendance and Self-Feelings

	College[1] Attendance	Young adult[1]		
		Self-derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)				
Prior CJI	-1.01***	.04	.10***	.06**
Deviant, no CJI	-.40*	.05**	.07***	.04**
Police contact	-.02	.05**	.07**	.04*
Arrest	-.91***	.06*	.03	.04
Guilty/Prison	-1.33***	.07***	.10***	.06***
T1 Self-derogation		.15***		
T1 Depression			.22***	
T1 Anxiety				.15***
Female	.21	.04**	.07***	.06***
Age	-.03	-.01*	-.02*	-.01
Race				
Black	-.32*	-.04**	-.07***	-.03*
Hispanic	-.26	-.05**	-.06*	-.03
Other race	.14	-.02	.14	.08
Parental…				
Years of education	.37***	-.00	-.00	-.01**
Income	.01***	-.00	-.00	-.00
Constant	-3.55*	.36**	.58***	.37**
Likelihood Ratio Chi-Square	340.81***			
Pseudo R-squared	.19			
Model *F*-statistic		5.96***	12.12***	9.02***
R-squared		.05	.10	.07
Degrees of freedom	12	13	13	13

[1]Unstandardized effects from binary logistic regression for predicting college attendance and linear regression with OLS estimates predicting self-feelings.
Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05

Table 3. Criminal Justice Involvement's Effect on College Attendance and Self-Feelings, Compared to those Deviant and with no criminal justice involvement

	College[1] Attendance	Young-adult[1]		
		Self-Derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)				
Prior CJI	-.62*	-.00	.03	.02
Not deviant/No CJI	.40*	-.05**	-.07***	-.04**
Police contact	.38	.00	.00	-.00
Arrest	-.52	.01	-.04	-.01
Guilty/Prison	-.93***	.02	.03	.02
T1 Self-derogation		.15***		
T1 Depression			.22***	
T1 Anxiety				.15***
Female	.21	.04**	.07***	.06***
Age	-.03	-.01*	-.02*	-.01
Race				
Black	-.32*	-.04**	-.07***	-.03*
Hispanic	-.26	-.05**	-.06*	-.03
Other race	.14	-.02	.14	.08
Parental…				
Years of education	.37***	-.00	-.00	-.01**
Income	.01***	-.00	-.00	-.00
Constant	-3.55*	.36**	.58***	.37**
Likelihood Ratio Chi-Square	340.81***			
Pseudo R-squared	.19			
Model *F*-statistic		5.96***	12.12***	9.02***
R-squared		.05	.10	.07
Degrees of freedom	11	12	12	12

[1]Unstandardized effects from binary logistic regression for predicting college attendance and linear regression with OLS estimates predicting self-feelings.
Source: KLAMS, Generation 1, Time7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05

Table 4. Linear Regression: Dichotomous Neighborhood Criminality Moderating the Effect of Criminal Justice Involvement on Self-Feelings

	Young adult		
	Self-derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)			
Prior CJI	-.04	.03	.04
Not deviant/No CJI	-.03	-.07**	-.03
Police contact	-.01	-.03	-.00
Arrest	.07*	.00	.01
Guilty/Prison	.02	-.00	.04
Criminal Neighborhood	.02	-.02	.03
Criminal Neighborhood X			
Prior CJI	.04	.00	-.04
Not deviant/No CJI	-.04	.00	-.03
Police contact	.04	.07	-.00
Arrest	-.12*	-.09	-.03
Guilty/Prison	.00	.06	-.04
T1 Self-derogation	.15***		
T1 Depression		.22***	
T1 Anxiety			.14***
Female	.04**	.07***	.06***
Age	-.01*	-.02*	-.01
Race			
Black	-.04**	-.07***	-.03*
Hispanic	-.05**	-.05*	-.03
Other race	-.03	.13	.08
Parental…			
Years of education	.00	-.00	-.01**
Income	-.00	-.00	-.00
Constant	.40**	.65***	.40**
Model *F*-statistic (df=19)	5.58***	11.25***	8.40***
R-squared	.06	.10	.08
Change in *F*-statistic for adding interactions (df=5)	2.89*	1.76	.46
Change in R-squared for adding interactions	.01	.00	.00

Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05

Table 5. Linear Regression: Continuous Neighborhood Criminality Moderating the Effect of Criminal Justice Involvement on Self-Feelings

	Young adult		
	Self-derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)			
Prior CJI	-.02	.03	.01
Not deviant/No CJI	-.04*	-.06**	-.03*
Police contact	-.03	-.02	-.00
Arrest	.03	.00	-.01
Guilty/Prison	.03	.03	.03
Neighborhood Criminality	-.00	.00	.01
Neighborhood Criminality X			
Prior CJI	.01	-.00	.00
Not deviant/No CJI	-.01	-.01	-.01
Police contact	.03*	.02	.00
Arrest	-.02	-.04	.01
Guilty/Prison	.01	.00	-.01
T1 Self-derogation	.14***		
T1 Depression		.22***	
T1 Anxiety			.14***
Female	.04**	.07***	.06***
Age	-.01*	-.01*	-.01
Race			
Black	-.04**	-.07***	-.03*
Hispanic	-.05**	-.06*	-.03
Other race	-.02	.14	.08
Parental…			
Years of education	-.00	-.00	-.01**
Income	-.00	-.00	-.00
Constant	.41**	.64***	.41***
Model *F*-statistic (df=19)	5.53***	11.26***	8.43***
R-squared	.06	.10	.08
Change in *F*-statistic for adding interactions (df=5)	3.04**	1.54	.66
Change in R-squared for adding interactions	.01	.00	.00

Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05

Table 6. Dichotomous Criminality of Personal Networks Moderating the Effect of Criminal Justice Involvement on Self-Feelings

VARIABLES	Young adult		
	Self-derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)			
Prior CJI	-.07	.17*	.04
Not deviant/No CJI	-.07**	-.09**	-.02
Police contact	-.05	-.03	.04
Arrest	.02	-.01	.07
Guilty/Prison	.05	.15**	.09**
Criminal Personal Network	-.04	-.00	.06**
Criminal Personal Network X			
Prior CJI	.08	-.16	-.04
Not deviant/No CJI	.04	.04	-.04
Police contact	.07*	.04	-.06
Arrest	-.01	-.04	-.11*
Guilty/Prison	-.04	-.16**	-.11**
T1 Self-derogation	.15***		
T1 Depression		.22***	
T1 Anxiety			.14***
Female	.04***	.08***	.06***
Age	-.01*	-.02*	-.01
Race			
Black	-.04**	-.07***	-.03*
Hispanic	-.05**	-.06**	-.03*
Other race	-.02	.14	.08
Parental…			
Years of education	-.00	-.00	-.01*
Income	-.00	-.00	-.00
Constant	.44***	.67***	.38**
Model *F*-statistic (df=19)	5.61***	11.27***	8.46***
R-squared	.06	.10	.08
Change in *F*-statistic for adding interactions (df=5)	1.83	4.06**	2.06
Change in R-squared for adding interactions	.01	.01	.01

Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05

Table 7. Continuous Criminality of Personal Networks Moderating the Effect of Criminal Justice Involvement on Self-Feelings

VARIABLES	Young adult		
	Self-derogation	Depression	Anxiety
Criminal Justice Involvement (CJI)			
Prior CJI	.02	.04	.01
Not deviant/No CJI	-.06**	-.06**	-.02
Police contact	-.02	-.03	.02
Arrest	.04	.01	.04
Guilty/Prison	.03	.08*	.06*
Personal Network Criminality	-.01	.01	.02**
Personal Network Criminality X			
Prior CJI	-.00	-.01	-.02
Not deviant/No CJI	.01	-.00	-.02
Police contact	.02	.02	-.01
Arrest	-.02	-.03	-.03*
Guilty/Prison	-.01	-.02*	-.02**
T1 Self-derogation	.15***		
T1 Depression		.21***	
T1 Anxiety			.14***
Female	.04***	.07***	.06***
Age	-.01*	-.02*	-.01
Race			
Black	-.04**	-.07***	-.03*
Hispanic	-.04**	-.06**	-.03*
Other race	-.02	.14	.08
Parental…			
Years of education	.00	-.00	-.01*
Income	-.00	-.00	-.00
Constant	.41***	.64***	.40**
Model *F*-statistic (df=19)	5.62***	11.28***	8.60***
R-squared	.06	.11	.08
Change in *F*-statistic for adding interactions (df=5)	2.27*	3.35**	2.12
Change in R-squared for adding interactions	.01	.01	.01

Source: KLAMS, Generation 1, Time 7; Generation 2, Time 1 and 3 (valid N=1,484)
*** p<0.001, ** p<0.01, * p<0.05