

**Relationship Context of Childbearing in Young Adulthood:
The Influence of Criminal Justice Contact**

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ABSTRACT

In the U.S., growing shares of young adults have had contact with the criminal justice system, and many of these individuals are parents. Using the Toledo Adolescent Relationships Study (n=1,321) we bridge the family and criminology literatures by analyzing the effects of criminal justice contact (arrest) on the biological parents' relationship context (single, dating, cohabiting, married) at time of pregnancy. Our results indicate that parental arrest prior to pregnancy increased the probability of the biological parents having no intimate relationship at time of pregnancy (single). Further, parents reporting substance abuse are significantly less likely to be married or cohabiting with the biological parent at pregnancy. Our results highlight the effects of prior parental arrest and behavioral indicators on both the parents' relationship at pregnancy, and family instability prior to childbearing. All have detrimental implications for the intergenerational transmission of disadvantage and Diverging Destinies.

In the U.S. about 40 percent, of children are born outside of marriage, with a growing share being born to cohabiting parents (Wu 2017). The relationship context at the time of pregnancy has implications for future family stability as well as child well-being (Brown, Manning, & Stykes 2016; Lichter, Michelmore, Turner, & Sassler 2016). While nonmarital birth trends are well documented, less attention has been paid to describing a broad set of factors reflecting social disadvantage that are associated with the relationship context at pregnancy. These include criminological factors, such as arrest, delinquency, and substance abuse. This set of factors are important, as we have witnessed growth in contact with the criminal justice system as well as high levels of substance abuse and delinquency among the incarcerated population (Giordano & Copp 2015; Petit & Western 2004)¹.

We draw on a population-based sample, the Toledo Adolescent Relationships Study (TARS), to investigate whether and how criminal justice (CJ) contact affects parents' relationship context at time of pregnancy. These data allow us to distinguish young parents who were single (not in an intimate relationship with the biological parent at the time of pregnancy), dating, cohabiting or married. Prior work indicates that incarceration is associated with an increased chance of non-marital childbearing (Lewis 2010; Western & McLanahan 2000; Western, Lopoo & McLanahan 2004). As of 2008, one fifth of young fathers had prior incarceration compared to only 6 percent of young men who were not fathers (Shoenberger 2012). However, it is unclear whether it is experience with the criminal justice system or other factors leading to criminal justice contact, such as substance abuse or delinquency, that are associated with parents' relationship context at pregnancy. We move beyond prior work by determining whether criminal justice effects remain after the inclusion of indicators of prior

¹ Growing shares of young adults have experience with the criminal justice system with 21.5% by age 64 in 2013, and an increasing number of children have parents who have been involved in the criminal justice system (Brown and Manning 2013; Shoenberger 2012).

substance abuse and levels of delinquency. This paper provides an important bridge between the family and criminology literatures and provides insights into how early CJ contact influences relationship context.

BACKGROUND

Sociodemographic Correlates of Nonmarital Childbearing

In the U.S., nearly two in five children are born to unmarried parents (Wu 2017). About one-fifth of children are born to single unmarried parents and more than one-fifth to cohabiting parents (Wu 2017). Parents in cohabiting unions have a dissolution risk that is five times higher than for parents who married (Osborne, Manning, & Smock 2007). As such, the relationship context at pregnancy has implication for the stability of family life, particularly in regards to the parents having a negative relationships transition prior to the child being born. Meaning children can be born already having gone through one negative family transition.

The traditional demographic correlates of nonmarital childbearing include social disadvantage and minority status (Lichter, Sassler, & Turner 2014). Specifically, women from families characterized by low educational attainment (mother's education) and without a high school diploma are more likely to have children while unmarried (Lichter et al. 2014; Wu 2017). Further evidence shows that as of 2014, 70% of births among women with less than a high school degree occurred outside of marriage (Wu 2017). During this same period, women with at least a bachelor's degree accounted for 12% of births outside of marriage (Wu 2017). Young mothers with lower, compared with higher, educational attainment are also less likely to transition into cohabiting or marital unions after childbearing (Lichter et al. 2014).

Racial and ethnic differences exist in the odds of having children outside of marriage. Between 2010 and 2014, 79% of births to Black women, 53% to Hispanic women and 30% to

White women were born to unmarried parents (Wu 2017). Further, Black and Hispanic, compared to White, women are more likely to give birth in a cohabiting relationship (Kennedy & Bumpass 2008).

Women's family structure while growing up also has implications for nonmarital childbearing. Children who spend time in nontraditional households report progressive views regarding nonmarital childbearing in adulthood, and have an increased risk of nonmarital fertility (Wu & Martinson 1993; Musick 2002). Earlier research has provided supporting evidence that single-parent family backgrounds lead to a heightened risk of nonmarital fertility (e.g., Wu & Martinson 1993). Upon further investigation, research shows that the effect of single-parent background is largest for White women, modest for Black women, and essentially nonexistent for Hispanic women (Musick 2002).

The family literature focusing on precursors to nonmarital childbearing often has excluded criminological factors. Given the rapid growth in mass incarceration since the 1970s and that incarceration has become a life course norm for some demographics (young males of color with low levels of education), it is now an imperative factor to have in analyses regarding family life (Petit & Western 2004; Western 2006). Black and Hispanic individuals have incarceration rates that are six times and two and a half times, respectively, higher than White individuals rates (Carson 2015). This further illustrates how many individuals of color have exposure to the criminal justice system, affecting not only themselves but also their families.

We argue that it is important to provide a better understanding of the implications of criminal justice contact as a precursor that influences children's family experiences, including parents' relationship context at pregnancy. In this paper, we examined whether there was an

association between criminal justice contact, and relationship context at the time of pregnancy while controlling for correlates of criminal justice contact.

Criminal Justice Contact and Nonmarital Fertility

Many of the same characteristics associated with nonmarital fertility have associations with criminal justice contact (Sampson & Laub 1993, Pettit & Western 2004). Men with prior incarceration experience, compared to those without incarceration experience, are more likely to be nonmarried fathers. Over 60 percent of men with prior incarceration are nonmarried fathers compared to less than 20 percent among men who have never experienced incarceration (Lopoo & Western 2005).

The Fragile Families and Child Wellbeing Study (Fragile Families) data set has been the source for most studies in which family scholars and criminologists have investigated the association between incarceration, nonmarital childbearing, and family formation. Examining the odds of union formation, Western and McLanahan (2000) found that incarceration was associated with 50% lower odds of cohabitation among parents and 50% lower odds of being in a relationship with the biological parent one year after childbirth. Further, the effect of incarceration on the odds that parents married or cohabited with one another was null. Other studies also using the Fragile Families data have found that paternal incarceration decreased the likelihood of parents transitioning into marriage within one year of their child's birth (Lewis 2010, Western et al. 2004). Western and colleagues (2004) also confirmed the prior finding that incarceration decreased the probability that biological parents would be cohabiting one year after the birth of their child. Taken together, these results demonstrate an association between incarceration, relationship formation and family stability.

A shortcoming, however, is that these studies do not include the activities that are associated with criminal justice contact. For example, the recent report from the *Committee on the Causes and Consequences of High Rates of Incarceration in the United States* concluded: “the field would benefit from tackling the problem of omitted variables by observing them” (Travis, Western, & Redburn. 2014, p. 278).

Criminologists have noted that solely focusing on the effects of incarceration as opposed to the ‘package’ of disadvantage (behaviors that precede and correlate with incarceration) may impede a comprehensive understanding of the role of criminal justice experience (Giordano & Copp 2015; Johnston 2006). The incarceration effects literature often ignores the association between incarceration and individual levels of offending, creating an overemphasis on the negative effects of incarceration as opposed to the larger set of factors that correspond to criminal justice system contact (Giordano & Copp 2015). It is likely that previously incarcerated individuals also had deviant behaviors predating spells of incarceration, creating a strong justification for including these behavioral indicators in analyses. Our objective in the current analysis is to build a more complete portrait of the circumstances that are associated with parents’ relationship context at the time of pregnancy.

Given that the median age at first incarceration, 27 (Perkins 1993), is later than the average age at first birth, 26 (Mathews & Hamilton 2016), this study is not focused on the effects of incarceration, but instead the effects of arrest, which typically occurs earlier in the life course than incarceration. Of individuals born in 2001, 6.6 percent of them will spend time incarcerated at one point in their lives (Bonczar 2003). The half way mark is age 27, where roughly 3.3 percent of the 2001 birth cohort will spend time behind bars (Bonczar 2003). Data from state courts show that in 2004 the average age of an individual convicted of a felony was 32 (Durose

& Langan 2007). In the current study, the average age of adult arrest is 21. These statistics further justify using arrest as opposed to incarceration as we have relatively young respondents (average age 25 at fifth interview) who have likely not achieved their highest risk of incarceration. It is also probable that the same antisocial behaviors that precede incarceration also precede arrests.

Further, although the Fragile Families dataset offers valuable insights into how criminal justice system contact influences family formation patterns these data do not allow us to assess how behaviors that are associated with criminal justice contact influence parents' relationship context at the time of pregnancy. In addition, researchers initially selected the parents in the Fragile Families dataset after the birth of their most recent child. The TARS data assesses characteristics of parents prior to the birth of their child (in adolescence and young adulthood) so we are able to model how early risk factors are associated with the parents' relationship at time of pregnancy.

CURRENT STUDY

Parental criminal justice contact is linked to many consequential outcomes for children and families (Foster & Hagan, 2015; Murray, Loeber, & Pardini, 2012; Wildeman, 2009; Wildeman 2014). An issue with this body of literature is that it is difficult to tease out whether it is the experience with the criminal justice system or the precursors associated with being involved in the system that lead to negative life outcomes. We conceptualize early behavioral factors (education, deviance, and substance abuse) as part of the 'package' of risk as opposed to simply isolating criminal justice experience. We hypothesize that individuals who have experienced an arrest before pregnancy are less likely to be in a relationship with the other parent. We first assess whether the biological parents were in a relationship (married, cohabiting,

and dating) or not (single). Next, we focus on respondents who were in a relationship and distinguish whether the biological parents were living together (married and cohabiting) at the time of pregnancy. Lastly, we analyze respondents who were co-residing and compare those who were married to those who were cohabiting. Second, we assess whether these effects will hold regardless of prior behavioral factors (grades, substance abuse and delinquency). Specifically, we expect that lower grades, as well as higher reports of substance abuse and delinquency will be associated with less stable family formations at pregnancy. We expect that early risk behaviors will explain some of the effects of arrest history.

In this paper, our goal is to establish how criminal justice contact influences the odds that pregnancy occurs in a family with two co-residing biological parents (either cohabiting or married). This initial childbearing setting is important for setting the stage for trajectories of advantage or disadvantage. We move beyond prior studies by establishing whether the criminal justice associations persist with the inclusion of the following key risk and protective factors: substance abuse, delinquency, and grades in school.

DATA AND METHODS

Data

We analyze longitudinal data from the Toledo Adolescent Relationships Study (TARS). TARS is a school-based sample based in Lucas County, Ohio. The 1,321 respondents were selected in 2000 from publically available records of students in the 7th, 9th, and 11th grade. As opposed to nationally representative school based samples, such as the Add Health, school attendance was not required for sample inclusion.

Our sampling frame, developed by the National Opinion Research Center, comprised 15,188 eligible students separated by race-ethnicity (non-Hispanic White, non-Hispanic Black, and Hispanic), gender, and grade into 18 strata. Through random subsamples, 2,273 students

were selected from each strata. Of the 2,273 students, we contacted 1,625 and had 304 refusals, leaving us with 81.3 percent or 1,321 students. Black and Hispanic students were oversampled. In order to maintain privacy, each respondent had an in-home interview with a questionnaire in the form of the computer-assisted personal interview (CAPI).

Analytic Sample

There are five waves of data included in this study. Interviews for wave 1 began in 2001, wave 2 was conducted in 2002/2003, wave 3 in 2004/2005, wave 4 in 2006/2007, and the most recent data collection occurred for wave 5 in 2011/2012. These data include a comprehensive set of risk factors that allow us to capture events and experiences that occurred prior to the birth of the child. Further, because we have longitudinal data, variables can be lagged to correspond with time of pregnancy.

The analytic sample is based on men and women who were interviewed at wave 5 and reported having a child since the initial interview wave (N=419). We further restricted the sample to those who reported on their relationship status at the time of pregnancy (N=328). Our analysis of the nature of the relationship is limited to individuals who were married, cohabiting, or dating (N=279). The final analysis was limited to respondents who were living with the other biological parent at time of pregnancy (N=220).

MEASURES

Dependent Variable

We establish the nature of the relationship between the biological parents at the time of pregnancy and birth of each child. We asked respondents, “At the start of this pregnancy, how would you describe your relationship with [bio-parent]?” Responses included (1) “My husband [wife],” (2) “My boyfriend [girlfriend] who I was living with,” (3) My boyfriend [girlfriend] who

I was not living with,” and (4) “other,” which consisted of write-in responses with the majority indicating that the pregnancy was the result of “casual sex.” We conceptualized the “other” category as single because respondents did not have a romantic relationship with the biological parent at the time of pregnancy. The modal category for biological-parent relationship was cohabitation.

Focal Independent Variables

Arrested before pregnancy is a binary variable measuring if respondents had experienced an arrest before they/their partner became pregnant with their child. TARS includes questions on the exact date of birth of children. We subtracted 8 months to estimate the time of pregnancy. In addition, the data provide dates of respondents’ first arrest and their last arrest since turning age 18. We calculated whether the respondent experienced an arrest before they/their partner became pregnant².

Delinquency is an eight-item mean scale, which asked respondents, “In the last two years (or 24 months), how often have you: (1) stolen (or tried to steal) things worth \$5 or less; (2) damaged or destroyed property on purpose; (3) carried a hidden weapon other than a plain pocket knife, (4) stolen (or tried to steal) something worth more than \$50; (5) attacked someone with the idea of seriously hurting him/her; (6) sold drugs; (7) broken into a building or vehicle (or tried to break in) to steal something or just to look around; and (8) used drugs to get high (not because they were sick)” (Elliott and Ageton, 1980). Responses ranged from “never” to “more than once a day,” with a mean scale resulting in a range from 0 to 8 (wave 1 alpha=.87; wave 2 alpha=.82; wave 3 alpha=.79; wave 4 alpha=.74). One of the responses “been drunk in a public

² Although we do have information on prior incarceration for respondents, we could not calculate incarceration before pregnancy, as there is no information regarding the exact dates of their incarceration.

place” was dropped because we are also using a substance abuse measure³. This lagged variable, measured at the four waves, assessed respondent’s *delinquency* at the wave prior to the birth of their child.

Substance Abuse prior to the birth of the child is operationalized as a 7-item mean scale in which respondents are asked, “How often in the past 12 months have you experienced these things because of your drinking/using drugs:” (1) “Not felt so good the next day,” (2) “Felt unable to do your best job at work or school,” (3) “Hit one of your family members,” (4) “Gotten into fights with others,” (5) “Had problems with your friends,” (6) “Had problems with someone you were dating,” and (7) “Gotten into a sexual situation that you later regretted,” The responses ranged from (1) never to (8) almost daily (wave 1 alpha=.92; wave 2 alpha=.89; wave 3 alpha=.92; and 4 alpha=.91). Similar to delinquency, this is a lagged variable, measured at the four waves, and assess *substance abuse* at the wave prior to the birth of the child. We logged the variable due to skewness.

Grades, self-reported at wave 1, was coded so that higher numbers represent higher (better) grades.

Sociodemographic Factors

Gender, a binary variable, specifies if the respondent was female. *Race/Ethnicity* (measured at wave 1) is classified into three binary variables: (1) White, (2) Black, and (3) Hispanic with White as the reference category. *Age at Birth* is the exact age of the respondent at the time their child was born. *Family structure*, from Wave 1, was operationalized as two biological parent households versus every other family form.

Analytic Strategy

³ In sensitivity analyses, the “been drunk in a public place” variable was added creating a nine-item delinquency scale. This was added to the models and there were no differences in output.

We employed logistic regression models to examine the relationship between criminal justice contact, delinquency, substance abuse, grades, and parents' relationship context at the time of the pregnancy. We estimate a series of models starting with the zero-order models and a model that includes criminal justice contact (arrest before pregnancy) with the behavioral indicators (grades, substance abuse, and delinquency) (*Model 1*). The final model includes the sociodemographic measures (*Model 2*). We estimate a series of models focusing on the specific relationship context of the biological parents at pregnancy. This approach results in the same sets of findings as multinomial models and are easier to interpret.

PRELIMINARY RESULTS

Table 1 presents the characteristics of the three different analytic samples. We focus on the overall sample here. The majority of the biological parents at the time of pregnancy were cohabiting (41%). Further, we find that 15% were single, 18% were dating, and 26% were married. About one-quarter, 28%, of the sample experienced an arrest before the time pregnancy. The behavioral measures in Table 1 show that on average self-reported grades were mostly C's (5.6). On average, respondents' substance abuse score was .21 and their average reported delinquency score was .84. The average age at parenthood was almost 21 years old with substantial variation with the youngest parent being about age 12 and the oldest age 28.

Women comprise 62% of our sample, and men comprise 38% of the sample. Regarding race/ethnicity, Non-Hispanic Black individuals comprise 28% of the sample, Hispanic individuals comprise 17%, and Non-Hispanic White individuals comprise 55% of the sample. About 41% of respondents grew up in a two-biological parent household while 59% did not.

Table 2 presents the logistic regression results predicting the likelihood that a child's parents were in a relationship (married, cohabiting, or dating) at pregnancy as opposed to being

single. The zero-order results indicate a significant negative association between experiencing an arrest before pregnancy and being in a relationship with the biological parent at pregnancy. The zero-order results also show that individuals with higher grades are significantly more likely to be in a relationship with the biological parent at pregnancy. Delinquency significantly lowers the probability of being with the biological parent at pregnancy.

In Model 1, we include the arrest before pregnancy and the behavioral indicators. The effect of arrest before pregnancy remains statistically significant. Net of their grades, substance abuse, and delinquency prior to birth, respondents who had an arrest before their child's conception are more likely to be single than in any other form of relationship with the biological parent. The effects of substance abuse and delinquency are not statistically significant. Model 3 adds the sociodemographic measures (age at parenthood, race/ethnicity, and family structure while growing up). The effect of experiencing an arrest before pregnancy remains significant, albeit diminishes slightly.

Table 3 presents the logistic regression results predicting the likelihood of co-residing (cohabiting or married) with the biological parent rather than just dating. In the zero-order model, experiencing an arrest before pregnancy significantly reduces the probability that the biological parents will be cohabiting or married at time of pregnancy.

Model 1 adds in the behavioral indicators and the association between arrest and parental relationship retains significance. None of the three behavioral measures are related to whether the biological parents were living together at pregnancy. However, in Model 3 once the sociodemographic measures are added there is no longer a significant effect of arrest before pregnancy on relationship context at pregnancy. Further analyses show that age at parenthood as well as race and ethnicity (Black and Hispanic) explains the effect of arrest before pregnancy.

For respondents who experienced an arrest before pregnancy their average age at birth of the child was 19.66 and for those who did not experience an arrest before pregnancy their average age at birth was 21. That is, the parents who experienced an arrest before pregnancy entered parenthood at younger ages, on average.

In Model 3, the substance abuse measure is associated negatively with parents' relationship context at pregnancy. This indicates that there is a suppression effect. Upon further investigation, respondents' race (Black) and age at birth suppressed the effects of substance abuse on predicting the biological parents co-residing at pregnancy.

Table 4 presents the logistic regression coefficients predicting marriage among respondents who were co-residing together. At the zero-order and in the final model there the association between arrest before pregnancy and the probability of being married to the biological parent at pregnancy is not statistically significant. Across all the models respondents with higher grades are significantly more likely to be married to the biological parent at the time of pregnancy. In Model 2, the effect of substance abuse is moderately related to odds of parental marriage. Respondents with higher scores on the substance abuse scale are moderately less likely to be married at the time of pregnancy.

DISCUSSION

In this paper, we examined how experiencing an arrest before pregnancy affects the biological parent's relationship context at pregnancy. We found that experiencing an arrest before pregnancy has a negative effect on relationship context, and this effect depends on the relationship under consideration. We hypothesized that respondents who experienced an arrest before pregnancy would have an increased risk of being in less stable relationships at pregnancy. Experiencing an arrest before pregnancy significantly decreases the probability of being in a

relationship with the biological parent at pregnancy and reduces the odds of co-residing with the biological parent. We find that this association persists even with the inclusion of the behavioral indicators that may be precursors to arrest. However, age at parenthood explains the effect of arrest experience on probability of co-residing. Thus, it does not seem that arrest is the factor influencing whether parents live together.

Earlier arrest does not seem to influence whether parents are cohabiting or married at the time of pregnancy. Relatively few parents in our sample were married at the time of their first child's pregnancy (25%) and there may be different results in a sample with a wider age range. Marriage appears to be more strongly associated with behavioral indicators. Lower grades and substance abuse in adolescence are associated with low odds of being married to the biological parent at the time pregnancy.

We believe that these findings support the call for more nuanced analyses of how criminal justice experience influences behavioral outcomes. These findings suggest that policies targeted at reducing criminal justice experience alone are not sufficient and need to tackle the sources of disadvantage, such as educational success and substance abuse.

While this study contributes to the literature, a few limitations are important to note. First, TARS is not a nationally representative dataset, therefore the results are not generalizable. However, the data still offer valuable insight on a relatively unexplored topic. Second, we use wave 5 reports of the respondent's first birth, so recall bias regarding the nature of their relationship with the biological parent is possible. Lastly, social desirability bias is always a possibility when discussing topics, such as criminal justice contact, substance use, grades, and delinquency. Despite these limitations, TARS remains an appropriate dataset for the questions in this study.

This study provides new insights into the effect of one type of criminal justice contact, arrest, on family formation. We find that experiencing an arrest before pregnancy significantly increases the probability of not being in a relationship with the other parent at time of pregnancy, and among those in a relationship with the other parent, arrest reduces the odds of co-residing with the other biological parent. These children will face the highest odds of parental instability and this demonstrates the value of considering intergenerational transmission of disadvantage. Our results show that parental criminal justice contact is partly responsible for the future life trajectories of children but do not determine alone whether children start their lives living with two biological parents or not. Given we are in a society of Diverging Destinies (McLanahan 2004) for children and mass incarceration (Petit & Western 2004; Western 2006); we believe further research is warranted that pursues innovative and advanced methodologies to examine whether and how parental incarceration transmits risk to children.

REFERENCES

- Bonczar, T. P. (2003). *Prevalence of Imprisonment in the U.S. Population, 1974-2001 (NJC-197976)* Washington D.C.: U.S. Department of Justice.
- Brown, S. L, Manning, W. D., & Stykes, B. J. (2016). Trends in Children's Family Instability, 1995-2010. *Journal of Marriage and Family*, 78, 1173-1183.
- Brown, Susan L., & Manning, W. D. (2013). Experiences with the Criminal Justice System in a Household Survey: Introducing the Survey of Criminal Justice Experience (SCJE). Bowling Green, OH: National Center for Marriage and Family Research (NCFMR)
- Carson, E.A. (2015). *Prisoners in 2014 (NJC-248955)*. Washington, D.C.: Department of Justice
- Durose, M. R. & Langan, P. A. (2007). *Felony Sentences in State Courts, 2004 (NJC-215646)* Washington D.C.: U.S. Department of Justice.
- Elliot, D. S. & Ageton, S. S. (1980). Reconciling Race and Class Difference in Self-Reported and Official Estimates of Delinquency. *American Sociological Association*, 2, 95-110.
- Foster, H. & Hagan, J. (2015). Punishment Regimes and the Multi-Level Effects of Parental Imprisonment: Inter-generational, Intersectional, and Inter-Institutional Models of Social Inequality and Systemic Exclusion." *Annual Review of Sociology*, 41, 135-158.
- Giordano, P. C., & Copp, J. E. (2015). 'Packages' of Risk: Implications for Determining the Effect of Maternal Incarceration on Child Wellbeing. *Criminal Public Policy*, 14, 157-168.
- Johnston, D. (2006). The wrong road: Efforts to understand the effects of parental crime and incarceration. *Criminology and Public Policy*, 5, 703-720
- Kennedy, S. & Bumpass, L. (2008). Cohabitation and children's living arrangements: New

- Estimates from the United States. *Demographic Research*, 19, 1663-1692.
- Lewis, C. E. (2010). Incarceration and Family Formation. In Johnson, W. E. (Ed.) *Social Work with African American Males: Health, Mental Health, and Social Policy*, New York, NY: Oxford University Press.
- Lichter, D. T., Sassler, S., & Turner, R. N. (2014). Cohabitation, Post-Conception Unions, and the Rise in Nonmarital Fertility. *Social Science Research*, 47, 134-147.
- Lichter, D. T., Micheltore, K., Turner, R. N., & Sassler, S. (2016). Pathways to a Stable Union? Pregnancy and Childbearing Among Cohabiting and Married Couples. *Population Research Policy Review*, 35, 377-399.
- Lopoo, L. M. & Western, B. (2005). Incarceration and the Formation and Stability of Marital Union. *Journal of Marriage and Family*, 67, 721-734.
- Mathews, T. J. & Hamilton, B. E. (2016). *Mean Age of Mothers is on the Rise: United States, 2000-2014 (232)* Hyattsville, MD: National Center for Health Statistics
- McLanahan, S. (2006). Diverging Destinies: How Children are Faring Under the Second Demographic Transition. *Demography*, 41, 607-627.
- Murray, J., Loeber, R., & Pardini, D. (2012). Parental Involvement in the Criminal Justice System and the Development of Youth Theft, Marijuana Use, Depression, and Poor Academic Performance. *Criminology*, 50, 255-302.
- Musick, K. (2002). Planned and Unplanned Childbearing among Unmarried Women. *Journal of Marriage and Family*, 64, 915-929
- Osborne, C., Manning, W. D., & Smock, P. J. (2007). Married and Cohabiting Parents' Relationship Stability: A Focus on Race and Ethnicity. *Journal of Marriage and Family*, 69, 1345-1366.

- Petit, B. & Western, B. (2004). Mass Imprisonment and the Life Course: Race and Inequality in U.S. Incarceration. *American Sociological Review*, 69, 151-169.
- Perkins, C. (1993). *National Corrections Reporting Program, 1990 (NCJ-141879)*. Washington, DC: U.S. Department of Justice.
- Sampson, R. J. & Laub, J. H. (1993). *Crime in the Making: Pathways and Turning Points Through Life*. Cambridge, Massachusetts: Harvard University Press.
- Shoenberger, Nicole, "FP-12-01 On the Road to Adulthood: Young Men's Contact with Criminal Justice System" (2012). National Center for Family and Marriage Research Family Profiles. Paper 8. http://scholarworks.bgsu.edu/ncfmr_family_profiles/8
- Travis, J., Western, B., & Redburn, S. (2014). *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. Washington, D.C.: The National Academy Press.
- Western, B., & McLanahan, S. (2000). Fathers behind bars: The Impact of Incarceration on Family Formation. *Families, Crime and Criminal Justice*, 2, 309-324
- Western, B., Lopoo, L., & McLanahan, S. (2004). Incarceration and the Bonds Between Parents in Fragile Families. In Patillo, M.m Weiman, D., & Western, B. (Ed.), *Imprisoning America: The social effects of mass incarceration* (pp. 21-45). New York: Russell Sage Foundation.
- Western, B. (2006) *Punishment and Inequality in America*. New York, New York The Russell Sage Foundation.
- Wildeman, C. (2009). Parental Imprisonment, the Prison Boom, and the Concentration of Childhood Disadvantage. *Demography*, 46, 265-280.
- Wildeman, C. (2014). Parental Incarceration, Child Homelessness, and the Invisible

Consequences of Mass Imprisonment. *ANNALS of the American Academy of Political and Social Science*, 651, 74-96

Wu, H. 2017. Trends in Births to Single and Cohabiting Mothers, 1980-2014. *Family Profiles*, FP-17-04. Bowling Green, OH: National Center for Family & Marriage Research.
<http://www.bgsu.edu/ncfmr/resources/data/family-profiles/wu-trends-births-single-cohabiting-mothers-fp-17-04.html>

Wu, L. L. & Martinson, B. C. (1993). Family Structure and the Risk of a Premarital Birth. *American Sociological Review*, 58, 210-232.

Table 1. Distribution of Sociodemographic Characteristics ($n = 328$)

Variables	Percent/Mean	Standard Deviation	Minimum	Maximum
Relationship Status at Pregnancy				
Married (%)	25.61			
Cohabiting (%)	41.46			
Dating (%)	17.99			
Single (%)	14.94			
Criminal Justice Contact				
Arrest Before Pregnancy				
Yes (%)	27.74			
No (%)	72.26			
Behavioral Indicators				
Grades (Wave 1)	5.58	2.12	1.00	9.00
Substance Abuse (Lagged)*	0.21	0.63	0.00	7.00
Delinquency (Lagged)	0.84	1.76	0.00	4.00
Sociodemographics				
Age at Parenthood	20.62	3.16	12.33	27.75
Gender				
Female (%)	61.89			
Male (%)	38.11			
Race/Ethnicity				
Non-Hispanic Black (%)	28.35			
Hispanic (%)	16.77			
Non-Hispanic White (%)	54.88			
Family Structure (Wave 1)				
Two Parent Household (%)	40.85			
Not Two Biological (%)	59.15			

Source: Toledo Adolescent Relationships Study

*Logged values not reported for the descriptive statistics

Table 2. Logistic Regression Coefficients Estimating Any Relationships with the Other Biological Parent ($n = 328$)

Variables	Zero Order			Model 1			Model 2		
	B	SE		B	SE		B	SE	
Criminal Justice Contact									
Arrest Before Pregnancy	-1.22	0.32	***	-1.00	0.35	**	-0.81	0.36	*
Behavioral Indicators									
Grades (Wave 1)	0.20	0.07	**	0.13	0.08	†	0.10	0.08	
Substance Abuse (Lagged)	-0.76	0.45	†	-0.11	0.49		-0.32	0.51	
Delinquency (Lagged)	-0.25	0.12	*	-0.20	0.13		-0.17	0.13	
Sociodemographics									
Age at Parenthood	0.18	0.05	***				0.12	0.06	*
Gender									
Female	-0.07	0.32					-0.31	0.36	
(Male)									
Race/Ethnicity									
Non-Hispanic Black	-0.86	0.32	**				-0.72	0.39	†
Hispanic	-0.11	0.40					-0.32	0.47	
(Non-Hispanic White)									
Family Structure (Wave 1)									
Two Parent Household	0.99	0.36	**				0.52	0.39	
(Not Two Biological)									

Source: Toledo Adolescent Relationships Study

Note: Contrast categories are in parentheses

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3. Logistic Regression of Co-residing for Biological Parents in Relationship ($n = 279$)

Variables	Zero Order			Model 1			Model 2		
	B	SE		B	SE		B	SE	
Criminal Justice Contact									
Arrest Before Pregnancy	-0.78	0.32	*	-0.73	0.35	*	-0.57	0.39	
Behavioral Indicators									
Grades (Wave 1)	0.02	0.07		-0.03	0.08		-0.15	0.09	†
Substance Abuse (Lagged)	-0.75	0.48		-0.44	0.51		-1.15	0.55	*
Delinquency (Lagged)	-0.08	0.14		-0.07	0.14		-0.02	0.31	
Sociodemographics									
Age at Parenthood	0.20	0.05	***				0.21	0.06	***
Gender									
Female	0.03	0.30					0.05	0.35	
(Male)									
Race/Ethnicity									
Non-Hispanic Black	-1.39	0.31	***				-1.71	0.39	***
Hispanic	0.14	0.40					-0.25	0.49	
(Non-Hispanic White)									
Family Structure (Wave 1)									
Two Parent Household	0.16	0.30					-0.52	.36	
(Not Two Biological)									

Source: Toledo Adolescent Relationships Study

Note: Contrast categories are in parentheses

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 4. Logistic Regression Comparing Those Married to Cohabiting ($n = 220$)

Variables	Zero Order			Model 1			Model 2		
	B	SE		B	SE		B	SE	
Criminal Justice Contact									
Arrest Before Pregnancy	-0.25	0.35		0.18	0.39		0.31	0.41	
Behavioral Indicators									
Grades (Wave 1)	0.23	0.07	**	0.23	0.07	**	0.17	0.08	*
Substance Abuse (Lagged)	-1.22	0.80		1.17	0.84		-1.55	0.89	†
Delinquency (Lagged)	-0.16	0.15		0.10	0.15		-0.07	0.16	
Sociodemographics									
Age at Parenthood	0.09	0.04	*				0.05	0.05	
Gender									
Female	0.26	0.29					0.10	0.33	
(Male)									
Race/Ethnicity									
Non-Hispanic Black	-1.00	0.40	*				-0.90	0.44	*
Hispanic	-0.19	0.37					-0.20	0.41	
(Non-Hispanic White)									
Family Structure (Wave 1)									
Two Parent Household	0.66	0.28	*				0.32	0.31	
(Not Two Biological)									

Source: Toledo Adolescent Relationships Study

Note: Contrast categories are in parentheses

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$