

Spring 4-30-2018

## Life Course Outcomes for Juveniles: Contact with the Criminal Justice System as a Turning Point

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### Repository Citation

Tauffner, Dominique, "Life Course Outcomes for Juveniles: Contact with the Criminal Justice System as a Turning Point" (2018). *Honors Projects*. 358.  
<https://scholarworks.bgsu.edu/honorsprojects/358>

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Life Course Outcomes for Juveniles:

Contact with the Criminal Justice System as a Turning Point

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Honors Project

Submitted to the Honors College  
at Bowling Green State University in partial fulfillment of the  
requirements for graduation with

University Honors Spring 2018

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### **Abstract**

This research investigated the life course outcomes of respondents who have been arrested during adolescence. Although the creation of the juvenile justice system is relatively recent, only existing for 119 years, there is a need for data on the impact this system has on society. The pre-existing knowledge and literature on juvenile delinquency and the criminal justice system often fails to capture longitudinal data. Most scholars on this issue will discuss the immediate effects of things like incarceration and placement or what influences delinquency, ignoring the long-term consequences or life outcomes of those that have been arrested prior to 18. The purpose of this study is to better understand how juvenile arrests and delinquency may influence life outcomes throughout early adulthood. I utilized self-reported survey responses from the Toledo Adolescent Relationships Study (TARS) (N = 1,239) to gather longitudinal data for statistical analyses, which pre-exists the creation of this study. The data was critically evaluated with the support of univariate and bivariate modeling. Specifically, my bivariate statistical analyses included t-tests, chi-squared tests, and cross tabulations. Results show significant evidence to support the hypothesis that formal juvenile contact with the criminal justice system serves as a negative turning point in adolescents' lives. This negative turning point results in poor life outcomes for the juveniles throughout early adulthood. Furthermore, those with greater frequency of arrests prior to 18 also report worse life outcomes when compared to those who have only been arrested once or never.

## Research Question

I examined the potential for contact with the criminal justice system to serve as a turning point in the life course of adolescents. My research assessed adolescents' interactions at various levels within the United States criminal justice system and how these interactions influenced adolescents as they transitioned to young adulthood. The original and primary goal of the juvenile justice system, in theory, is to rehabilitate adolescent offenders; however, this does not always appear to be the case. Recent literature indicates that often the opposite is occurring and punitive models are becoming more prevalent. Many prior studies have focused on youths and delinquency; however, there are still several research gaps. The gap that I focused on is concerned with the potential ways that the criminal justice system (i.e., law enforcement officers, courts, judges, and juvenile detention centers) may alter adolescents' life course transitions, predictably for the worse. Formal contact with the criminal justice system undoubtedly has immediate negative effects on an individual's life. My research seeks to take this one step further and examine what, if any, long-term effects that contact with the criminal justice system may have on adolescents.

Juveniles have been the focus of research for many sociologists, psychologists, social workers and even scholars in the field of criminal justice. The emphasis has been placed on factors such as family, education, friends and peer relationships, neighborhood structure, delinquency, and substance use and how these factors affect juveniles' social development. However, throughout my research there is one notable factor missing from the literature: contact with the juvenile justice system. When formally sanctioned criminal activity or delinquency is considered in research, it is often viewed through a labeling theorist perspective, which ignores the affect of the contact with the criminal justice system and focuses on the label associated with

those individuals. My study analyzed juvenile justice system contact, adolescent development, turning points, and related theories that provided insight on potential negative implications of criminal justice contact on critical life course outcomes.

### **United States Juvenile Justice System**

The juvenile justice system was created in 1899 with the goal of providing treatment in the best interest of youths. According to Kroska, Lee, and Carr (2016):

The goal of the juvenile justice system in the United States is to treat and rehabilitate delinquent youth to prevent future violations. Yet, numerous studies suggest that encounters with this system have the opposite effect on teens, leading them to reoffend at higher rates than they otherwise would (e.g., Bernburg and Krohn, 2003; Bernburg, Krohn, and Rivera, 2006; Johnson, Simons, and Conger, 2004; Kaplan and Johnson, 1991; Liberman, Kirk, and Kim, 2014; Petrosino, Turpin-Petrosino, and Guckenburg, 2010; Stewart et al., 2002). Together these studies suggest that juvenile justice system sanctioning increases rather than decreases recidivism.

This original goal of reforming and doing what is best for youths has been lost somewhere in the dismantling of the juvenile justice system. The dismantling of the original intentions of the juvenile justice system have moved the system toward a more punitive direction. This punitive system now punishes juveniles for their actions instead of working to reform them. Juveniles are often transferred from the juvenile court to the adult court system, which is designed with the intent to punish. Recently, there has been a pushback towards a more rehabilitative model. This pushback as evidenced by child advocates who argue that ultimately, the values, goals, and policies in support of a punitive model need to change. Some even argue that there is a need for change from the bottom-up; a total reform (Bazemore & Umbreit, 1995).

Nevertheless, today's juvenile court is more punitive and far more complicated than originally intended. Three trends in the system have resulted in courts providing more punishment and less rehabilitation: (1) The scope of the juvenile courts has narrowed so that they deal less and less with social welfare issues and focus their attention on delinquency; (2) The courts have shifted away from placing emphasis on individualized solutions; and (3) The powers of the courts have been limited by guidelines and legislation. Society's perception that juvenile crime is a growing problem is a myth, being inflated by the media. The data on juvenile delinquency does not substantiate society's perception that juvenile crime is increasing. The fear may be fueled by media coverage of American youth: 47% of televised news reports and 40% of newspaper reports involving children cover juvenile delinquency. The emphasis on violent juvenile crime has fed the demand for punishment and revenge. Perhaps the most troubling aspect of the juvenile justice system is the fact that the U.S. allows the death penalty for juveniles, which is otherwise largely banned globally (McVicker, 1999).

Juvenile Court Statistics of 2013 have described delinquency cases handled between 1985 and 2013 and petitioned status offense cases handled between 1995 and 2013. National estimates of juvenile court delinquency caseloads in 2013 were based on analyses of 749,722 automated case records and court-level statistics summarizing an additional 44,219 cases. Estimates of status offense cases formally processed by juvenile courts in 2013 were based on analyses of 75,411 automated case-level records and court-level summary statistics on an additional 4,820 cases. The data suggests that trends in juvenile court cases paralleled trends in arrests of persons younger than 18. The number of juvenile court cases involving offenses included in the FBI's Violent Crime Index<sup>2</sup> (criminal homicide, forcible rape, robbery, and aggravated assault) fell 2% between 2012 and 2013. The FBI reported that the number of arrests

involving persons younger than age 18 charged with Violent Crime Index offenses dropped 9% during this same period (Hockenberry & Puzzanchera, 2015).

Although crime has been on the decline, punishment for juvenile offenses has been on the rise. In 1996, the juvenile justice system, supported by social norms emphasizing retribution and punishment, was revised with the passage of an important crime bill. This crime bill enacted 'super-predator' laws that automatically transferred certain youth to adult courts. Judges had little discretion in these cases due to mandatory sentencing laws. Over half of all juvenile cases between 2001 and 2009 were handled formally in court. The other cases were diverted: Diversion can mean any number of things from being transferred to the adult court or having the charges dropped. A majority of the formal adjudications come in the form of placement or probation. Placement means that the youth is placed somewhere outside of the home. Probation and placement do very little to rehabilitate or better those youths' lives (Church, Springer & Roberts, 2014). Between 1985 and 1991, the proportion of detained drug offense cases involving Black youths increased substantially (from 30% to 67%). (Hockenberry & Puzzanchera, 2015). In sum, the basic rehabilitative principles of the United States juvenile system have been left in the past.

The research by Watkins and Maume (2012) and Richards (2009) concludes that there is a lack of not only knowledge, but also data on juveniles contact with the criminal justice system. Much of the contact that juveniles have with the criminal justice system goes undocumented because it is informal contact. Even some of the formal contact with the criminal justice system goes undocumented. Richards (2009) has speculated that there is so much more unknown, or at least uncertain, with juvenile delinquency and the criminal justice system (specific to Australia), then what is known. A major part of this is due to the acknowledgement of a major lack of data

on juveniles. Watkins and Maume (2012) has further argued that that there is a huge portion of data missing even from the informal contact that the criminal justice system has with juveniles. There is no way to study all of those instances because there is no existing documentation that the instances of informal – and sometimes even formal – contact occurred. Because of the limited documented contact with the criminal justice system, this study fills an important gap in the existing literature.

### **Juvenile Development within the Criminal Justice System**

Incarceration of young offenders in most cases has proven to be actually more hazardous than beneficial. It often results in grave psychological trauma and deteriorating emotional and physical health of the detained youth, which makes their successful reintegration back into society even more difficult and unlikely. Children in conflict with the law who are not given proper counseling and rehabilitation programs often find reintegration to society difficult and face high rates of return to the prison system. Lack of educational opportunities is another serious problem facing children in conflict with the law. This association between criminal justice contact and poor educational outcomes is evident in cross-cultural studies. In Russian prisons, for example, there were registered cases of children as old as 14 who were unable to read or write. In Pakistan, the education of juvenile offenders is mostly limited to religious studies. As a result, incarcerated children are on the whole not ready for the challenges of socialization and employment in the free society, and often return to the life of crime (Youth, 2014). This study highlights a global need for adolescents to have the ability to continue developing – even when incarcerated.

### **Contributing Factors to Delinquency**



A number of societal factors contribute to the development of delinquent behavior in children. Left-behind children, runaway and street children, and children living in poverty are at the greatest risk. Other specific risk factors are child abuse and family disintegration, low neighborhood attachment, parental attitudes condoning law-violating behavior, academic failure, truancy, school drop-out, and antisocial behaviors early on in life (Youth, 2014).

Giordano, Manning, and Longmore are continually adding new findings from their TARS data, which over represents minorities. Their research indicates how important factors such as family, friends, education, delinquency, intimate partner violence, and neighborhood are to the development and often the life outcomes of juveniles. Although their research to this point does not directly pertain to my research question, they provide insight on a multitude of factors that are critical to juveniles' development and transition to adulthood. Knowing these factors affect juveniles throughout their life, means these factors need to be controlled for when testing for a new factor, such as contact with the juvenile justice system.

Understanding that factors – such as, neighborhood structure, poor socioeconomic status, substance use, poor family and peer relationships – have a negative effect on juvenile development adds to the validity and accuracy of my own research and data. These topics go beyond providing insight on other influential factors in a juvenile's life. Giordano et al. (2010) provide an in-depth understanding of the data and methods utilized throughout their study. This served as a blueprint for working with the data. It allowed to familiarization with the data before working with and analyzing it (Copp, Kuhl, Giordano, Longmore, & Manning, 2015; Gatti, Tremblay, & Vitaro, 2009; Giordano, Lonardo, Manning, & Longmore, 2010; Giordano, Seffrin, Manning, & Longmore, 2011; Johnson, Giordano, Longmore, & Manning, 2016; and Lonardo, Manning, Giordano, & Longmore 2010).

## **Labeling Theory**

In discussing how individuals are affected by encountering formal criminal sanctions, attention is often given to labeling theory. This theory suggests that being labeled promotes the development of deviant self-meanings. That is, people believe they are what others see them as: it is a self-fulfilling prophecy. Although scholars often explain poor life outcomes and post-formal criminal sanctions, from a labeling theorist's perspective, this ignores the possibility that the contact with this system may be, at least in-part causing the poor life outcomes. Although, there is some evidence to support labeling theory, however I argue that it fails to take into account all potential contributing factors. Kroska, Lee, and Carr (2016) found evidence to support the idea that "a delinquency adjudication is linked with lower self-evaluation and higher self-potency. But, contrary to expectations, it is associated with higher feelings of activity." Kroska et al. (2016), chose to control for gender, age, and deviant behavior within the past 12 months. They hypothesized that a delinquency adjudication will: reduce self-evaluation, increase self-potency, and reduce self-activity (Kroska, Lee, & Carr, 2016). Although Kroska et al.'s, study provides further understanding and concrete definitions, it ignores factors and has too narrow a scope to account for all of the issues associated with formal juvenile adjudications. There is a clear need for sociological perspectives to be able to account for longitudinal data, particularly when studying juvenile development.

## **Life Course Theory**

By the mid-1920s, Thomas was emphasizing the vital need for a "longitudinal approach to life history." The Life Course Theory is based on five principles:

1. The Principle of Life-Span Development: Human development and aging are lifelong processes...
2. The Principle of Agency; Individuals construct their own life course

through the choices and actions they take within the opportunities and constraints of history and social circumstance... 3. The Principle of Time and Place: The life course of individuals is embedded and shaped by the historical times and places they experience over their lifetime... 4. The Principle of Timing: The developmental antecedents and consequences of life transitions, events, and behavioral patterns vary according to their timing in a person's life... 5. The Principle of Linked Lives: Lives are lived interdependently and socio-historical influences are expressed through this network of shared relationships (Elder, Johnson, & Crosnoe, 2003).

Life-span development defines human development and aging as lifelong processes; agency; time and place; timing; and linked fate. Agency is defined as an individual's choices and actions constructing their life. Time and place refers to the shaping of an individual's life through experiences. Timing refers to the development and consequences of transitions, according to the timing in an individual's life.

These five principles are key in understanding juvenile delinquency, criminal justice contact and how that contact will extend into young adulthood. The life histories and future trajectories of individuals and groups were largely neglected by early sociological research. More recent scholars have argued for the importance of placing greater focus on the life course perspective, especially when studying juveniles or utilizing longitudinal data. I hypothesize formal contact with the criminal justice system will serve as a life transition. Linked fate is defined as lives being lived interdependently and historical experiences are expressed through a network of dependent relationships. This perspective serves longitudinal data research better because it considers the life and different transitional stages throughout the life (Elder, Johnson, & Crosnoe, 2003). Elder, Johnson, and Crosnoe (2003), conclude by stating that this perspective

has been applied in research across a variety of professional disciplines, such as historians, sociologists, and psychologists.

### **Purpose**

The purpose of my research is to provide knowledge on a topic that is otherwise missing. Few studies have examined the direct affect that contact with the criminal justice system has on juveniles as they transition to young adulthood. I have observed three groups with different levels of criminal justice system contact. The first group have not experienced any formal contact with the criminal justice system. They served as my control group in this research, as they have no experience with the independent variable. Therefore, I expected their life outcomes to be relatively more promising with respect to union formation, educational attainment, and employment prospects. The second group has experienced some formal contact; however, this contact is minor and should not be life altering. The third group was the most vulnerable to the negative life course outcomes, as these individuals have experienced the most severe and frequent contact with the criminal justice system. I then compared these groups in terms of their demographic backgrounds (race, class, gender, and average age) using t-test statistics to test for significant differences. Next, I evaluated both prosocial and antisocial outcomes during young adulthood. These included employment status, being in a relationship (marriage), educational level, criminal behavior, and arrest as a young adult. Ultimately, I wanted to know how my independent variable of contact with the criminal justice system correlated with my dependent variables of juveniles' life course outcomes.

### **Hypotheses**

I first hypothesize that the juvenile justice system is doing more harm than good for those it comes into contact with, which has lasting negative life outcomes. The criminal justice system

contact is being studied in the form of frequency of arrests in adolescence. The harm from the contact is reflected in the self-reported life outcomes. I expect that those who have been arrested will be worse off later in life than those who have not been arrested during adolescence.

I further hypothesize that the harm being done to those who have come into contact with the criminal justice system will be greatest for those that I have categorized as having the most severe contact (group 3). This group has been arrested two or more times prior to turning age 18. Support for these hypotheses would, ultimately, suggest that the juvenile justice system is failing to rehabilitate adolescents.

### **Methodology**

I utilized self-reported survey data from the Toledo Adolescent Relationships Study (TARS) for my Honors project research. The TARS sample was drawn from the enrollment records of registered students in the 7th, 9th, and 11th grades from Lucas County, Ohio. The sample encompassed records of 62 schools from seven school districts across the county. The stratified random sample, devised by the National Opinion Research Center, oversampled Black and Hispanic youths for the TARS data collection. The region from which the sample was drawn reflects the normative sociodemographic characteristics of the United States, specifically in terms of education, median family income, marital status, and race.

In total, the Toledo Adolescent Relationships Study currently has five waves of survey data. The first wave consisted of interviews conducted in 2001 at the homes of the respondents. They completed the interview with a laptop pre-loaded with the survey. At the time of the first interviews, parents were also given a survey questionnaire to complete about their child. The fifth wave of interviews had been conducted in 2011. I restricted my analyses to White, Black, and Hispanic respondents, as the number of respondents in the “other” race/ethnicity category (N

= 19) was too small for bivariate analyses. Ultimately, my sample included 790 respondents. My sample included 68% White, 21% Black, and 11% Hispanic respondents. Furthermore, the sample was composed of 46% male and 54% female respondents (Johnson, Giordano, Longmore, & Manning, 2016).

Drawing on longitudinal data from the Toledo Adolescent Relationships Study (TARS) and using bivariate modeling, my analyses examined direct and indirect ways that the juvenile justice system influenced life outcomes for juveniles. Specifically, my bivariate statistical analyses included t-tests, chi-squared tests, and cross tabulations. The t-tests and chi-squared tests assessed my hypotheses for a statistically significant relationship. I expected that youths' who scored higher on the delinquency and arrest scale would face worse or different life outcomes from those who had minimal to no formal contact with the criminal justice system. I examined the results of the data using a life course perspective and viewed contact with the criminal justice system as a turning point in juveniles' lives. Typically turning points are positive life events, such as marriage, however criminal justice contact can be a negative turning point.

### **Independent Variables**

*Frequency of adolescent arrests* is the primary independent variable of this research. The number of arrests before 18 years of age is the primary means of measuring formal criminal justice contact with adolescents. If a juvenile is arrested, he/she, ultimately, must have had some form and extent of contact with the criminal justice system. This variable is measured by asking "How many times were you arrested before you were 18?" The answers ranged from (0) "never," (1) "1 time," (2) "2 times," (3) "3 or 4 times," (4) "5 or more times," or (5) "refused." Based upon responses to this variable, respondents were placed into groups. Group 1 consisted of those respondents that reported never being arrested. Group 2 was composed of respondents that have

reported only being arrested once before turning 18. Group 3 consisted of respondents that have been arrested two or more times prior to being 18. These three groups served as the foundation for my analyses with Group 1 acting as a control group.

*Adolescent delinquency* is an important independent variable for my research because it reflects delinquent and criminal activity that may or may not have resulted in an arrest. It is measured using a 10-item scale revised from Elliot and Ageton's (1980) inventory in the TARS data set (Lonardo, Manning, Giordano, & Longmore, 2010). The participating youths were asked how frequently they had:

drunk alcohol, used drugs to get high (not because they were sick), stolen (or tried to steal) things worth \$5 or less, stolen (or tried to steal) something worth more than \$50, been drunk in a public place, damaged or destroyed property on purpose, broken into a building or vehicle (or tried to break in) to steal something or just to look around, attacked someone with the idea of seriously hurting him/her, sold drugs, and carried a hidden weapon other than a plain pocket knife.

Potential responses to these items included: (0) "never," (1) "once or twice a year," (2) "once every 2-3 months," (3) "once a month," (4) "once every 2-3 weeks," (5) "once a week," (6) "2-3 times a week," (7) "once a day," and (8) "more than once a day." Frequency of adolescent delinquency indicates how often these youths were involved with illegal activities. Using the STATA program, I had combined these 10 measures of delinquency into a single scale. I named this scale in the codebook as "delinq" (see the created codebook in the appendix for variable descriptions). This scale rates delinquency from 0 to 80 based on the adolescents' self-reported responses to the 10 items. A zero on the delinquency scale would indicate that the respondent has

never done any of the ten items asked, whereas an 80 on the scale would indicate a respondent has done each of the ten items more than once a day.

### **Dependent Variables**

*Life course outcomes* are measured by comparing various factors of the three groups' adult lives. I examined variation among the three groups with regard to the following life course outcomes: employment status; marital status; cohabitation habits; current or on-going criminal activity; drug and alcohol use; and educational attainment, as they transition throughout adulthood. These data were collected at Wave 4 of the TARS research. At Wave 4 participants ranged in age from 17 to 24 years old. I expected that those with high levels of criminal justice involvement as adolescents would experience higher odds of: no marriage, unemployment, cohabitating relationships (if any romantic relationship), frequent or occasional criminal activity, more frequent drug or alcohol use, and lower educational attainment – when compared with individuals who report no or very little criminal justice contact as adolescents. I expected that the group with no criminal justice contact will have opposite experiences throughout their lives.

*Criminal justice involvement* is the primary dependent variable. This variable incorporates several measures including self-reported number of arrests and incarcerations of the respondents beyond their years of adolescence. Interviews conducted in prison or jail, parental reports of delinquency, and self-reports of time served in juvenile facility or prison were used to gather this data. At wave 4 interviews, researchers asked respondents, “How many times have you been arrested?” Responses ranged from “never” to “5 or more times,” which was dichotomized as (1) any prior arrests and (0) no prior arrests. At additional interviews, respondents were asked questions about contact with the criminal justice system. Specifically, they were asked: “How many times have you been arrested [Don't count minor traffic



violations]?” Possible responses included: (0) “never,” (1) “1 time,” (2) “2 or 3 times,” (3) “4 or 5 times,” or (4) “6 or more times.” If the juvenile justice system is achieving the goal of rehabilitation, group 2 and group 3 respondents should not see frequent levels of arrest at wave 4.

*Gainful activity* is a dependent variable that measures employment status and includes being a student as a positive life outcome. It is important to recognize being a student (full or part-time) as gainful activity, as it is a pro-social act preparing for future employment. This variable is coded as the subject either being (0) “not gainfully active” or (1) “full time student or full-time employed.”

*Substance use* includes a number of factors pertaining to drug and alcohol use of respondents at Wave 4. Respondents were asked “drunk alcohol,” “been drunk in a public place,” and “used drugs to get high (not because you were sick).” Answers were scaled from 0 to 8; where (0) is “never” and (8) is “more than once a day”. These three questions to measure substance use were then combined to create a substance use scale that is coded as “substance” in the codebook. This substance use scale depicts how often respondents use substances, including drugs and alcohol. It is evident that substance use is anti-social behavior and would be indicative of a poor life outcome.

*Union status* captures respondents dating habits and marital status at Wave 4. Respondents were asked about current relationship status and were coded as (0) “currently single,” (1) “dating,” (2) “cohabitating,” or (3) “married.” Respondents that identified as being married display the greatest pro-social life outcome within the category of union status. Married couples have displayed pro-social behaviors that would indicate positive life outcomes. In most societies, it is expected of or at least desired for people to get married. While cohabiting relationships prove to often be detrimental to individuals’ prosocial behaviors. I broke down the

union status variable into separate categories. These categories are: currently dating or single, cohabitating, and married. I then combined these categories to create a revised version of the union status coded as “status.”

*Educational attainment* is a measure of highest education level reached at Wave 4. Respondents were asked “How far have you gone in school?” Responses ranged from (1) “Less than High school,” (2) “Current High School Student,” (3) “High School Graduate,” (4) “Some College (i.e. certificate, currently in community or 4-year college),” (5) “College or More (Bachelor’s Degree or graduate school),” or (.) “refused.” Educational attainment has been studied heavily and typically is an indicator of life success.

*Depressive symptoms* are a measure of frequency. This variable is determined using an eight-item version of the Center for Epidemiological Studies Depressive Symptoms (CESD) scale (Copp, Kuhl, Giordano, Longmore & Manning, 2015). Respondents were asked “how often in the last week had they felt that each of the following statements was true: (1) You felt depressed; (2) You felt that everything was an effort; (3) you felt sad; (4) you felt like you couldn’t get going; (5) you felt lonely; (6) you felt like you couldn’t shake off the blues; (7) you had trouble sleeping or staying asleep; and (8) you couldn’t keep focused.” The responses were categorized as 1 being never through 8 being every day.

## **Findings and Analysis**

Table 1 depicts the descriptive statistics of each independent and dependent variable. From this table, the frequency, mean or percentage, standard deviation of the mean, the minimum, and the maximum can be found. The population for this study is 1,239 respondents. Three of the complex variables have been made into single scale variables: Delinquency, Depressive Symptoms, and Substance Use. The scales for these variables range from 0 to 80, 0

to 56, and 0 to 22, respectively. It is notable that the mean for the delinquency scale is 2.92. This relatively low value compared to the maximum value of 80. Which suggests that most adolescents do not report themselves as being frequently delinquent. The depression scale has the highest mean of all the variables with 11.09. The maximum score on the depression scale is a 56. Respondents in all groups of this study have reported relatively frequent depressive symptoms. On the other hand, the gainfully active variable has the lowest mean with a 0.61. Although, the maximum value for gainful activity is 1. This 0.61 average indicates that on average, more than half of the sample population reports being a student or employed. The criminal justice contact after age 18 variable is also notable with a mean of 0.98 and a maximum of 4. This average supports the idea that most people do not live a life that consists of being arrested frequently. It should be noted that the sample population comes from 'average' people in Toledo, Ohio, so this is not simply a criminal population.

When comparing the delinquency scale to arrests as a juvenile (before 18), there is statistical significance (see Figure 1). A chi-square test was used to test the statistical significance. That is, those with the greatest number of arrests score higher (are more delinquent) than those with no arrests or one arrest (group 1 and 2 juveniles). About 38 percent of group 1 respondents identify as never being delinquent, while zero respondents from group 1 report a delinquency score higher than a 28 out of a potential 80. Conversely, group 3 respondents score the highest on the delinquency scale. The respondents received a variety of scores, however at least three group 3 respondents rated above a 28 on the delinquency scale. Roughly 12 percent of group 3 respondents scored greater than a 20 out of 80 on the delinquency scale. Figure 1 depicts the delinquency scores for the three groups. The majority of group 1 (no arrest) and group 2 (one arrest) have reported little to no delinquent activities. Group 1 respondents have a negative

correlation to delinquency. In contrast, group 3 respondents demonstrated a much greater range of delinquency from 1 to 46. This is important because it shows that those adolescents being arrested repeatedly are in-fact reporting themselves to be delinquent. Reporting oneself to be delinquent shows to some degree a need, or at the very least a potential, for the delinquent individual to be rehabilitated. This rehabilitation would serve the purpose of bettering the delinquent individual, so they do not continue a life of crime throughout their life.

The P-value of 0.004 from the chi-square test indicates a statistically significant relationship between delinquency and frequency of arrest(s) beyond 18 years old. This relationship portrays delinquency as a juvenile positively correlated to arrests as an adult. Nearly 37 percent of those who identified as never being delinquent, also reported never being arrested at wave 4. This evidence to support the idea that delinquency in adolescence contributes to frequency of arrests as an adult. Ultimately, the data depicts a life of delinquency typically carries over into young adulthood. There is a need for something or someone to intervene (like the criminal justice system) to rehabilitate the delinquency into more pro-social behaviors.

Delinquency and union status do not portray a statistically significant relationship when tested using a chi-square, as evidenced with a Pearson  $\chi^2(82)$  of 86.0144 and a p-value of 0.359. When testing the relationship between frequency of arrests before 18 and union status, it proved to also be statistically insignificant. The T-Test also provided statistically insignificant results when comparing union status to the independent variables: delinquency scale and frequency of arrests prior to 18. These results indicate that delinquency and frequency of arrests prior to 18 have no or insignificant influence on union status in adulthood. However, it is notable that the age of first marriage has increased.

The chi-square test portrays a statistically significant when comparing delinquency to educational attainment with a p-value of 0.010. It can be seen from Figure 2 that those who report frequent delinquency prior to 18, often do not graduate from college with a Bachelors or go on to graduate school. Those who have completed a four-year degree and beyond do not report delinquency beyond a 14, out of a potential 80. This can be contrasted with those who completed less than high school or are currently in high school, who report delinquency ratings up to a 46, out of a possible 80 on the delinquency scale. What was surprising in this analysis was the prevalence of those with some college education to rate all across the delinquency scale. Those with some college education rated as high as a 41 on the delinquency scale. One of the most important findings from Figure 2, is the trend for individuals with an educational attainment of less than high school to be increasingly prevalent on the delinquency scale, while those who have at least graduated college have a negative correlation with the delinquency scale.

The chi-square test of delinquency and depression scale provide a statistically significant relationship with a Pearson  $\chi^2(1800) = 2.8e+03$  and a p-value of 0.000. This relationship provides evidence that those who self-report more frequent delinquency, report less frequent depressive symptoms. These results portray a negative correlation. High frequency of delinquency as an adolescent tends to indicate low frequency of depressive symptoms beyond 18. Conversely, low frequency of delinquency prior to 18 tends to indicate a greater frequency of depressive symptoms beyond 18. This may be due to that idea of success and pressure; those that were frequently delinquent as adolescents may not be striving for great successes (or positive life outcomes as a young adult. On the other hand, those that reported low frequency of delinquency may be striving to achieve pro-social life outcomes (such as high educational attainment) that

may be causing them greater mental strains and pressure. These mental strains, pressure, etc. may ultimately lead to poorer mental health or depressive symptoms.

There is a statistically significant relationship between delinquency and substance use at Wave 4. The chi-square test provided a Pearson  $\chi^2(792)$  of  $(1.7e+03)$  and a p-value of 0.000. Furthermore, the substance use scale at Wave 4 depicts a statistically significant relationship with those in group 3. The chi-square test provided a p-value of 0.049. This relationship indicates that those in group 3 who have been arrested 2 or more times prior to their 18th birthday also report higher levels of substance use in adulthood. Group 1 and Group 2 both indicate a statistically insignificant relationship with substance use at Wave 4. The prevalence of substance use in America could explain the insignificance found. This age group is known to be used frequently and in high quantities by this age range at wave 4.

The p-value of 0.00 from the chi-square test depicts a statistically significant relationship between frequency of arrests after 18 when compared to group 1, 2, and 3. The frequency of arrests after 18 years of age is dependent on the frequency of arrests before 18 for groups 1, 2, and 3. Group 1 provided a Pearson  $\chi^2(4)$  of 69.7164 and a p-value of 0.0; group 2 provided a Pearson  $\chi^2(4)$  of 40.6945 and a p-value of 0.000; and group 3 provided a Pearson  $\chi^2(4)$  of 23.7036 and a p-value of 0.000. These two variables are the primary dependent and independent variable for this research. The statistically significant relationship provides evidence that arrests before the age of 18, do not lead to rehabilitated adolescents, and instead produce individuals that continue to offend and be arrested beyond their youth.

In utilizing the T-Test, educational attainment is significantly related to group 1 and 3, but there is not a significant relationship to group 2. Individuals in group 1 achieve statistically significant higher education than those not in group 1. This can be seen through the -0.03

differences in means. Group 1 has a mean educational attainment of 2.96, while those not in group 1 average an educational attainment of 2.59. Group 2 has a mean educational attainment of 2.71, while those not in group 2 average a 2.70 for educational attainment. It is unsurprising that group 2 is statistically insignificant because the educational attainment of group 1 is pulling the mean up, while the educational attainment of group 3 is pulling the mean down. Group 3 then proves to be significant because of the 0.49 difference in means. The mean educational attainment for those in group 3 is 2.32, which is well below the mean attainment (2.81) of those not in group 3. These T-Test run on all groups illustrates how frequency of arrests prior to being 18 is negatively related to educational attainment.

Utilizing the chi-square test, the depression scale at Wave 4 proved to be statistically insignificant, but significant in its contributions to the understanding of juvenile delinquency and criminal justice interactions over the life course. The statistical insignificance of this variable follows accordingly when the variable is broken down by question. Respondents were asked things like “Did you find it hard to get up this morning.” These questions do not get at the heart of mental illness, as anyone may experience a day where it is hard to get out of bed, not just the mentally ill or depressed. In critically evaluating the depression scale variable, the statistical insignificance is logical. It is reasonable to assume that the pressure for success can weigh you down, leading to depressive symptoms. It is possible that those who push themselves to achieve higher status, education, employment, etc. place greater stress and worry on themselves that may contribute to these depressive symptoms.

### **Challenges and Obstacles:**

A major challenge of this research is the scope. In researching juveniles there are countless factors that may influence or bias my results. The TARS data includes variables such

as household income, socioeconomic status, gender, race, birth control, contraception, dating (social), educational environment, families, family planning, family relationships, family structure, friendships, household composition, living arrangements, marriage, parent child relationship, parental attitudes, parental influence, neighborhoods, neighborhood characteristics, sexual attitudes, sexual behavior, and social environment. It is important that I control for as many of these factors as possible. If these factors are not controlled for it exposes my research to bias and damages the validity of this study.

This research is also challenging in its originality. Being that the data comes from sociologists with their primary focus on intimate partner violence and family, this data set was not originally intended for this purpose. I am taking data originally intended for sociologists' research interests and expanded it to apply specifically to the criminal justice field, but also touching on the psychology and political science field. This issue of originality greatly aligns with the challenges that arise from the scope of the study.

Another challenge that this study faces is that the data is self-reported from juveniles through their adulthood. The challenge with self-reported data is the people, especially delinquent kids, can lie. I have no way of knowing if the subjects of the research were honest in their self-reporting. Another issue with self-reporting is that I am missing and unable to verify contact with the criminal justice system. This makes my research highly vulnerable. How will labeling theory affect my study? Being labeled a delinquent as effecting life course outcomes for juveniles versus the actual contact. Often the way society perceives these individuals decides their fate long before their actions have any affect.

It is important to distinguish between formal and informal contact with the system, as Watkins and Maume (2012) have noted in their research. Informal contact often goes



undocumented and is therefore nearly impossible to study. This is a challenge for my study because those informal, undocumented incidents may be positively influential in those juveniles' lives. Although, it is difficult to know exactly how those informal contacts with the criminal justice system affect juveniles because there is no easy way to research undocumented happenings.

Another challenge is the fact that this data was pre-existing. Meaning that the data gathered was not originally intended for the purposes of this study. As such, I had to modify my variables and mold my hypotheses to fit the constraints of the data available to me. I had originally intended to measure court outcomes (jail time, community service, placement, etc.) as an independent variable and mental illness as a poor life outcome, however these variables do not exist within the TARS dataset. My research is, ultimately weakened by the constraints of the pre-existing data that is not specifically tailored for this study, but rather this study is tailored to.

### **Discussion and Implications**

My two hypotheses are that the juvenile justice system is doing more harm than good for those it comes into contact with, which has lasting negative life outcomes and secondly that the harm being done to those who have come into contact with the criminal justice system will be greatest for those that I have categorized as having the most severe contact (group 3). This group has been arrested two or more times prior to turning age 18. These hypotheses are plausible based on the large proportion of statistically significant relationships when analyzing a multitude of dependent life outcomes to the three groups created based on frequency of arrest prior to 18. Variables such as educational attainment and arrests beyond 18 are critical in understanding how juvenile arrests lead to poor life outcomes throughout young adulthood.

The proposed hypotheses are validated by the data analyses. Therefore, my prediction is supported that the criminal justice system may serve as a turning point in adolescents' lives. This implies that the juvenile justice is failing those that it was designed to rehabilitate, which would indicate a need for reform. The goal of the criminal justice system should not be to punish delinquent juveniles, but rather to allow them to learn from their mistakes, right their wrongs, and grow to be a better person. My findings indicate the opposite occurring within the juvenile justice system. This allows for future research to expand upon the results and apply these findings to remedy real world issues. My research could contribute to the pre-existing literature on juveniles that is already pushing for, at least providing data on, the reform that is needed. This reform is not only needed within the criminal justice system, but society in general. If it is to be believed that younger generations are the future, then everything possible should be done to set the future up for success. In the end, juvenile delinquency is not a problem that can be remedied by just one field, this issue would require a collaboration of professionals from many disciplines to understand all concepts involved. Upon further examination, these variables are understandably insignificant to this issue at this stage in the life course.

The surprising variables in this data are the union status, substance use scale, and the depressive symptoms scale. These variables proved to be statistically insignificant in relation to the three groups or the delinquency scale. This means that union status, substance use, and depressive symptoms are not influenced by delinquency or arrests prior to 18. At first, I had predicted that these variables would be negatively affected by my independent variables. However, upon further examination the statistical analyses follow logically. The variable of depressive symptoms was discussed extensively already. That is people may feel depressed regardless of experiences in adolescence. The variable of union status was also insignificant,

which follows logically when it is known that today, men and women get married at later ages than they did in the past. Women typically get married at 27 and men at 29. Getting married later in life would mean that the wave 4 data, which has an age range from 18 to 24, could potentially be a premature question that needs to be studied later in life.

Without a doubt, the criminal justice system, at all levels, has the potential to better lives and create an overall more pro-social society. However, at the juvenile level this is not happening today. Those delinquent youths arrested prior to 18 are continuing on later in life only to act in anti-social and often criminal ways. This research supports a greater need for an increase in the scholarly literature on delinquent juveniles and their life course. The greatest conclusion to be made from this research is the need for reform in the juvenile justice system. Delinquent adolescents need to be rehabilitated to be encouraged to act in pro-social ways, not simply punished for mistakes that they have made. Anti-social, delinquent, and criminal behaviors harm and cost all of society. In rehabilitating delinquent juveniles, all of society will benefit from the advancement of pro-social behaviors among individuals.

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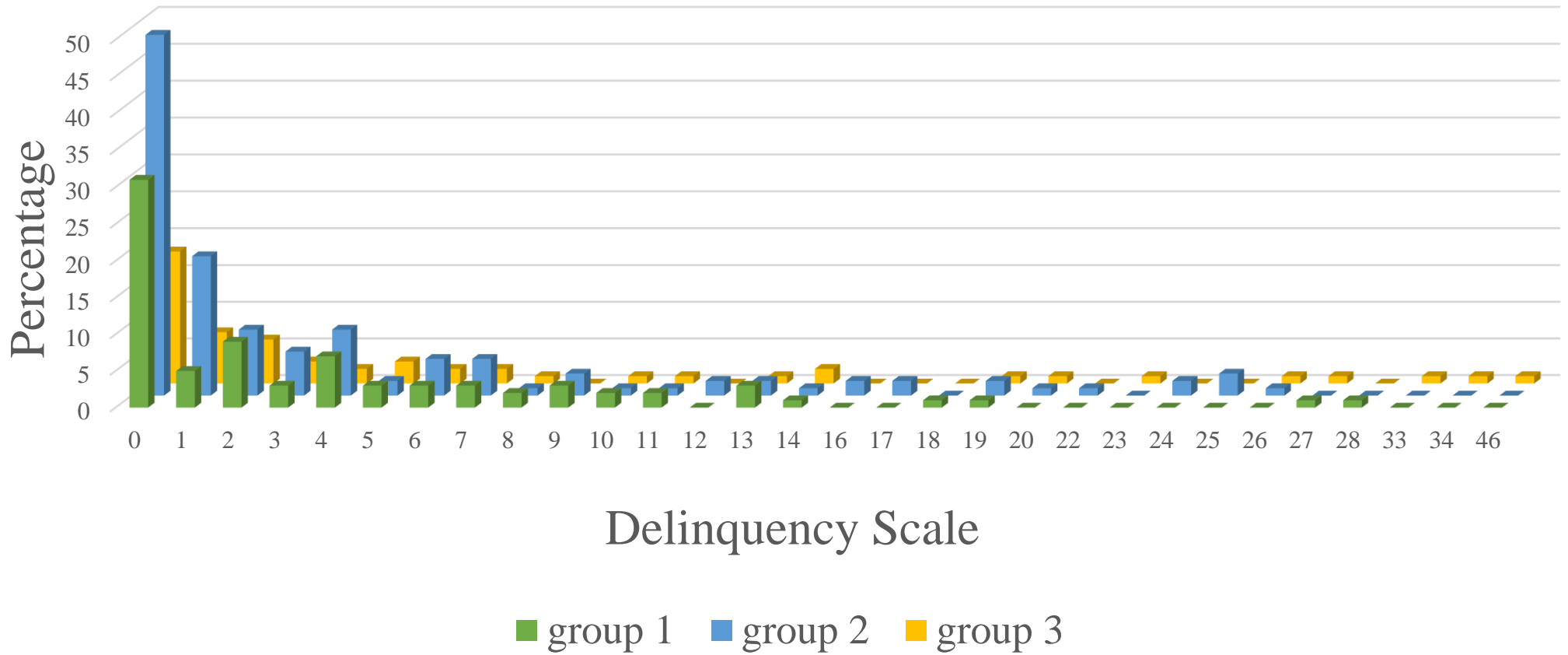
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Table 1: Descriptive Statistics (N = 1,239) for Criminal Justice Contact, Adolescent Delinquency, and Life Outcomes

<b><u>Variables</u></b>	<b><u>Frequency</u></b>	<b><u>Percentage/Mean</u></b>	<b><u>SD</u></b>	<b><u>Min</u></b>	<b><u>Max</u></b>
<b>Independent</b>					
<i>Delinquency Scale</i>	1,218	2.920	6.52	0	80
<i>Criminal Justice Contact (before 18)</i>	272	2.699	0.46	1	3
Group 1	82	30.150			
Group 2	132	48.530			
Group 3	58	21.320			
<b>Dependent</b>					
<i>Criminal Justice Contact after age 18</i>	271	0.978	1.07	0	4
Never	110	40.590			
1 time	98	36.160			
2 times	30	11.070			
3 or 4 times	25	9.230			
5 or more times	8	2.950			
<i>Gainful Activity</i>	1,239	0.606	0.49	0	1
Not gainfully active	488	39.390			
Full-time employment or student	751	60.610			
<i>Union Status</i>	1,239	1.252	0.54	1	3
Currently single or dating	991	79.980			
Cohabiting	184	14.850			
Married	64	5.170			
<i>Educational Attainment</i>	1,014	3.261	1.06	1	5
Less than high school	124	12.230			
Current high school student	50	4.930			
High school graduate	324	31.950			
Some college (Associate's Degree, currently in community or 4 year college)	469	46.250			
College or more (Bachelor's Degree or graduate/professional school)	47	4.640			
<i>Depression Scale</i>	1,014	11.085	10.41	0	56
<i>Substance Use Scale</i>	1,015	5.592	4.98	0	22

Source: Toledo Adolescent Relationship Study

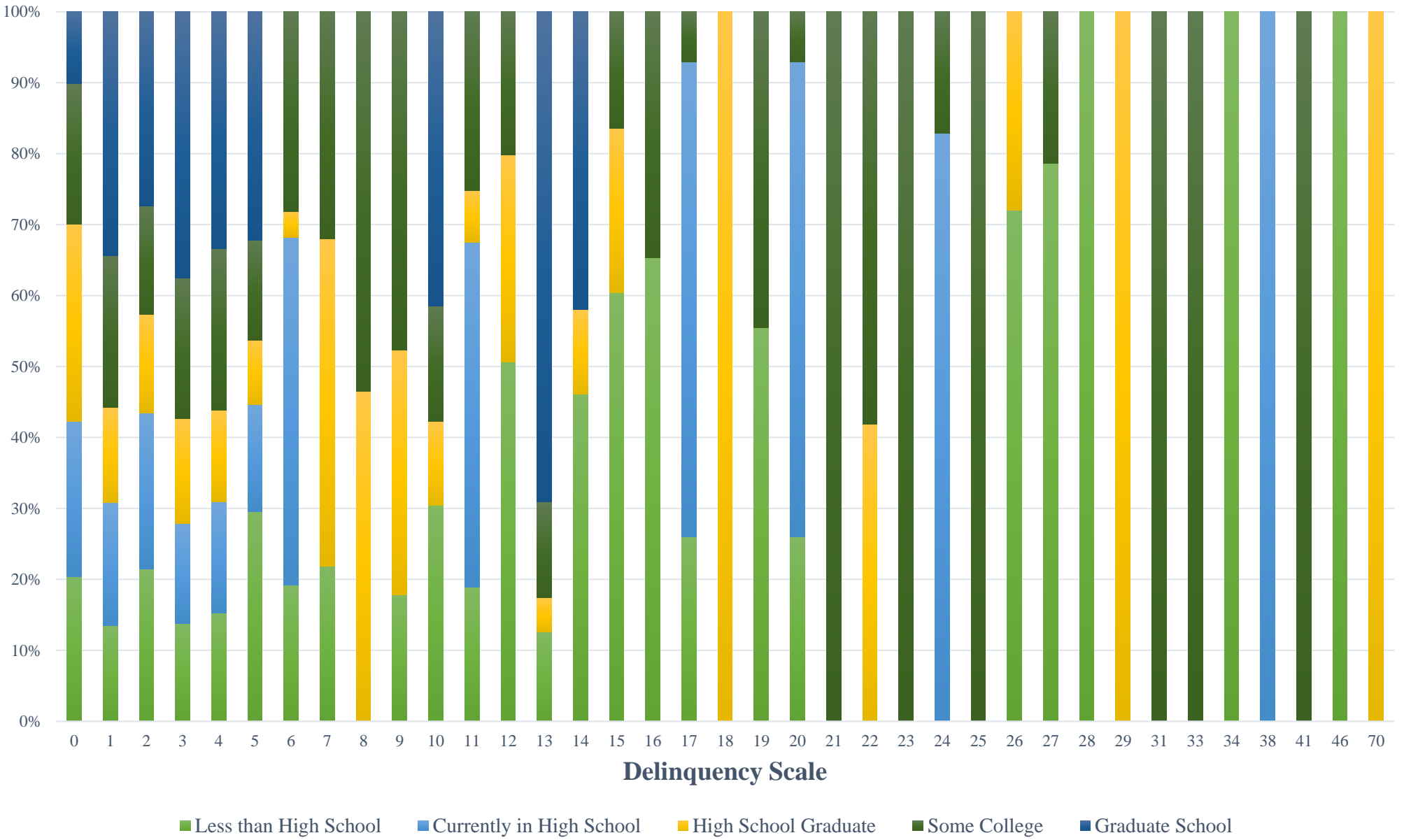
### Figure 1: Chi-Square Test of Delinquency and Arrests Before 18



Source: Toledo Adolescent Relationship Study



**Figure 2: Chi-Square Test of Delinquency and Educational Attainment**



Source: Toledo Adolescent Relationship Study

Table 2: Chi-Square Test of Frequency of Arrest After 18 Compared to Group 1, 2, and 3

		<b>Frequency of Arrests After 18</b>					
<b>Group 1</b>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<b><u>Total</u></b>	
0	104	42	19	13	8	186	
1	6	55	11	10	0	82	
<b>Total</b>	<b>110</b>	<b>97</b>	<b>30</b>	<b>23</b>	<b>8</b>	<b>268</b>	
<b>Group 2</b>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		
0	32	65	18	18	6	139	
1	78	32	12	5	2	129	
<b>Total</b>	<b>110</b>	<b>97</b>	<b>30</b>	<b>23</b>	<b>8</b>	<b>268</b>	
<b>Group 3</b>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		
0	84	87	23	15	2	211	
1	26	10	7	8	6	57	
<b>Total</b>	<b>110</b>	<b>97</b>	<b>30</b>	<b>23</b>	<b>8</b>	<b>268</b>	

Group 1: Pearson  $\chi^2(4) = 69.7164$  Pr = 0.000

Group 2: Pearson  $\chi^2(4) = 40.6945$  Pr = 0.000

Group 3: Pearson  $\chi^2(4) = 23.7036$  Pr = 0.000

Source: Toledo Adolescent Relationship Study

Table 3: Two-sample t test of Educational Attainment by Groups with Equal Variances

Group 1	Obs	Mean	Std. Err.	Std. Dev.	95% Conf. Interval
0	189	2.59	0.09	1.25	2.41 - 2.77
1	82	2.96	0.13	1.23	2.69 - 3.23
<b>combined</b>	271	2.7	0.08	1.26	2.55 - 2.89
<b>diff</b>		-0.3	0.16		0.7 - (-0.46)
<b>Group 2</b>					
0	139	2.7	0.11	1.26	2.49 - 2.90
1	132	2.71	0.11	1.26	2.50 - 2.93
<b>combined</b>	271	2.7	0.08	1.26	2.55 - 2.86
<b>diff</b>		-0.01	0.15		(-0.32) - 0.29
<b>Group 3</b>					
0	214	2.81	0.09	1.25	2.64 - 2.98
1	57	2.32	0.16	1.21	2 - 2.64
<b>combined</b>	271	2.7	0.08	1.26	2.55 - 2.86
<b>diff</b>		0.49	0.19		0.13 - 0.86

<p><b>Group 1:</b>  diff = mean(0) - mean(1)    t = -2.2482  Ho: diff = 0    degrees of freedom = 269  Ha: diff &lt; 0    Ha: diff != 0    Ha: diff &gt; 0  Pr(T &lt; t) = 0.0127    Pr( T  &gt;  t ) = 0.0254    Pr&gt; (T &gt; t) = 0.9873</p>	<p><b>Group 2:</b>  diff = mean(0) - mean(1)    t = -0.09  Ho: diff = 0    degrees of freedom = 269  Ha: diff &lt; 0    Ha: diff != 0    Ha: diff &gt; 0  Pr(T &lt; t) = 0.4629    Pr( T  &gt;  t ) = 0.9257    Pr(T &gt; t) = 0.5371</p>
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<p><b>Group 3:</b>  diff = mean (0) - mean (1)    t = 2.6594  Ho: diff = 0    degrees of freedom = 269  Ha: diff &lt; 0    Ha: diff != 0    Ha: diff &gt; 0  Pr(T &lt; t) = 0.9959    Pr( T  &gt;  t ) = 0.0083    Pr(T &gt; t) = 0.0041</p>
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Source: Toledo Adolescent Relationship Study

**Appendix A: Data Codebook with Preliminary Statistical Analyses**

**INDEPENDENT VARIABLES**

Respondent Identification Number

**RID2:** Respondent ID number (if you want to know things about specific respondents)

Delinquency Scale Variables:

In the past 12 months, how often have you:

**HR40:** Drunk Alcohol

. tab HR40

How often   drink   alcohol	Freq.	Percent	Cum.
0	713	58.30	58.30
1	226	18.48	76.78
2	105	8.59	85.36
3	51	4.17	89.53
4	52	4.25	93.79
5	35	2.86	96.65
6	31	2.53	99.18
7	6	0.49	99.67
8	4	0.33	100.00
Total	1,223	100.00	

**HR41:** Stolen (or tried to steal) things worth \$5 or less?

. tab HR41

Stolen   worth \$5	Freq.	Percent	Cum.
0	1,107	90.52	90.52
1	70	5.72	96.24
2	16	1.31	97.55
3	8	0.65	98.20
4	7	0.57	98.77
5	2	0.16	98.94
6	7	0.57	99.51
7	5	0.41	99.92
8	1	0.08	100.00
Total	1,223	100.00	

**HR42:** Carried a hidden weapon other than a plain pocket knife?

. tab HR42

Carried   hidden   weapon	Freq.	Percent	Cum.
0	1,168	95.50	95.50
1	21	1.72	97.22
2	8	0.65	97.87
3	7	0.57	98.45
4	4	0.33	98.77
5	2	0.16	98.94
6	5	0.41	99.35
7	5	0.41	99.75
8	3	0.25	100.00
Total	1,223	100.00	

**HR43:** Damaged or destroyed property on purpose?

. tab HR43

Damaged property	Freq.	Percent	Cum.
0	1,089	89.04	89.04
1	97	7.93	96.97
2	18	1.47	98.45
3	8	0.65	99.10
4	1	0.08	99.18
5	1	0.08	99.26
6	5	0.41	99.67
7	3	0.25	99.92
8	1	0.08	100.00
Total	1,223	100.00	

**HR44:** Stolen (or tried to steal) something worth more than \$50?

. tab HR44

Stolen worth \$50	Freq.	Percent	Cum.
0	1,167	95.50	95.50
1	29	2.37	97.87
2	8	0.65	98.53
3	5	0.41	98.94
4	4	0.33	99.26
5	1	0.08	99.35
6	3	0.25	99.59
7	4	0.33	99.92
8	1	0.08	100.00
Total	1,222	100.00	

**HR45:** Attacked someone with the idea of seriously hurting him/her?

. tab HR45

Attacked   someone	Freq.	Percent	Cum.
0	1,085	88.72	88.72
1	89	7.28	95.99
2	21	1.72	97.71
3	9	0.74	98.45
4	5	0.41	98.86
5	4	0.33	99.18
6	4	0.33	99.51
7	3	0.25	99.75
8	3	0.25	100.00
Total	1,223	100.00	

**HR46:** Sold drugs?

. tab HR46

Sold drugs	Freq.	Percent	Cum.
0	1,157	94.60	94.60
1	30	2.45	97.06
2	13	1.06	98.12
3	4	0.33	98.45
4	3	0.25	98.69
5	3	0.25	98.94
6	5	0.41	99.35
7	3	0.25	99.59
8	5	0.41	100.00
Total	1,223	100.00	

**HR47:** Been drunk in a public place?

. tab HR47

Drunk in |

public	Freq.	Percent	Cum.
0	1,081	88.39	88.39
1	60	4.91	93.30
2	27	2.21	95.50
3	19	1.55	97.06
4	11	0.90	97.96
5	12	0.98	98.94
6	8	0.65	99.59
7	3	0.25	99.84
8	2	0.16	100.00
Total	1,223	100.00	

**HR48:** Broken into a building or vehicle (or tried to break in) to steal something or just to look around?  
 . tab HR48

Broken in	Freq.	Percent	Cum.
0	1,174	95.99	95.99
1	29	2.37	98.36
2	6	0.49	98.86
3	2	0.16	99.02
4	3	0.25	99.26
5	1	0.08	99.35
6	4	0.33	99.67
7	3	0.25	99.92
8	1	0.08	100.00
Total	1,223	100.00	

**HR49:** Used drugs to get high (not because you were sick)?

. tab HR49

Used drugs	Freq.	Percent	Cum.
0	1,023	83.92	83.92



1		68	5.58	89.50
2		35	2.87	92.37
3		14	1.15	93.52
4		20	1.64	95.16
5		23	1.89	97.05
6		14	1.15	98.20
7		14	1.15	99.34
8		8	0.66	100.00
-----				
Total		1,219	100.00	

## Response options:

- 0 = never
- 1 = once or twice a year
- 2 = once every 2-3 months
- 3 = once a month
- 4 = once every 2-3 weeks
- 5 = once a week
- 6 = 2-3 times a week
- 7 = once a day
- 8 = more than once a day
- . = missing/refused

Criminal Justice Contact (before 18)

**T4CH2:** How many times were you arrested before you were 18?

## Responses:

- 0 = never
- 1 = 1 time
- 2 = 2 times
- 3 = 3 or 4 times
- 4 = 5 or more times

5 = refused

recode T4CH2 (0 = 1) (1 2 = 2) (3 4 = 3) (5 = .), generate (arrestb18)

\*This line recodes the arrest before 18 into a new variable arrb18 with your 3 groups\*

tabulate arrb18 , generate(arrestcat)

\*This creates 3 dummy variables that are your 3 groups\*

gen noarr = arrestcat1

\*First group: no arrests before 18\*

gen arr12 = arrestcat2

\*Group 2: 1 arrest\*

gen arr3m = arrestcat3

\*Group 3: 2 or more arrests\*

**adolcj**: recoded version of T4CH2 so that:

0 = never

1 = 1 or more times

### **DEPENDENT VARIABLES**

Criminal Justice Contact after age 18 (asked at wave 4)

**T4CH18**: How many times have you been arrested since you turned 18? [Don't count minor traffic violations.]

```
. tab T4CH18
```

T4CH18	Freq.	Percent	Cum.
0	110	40.59	40.59
1	98	36.16	76.75
2	30	11.07	87.82
3	25	9.23	97.05
4	8	2.95	100.00
Total	271	100.00	

#### Responses:

0 = never

1 = 1 time

2 = 2 times

3 = 3 or 4 times

4 = 5 or more times

5 = refused

. = missing

#### **adultcj:** recoded so that:

0 = never

1 = 1 time

2 = 2 or more times

. = missing/refused

#### Gainful Activity (at Wave 4)

#### **w4gain:** recoded from a list of variables (available upon request) so that:

0 = not gainfully active

1 = full time student or full-time employed

. tab T4W4 (full-time or part-time)

T4W4	Freq.	Percent	Cum.
1	319	48.85	48.85
2	334	51.15	100.00
Total	653	100.00	

. tab T4W2 (Working for pay for at least 10 hours per week?)

T4W2	Freq.	Percent	Cum.
0	307	32.01	32.01
1	652	67.99	100.00
Total	959	100.00	

. tab T4SC1 (Did you attend School in the past year?)

T4SC1	Freq.	Percent	Cum.
0	456	44.88	44.88
1	560	55.12	100.00
Total	1,016	100.00	

#### Union Status (at Wave 4)

. recode ustat (0 1 = 1) (2 = 2) (3 = 3), gen (status)

(579 differences between ustat and status)

```
. tab status, generate (statuscat)
```

```
RECODE of |
  ustat |   Freq.   Percent   Cum.
-----+-----
    1 |     991    79.98    79.98
    2 |     184    14.85    94.83
    3 |      64     5.17   100.00
-----+-----
  Total |    1,239   100.00
```

```
. gen single = statuscat1
```

```
. gen cohabit = statuscat2
```

```
. gen marry = statuscat3
```

**ustat:** recoded from dummy variables where:

0 = currently single

1 = dating

2 = cohabitating

3 = married

### Educational Outcome

**T4SC2:** How far have you gone in school?

```
. tab T4SC2
```

```
T4SC2 |   Freq.   Percent   Cum.
```

0	2	0.20	0.20
1	124	12.20	12.40
2	50	4.92	17.32
3	324	31.89	49.21
4	25	2.46	51.67
5	112	11.02	62.70
6	208	20.47	83.17
7	112	11.02	94.19
8	12	1.18	95.37
9	39	3.84	99.21
10	8	0.79	100.00
Total	1,016	100.00	

**Responses:**

1 = dropped out of high school

2 = currently in high school

3 = graduated from high school/earned GED

4 = certificate or specialized training program

5 = currently in community college

6 = currently in four-year college

7 = some college, but not currently attending

8 = graduated from college with Associate or junior college degree

9 = graduated from college with Bachelor's degree

10 = graduate school

0 = refused

**reduc:** recoded version of education variable so that:

1 = Less than High school

2 = Current High School Student

3 = High School Graduate

4 = Some College (i.e. certificate, currently in community or 4 year college)

5 = College or More (Bachelor's Degree or graduate school)

. = refused

Depression Scale (Wave 4)

How often was each of the following true during the past seven days?

**T4S15:** You felt you just couldn't get going.

**T4S16:** You felt that you could not shake off the blues.

**T4S17:** You had trouble keeping your mind on what you were doing

**T4S18:** You felt lonely.

**T4S19:** You felt sad.

**T4S20:** You had trouble getting to sleep or staying asleep.

**T4S21:** You felt that everything was an effort.

**T4S22:** You felt depressed.

Responses:

0 = never

1 = one day a week

2 = two days a week

3 = three days a week

4 = four days a week

5 = five days a week

6 = six days a week

7 = everyday

. = refused/missing

**depn:** mean value of depression scale scores

**deps:** sum of depression scale scores

Substance Use (Wave 4)

In the past two years (or 24 months), how often have you:

**T4HR26:** drunk alcohol?

. tab T4HR26

T4HR26	Freq.	Percent	Cum.
0	159	15.67	15.67
1	128	12.61	28.28
2	140	13.79	42.07
3	101	9.95	52.02
4	137	13.50	65.52
5	160	15.76	81.28
6	172	16.95	98.23
7	9	0.89	99.11
8	9	0.89	100.00
Total	1,015	100.00	

**T4HR33:** been drunk in a public place?

. tab T4HR33

T4HR33	Freq.	Percent	Cum.
0	592	58.33	58.33
1	103	10.15	68.47
2	76	7.49	75.96
3	72	7.09	83.05
4	59	5.81	88.87
5	59	5.81	94.68
6	50	4.93	99.61
7	1	0.10	99.70
8	3	0.30	100.00
Total	1,015	100.00	



**T4HR35:** used drugs to get high (not because you were sick)?

. tab T4HR35

T4HR35	Freq.	Percent	Cum.
0	760	74.88	74.88
1	57	5.62	80.49
2	26	2.56	83.05
3	24	2.36	85.42
4	22	2.17	87.59
5	25	2.46	90.05
6	32	3.15	93.20
7	21	2.07	95.27
8	48	4.73	100.00
Total	1,015	100.00	

Responses:

0 = never

1 = once or twice a year

2 = once every 2-3 months

3 = once a month

4 = once every 2-3 weeks

5 = once a week

6 = 2-3 times a week

7 = once a day

8 = more than once a day

. = missing/refused