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THE INTERGENERATIONAL EFFECTS OF THE VIETNAM DRAFT ON RISKY  
BEHAVIORS

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The Intergenerational Effects of the Vietnam Draft on Risky Behaviors  
Monica Deza and Alvaro Mezza  
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**ABSTRACT**

We exploit the natural experiment provided by the Vietnam lottery draft to evaluate the intergenerational effect of fathers' draft eligibility on children's propensity to engage in risky health behaviors during adolescence using the NLSY97. Draft eligibility increases measures of substance use, intensity of use, decreases age of initiation—particularly for marijuana—and increases measures of delinquency. We explore potential mechanisms: Draft eligibility affects paternal parenting styles and attitudes towards the respondent, environmental aspects, and even maternal factors. Results are robust to alternative specifications and falsification diagnostics. Our results indicate that previous analyses underestimate the full negative effects of draft eligibility.

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## 1. Introduction

A vast literature documents the important effects of the Vietnam draft on long-term outcomes of the generation directly affected by it, such as on earnings losses (Angrist, 1990), crime (Rohlf, 2009; Lindo and Stoecker, 2014), federal transfer income program participation (Angrist et al., 2010), education (Angrist and Chen, 2011; Card and Lemieux, 2001), employment (Autor et al., 2011; Autor et al., 2016; Coile et al., 2015) and disability status (Angrist et al., 2011). Another strand of influential research highlights the extent to which shocks and policies that directly alter outcomes of one generation can also have important long-run effects on succeeding generations.<sup>2</sup> Merging these strands of literature, this paper explores the intergenerational effect of fathers' draft eligibility on their children's propensity to engage in risky health behaviors, such as substance use, and delinquent acts. Our estimates reveal large adverse effects of the Vietnam draft on these risky outcomes on the subsequent generation and suggest that previous estimates of the direct effects of the draft on the generation directly affected by it understate the full extent to which the Vietnam War affected communities.

Our empirical strategy exploits the randomized variation that occurred as a result of the Vietnam draft lottery and compares children of fathers who were eligible for the draft with children of fathers who were not.<sup>3</sup> Given the random nature of the lottery, draft- and non-draft-eligible fathers were comparable, except that draft-eligible fathers were called to report for potential induction into the military.<sup>4</sup> We exploit this randomized variation and the information on both respondent (i.e., children) and parents provided in the National Longitudinal Survey of Youth 1997 (NLSY97) to estimate the effect of draft eligibility on children's risky behaviors, as defined by substance use and delinquent acts. Our findings indicate that paternal draft eligibility

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<sup>2</sup> Our study contributes to a literature that focuses on shocks that affects the parental generation without directly affecting their children's generation. The circumstances analyzed by these studies range from the 1918 flu (Richter and Robling, 2013, Cook et al., 2019) and nuclear (Black et al., 2019) in utero exposure, to quasi-experimental variation in parental education (Black et al., 2005; Oreopoulos et al., 2006) and lottery wins (Bleakley and Ferrie, 2016; Cesarini et al., 2016) and estimate the intergenerational effects on outcomes such as educational attainment, socioeconomic status, and cognitive scores.

<sup>3</sup> The Vietnam draft lottery randomly assigned lottery numbers to each exact date of birth (RSN) for males born between 1944 and 1952 and called for induction those with low lottery numbers until the number of needed inductions were met. Treated children are those whose fathers got a low lottery number. See the background section for more details.

<sup>4</sup> The 1969 lottery—that affected men born between 1944 and 1950—had an implementation issue that potentially affected the randomization process and, as a result, individuals born later in the year were more likely to be draft-eligible (Fienberg, 1971). See the background section for more details and the results section for how we approach this issue.

had the following effects on children’s risky behaviors. First, we show that draft eligibility increased the probability to have consumed marijuana by age 18, decreased the age of marijuana initiation, and increased measures of marijuana consumption. Second, draft eligibility reduced the age of cigarette initiation. Third, draft eligibility increased measures of hard drugs consumption (though these effects are statistically significant only at a 10 percent level). Fourth, draft eligibility increased the probability of engaging in delinquent behaviors. Results are robust to a variety of specifications, different subsamples, and falsification diagnostics where we use maternal exact date of birth to determine draft eligibility instead of paternal exact date of birth.

There are many potential ways in which fathers’ draft eligibility could increase children’s propensity to engage in risky behaviors. Draft eligibility could lead to military service and military service could affect veterans’ negatively by increasing opioids use (Robins et al., 1974; Cesur and Sabia, 2016), psychiatric conditions such as PTSD (Jordan et al., 1992), propensity to commit violent crimes and incarceration (Rohlf, 2009; Lindo and Stoecker, 2014; Wang and Flores-Lagunes, 2020), domestic violence against the partner and children (Cesur and Sabia, 2016), or by lowering socioeconomic status of the household by precluding soldiers from labor market experience, which ultimately decreases wages (Angrist, 1990; Imbens and van der Klaauw, 1995). Draft eligibility could also lead to draft avoidance behaviors. Engaging in delinquent activity and crime could lead to draft avoidance (Kuziemko, 2010; Wang and Flores-Lagunes, 2020), as having a criminal record would lead to failing the moral evaluation of the pre-induction exam required to be passed to be drafted (Suttler, 1970, Shapiro and Striker, 1970).<sup>5</sup> Additionally, refusing to serve after receiving a low lottery number could lead to convictions and prison sentences according to the draft law (Baskir and Strauss, 1978).<sup>6</sup> These direct, negative effects of the draft on eligible fathers could in turn indirectly affect their children, making them more likely to engage in risky behaviors<sup>7</sup>.

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<sup>5</sup> A pre-induction exam (consisting of a physical health, mental health, and moral evaluation) was required to determine whether draft-eligible men needed to report for induction (Semi-Annual Report of the Director of Selective Service 1967, Bitler and Schmidt, 2011).

<sup>6</sup> The draft could also have positive effects on those fathers affected by it, which could, in turn, affect their children positively. In particular, military service could affect veterans’ positively by providing training, imparting discipline, or allowing former soldiers to benefit from the GI Bill benefits, which ultimately increases education (Angrist and Chen, 2011). Additionally, enrolling in universities to avoid the draft—also referred as educational deferment—would increase parental college attendance and college retention among those avoiding serving, thereby positively affecting the fathers’ labor market outcomes and wages (Card and Lemieux, 2001).

<sup>7</sup> Evidence indicates that draft avoidance through exemptions was not prevalent for the group of fathers under our study. First, draft avoidance through spousal and paternal exemptions were no longer available at the time the

While we do not have information on many of these potential direct effects of the lottery draft on the generation of fathers affected by it (such as drug consumption, suffering of PTSD or incarceration records), we find that parenting styles, attitudes towards the children and the environment where children were raised differ by fathers' draft eligibility, potentially driving children of draft-eligible fathers to engage more in risky behaviors. More specifically, we first find strong evidence that paternal draft eligibility negatively affects potential determinants of father-children relationship, such as parenting styles and attitudes from the father towards the child.<sup>8</sup> Draft eligibility affects parenting styles of both parents, by increasing the likelihood that both parents are “unresponsive” and “undemanding.”<sup>9</sup> Additionally, draft eligibility affects the attitude fathers have towards their children, as fathers are less likely to help them, and more likely to cancel plans on them (as reported by the children). Second, we find that children of draft-eligible fathers grow up in environments more conducive to engaging in risky behavior, as evidenced by, for example, interviewees being less likely to report feeling safe in the residence or neighborhood of draft-eligible fathers and children being exposed to school peers that are more likely to engage in risky health behaviors (e.g., smoking cigarettes, getting drunk, using drugs, and having sex).<sup>10</sup> These findings are consistent with previous literature that indicates that sons of draft-eligible fathers reside in lower mobility counties and lower income zip codes (Goodman and Isen, 2020). Third, we find that children's scores on aptitude tests do not differ by fathers' draft eligibility. Additionally, paternal draft eligibility does not affect pre-determined maternal characteristics through assortative mating, as measured by the probability that the respondent's mother was living with her biological parents by age 14. Thus, neither lower school performance nor differences in mothers' characteristics seem to be behind the higher probability of children

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lotteries occurred (Bitler and Schmidt, 2012). Second, avoidance through educational deferments were not prevalent (Card and Lemieux, 2001) and they would presumably raise human capital of those draft-eligible and generating an environment less conducive of risky health behaviors which would work against the direction of our results.

<sup>8</sup> Given that the NLSY97 respondents were born between 1980 and 1984, the results cannot be attributed to father's absence during war and, hence, the potential mechanisms are not driven by paternal war exposure directly, but, likely, in part, by the long-term consequences of it.

<sup>9</sup> Demandingness refers to the extent to which parents control their children's behavior or demand their maturity, while responsiveness refers to the degree parents are accepting and sensitive to their children's emotional and developmental needs. The father is more likely to be “uninvolved” (unresponsive and undemanding) and the mother less likely to be “authoritative” (responsive and demanding).

<sup>10</sup> The NLSY97 defines peers as kids in the grade of the respondent. Thus, peers reflect the choice of where the parents decided to live rather than a choice based on friendship of the respondent.

engaging in risky behaviors. Finally, we also present evidence that paternal draft eligibility affects maternal health negatively.<sup>11</sup>

Our study contributes to three bodies of literature. First, we contribute to the literature on identification of causal intergenerational effects of shocks and policies (e.g., Black et al. 2019, Oreopoulos et al. 2018, Cesarini et al. 2016).<sup>12</sup> In this particular strand, we add to the nascent literature on the intergenerational effects of the Vietnam draft, which to date has mostly concentrated on estimating the effects on military service and labor market outcomes (Goodman and Isen, 2020; Johnson and Dawes, 2016).<sup>13</sup> Our study focuses on the effects of draft eligibility on children's outcomes among cohorts that were born after the Vietnam War was over (1980-1984), which allows us to estimate the effect of long-term household circumstances isolated from the potential effects of fathers being absent while serving in the military.<sup>14</sup> To the best of our knowledge, this is the first study to establish that draft eligibility affected the next generation's propensity to engage in risky behaviors.<sup>15</sup>

Second, our study also contributes to the vast literature that explores important long-term costs of the Vietnam lottery draft and war (e.g., Angrist, 1990; Autor et al, 2011) that should

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<sup>11</sup> Data do not allow us to disentangle whether the differential maternal health between draft- and non-draft-eligible men is driven by selection (e.g., draft-eligible men marry unhealthier women) or by a direct effect of draft eligibility (e.g. the mental health status of the husband affects the mental and physical health status of the wife). However, the evidence we find that children's aptitude test do not differ by fathers' draft eligibility and that mothers do not differ in pre-determined characteristics suggests that a direct effect of draft eligibility is more likely to be the cause of the differential maternal health.

<sup>12</sup> Identifying causal intergenerational effects of policies that affect parental inputs on children's risky health behaviors is challenging due to the limited availability of household data that provide information on both parental inputs and children's risky health behaviors. Chalfin and Deza (2015a,b) exploit variation induced by changes in compulsory schooling laws in the United States and the household survey nature of the NLSY79 to study the effect of parental education on risky health behaviors and find that increasing parental education reduces delinquent behaviors and substance use among children.

<sup>13</sup> More specifically, Goodman and Isen (2020) find that father's draft eligibility negatively affected son's earnings and labor force participation, and increased the probability of enlisting in the military. Relatedly, Campante and Yanagizawa-Drott (2015), by pooling information on war service in World War I, World War II, Korean and Vietnam wars, find that father's war service increased the probability of son's military service in times of war, but decreased military service outside of wartime. Finally, Johnson and Dawes (2016) find that father's draft eligibility negatively affected children's political and civic participation.

<sup>14</sup> National level inductions rose from fiscal year 1960 to fiscal year 1968 and then decreased until the draft suspension in 1973. There were approximately 2.25 million men inducted over this period, but men who enlisted voluntarily were still the majority of those who served in the armed forces, and were approximately two thirds. Overall, during the Vietnam Conflict, more than 8 million Americans served in the armed forces (Bitler and Schmidt, 2012).

<sup>15</sup> An exception is Goodman and Isen (2020), who exploit incarceration data that the IRS receives on the incarcerated population, and find that children of draft-eligible fathers are more likely to have been in prison as young adults. Thus, our results that children from draft-eligible fathers are more likely to engage in risky health behaviors during adolescence might translate into more chances of spending time in prison as young adults.

dictate compensation policies to those affected by the draft. Finally, our study contributes to the literature on determinants of adolescent substance use and delinquency by highlighting, for example, the potential role of parental inputs and the extent to which these parental inputs are affected by draft eligibility. Examining potential determinants of adolescent substance use and delinquency is crucial for policy in order to prevent long-term substance use, potential escalation to hard drugs, and potential escalation of these delinquent acts into more serious crimes.<sup>16</sup> Given the medical literature that indicates that the brain is still developing in adolescence (Giedd, 2004; Meier et al, 2012) and that early consumption can increase substance disorders later in life (Winters and Arria, 2011; Casey et al, 2008), adolescent substance use is particularly costly to society relative to adult substance use.<sup>17</sup> Moreover, as adolescence coincides with a period where individuals make several important decisions in life, such as whether or not to go to college and invest in human capital accordingly, substance use during these crucial ages may have long-term effects in labor market outcomes and educational attainment (Mezza and Buchinsky, forthcoming).

Because of the changes that have occurred over time, it is important to discuss the extent to which our findings apply to today's environment and military context. Most importantly, today's military service is based on volunteering. Men who volunteer to serve could be different in several unobservable ways to men who serve because a lottery pushed them to. Additionally, the current system based on volunteering eliminates incentives to change behaviors to avoid serving. Thus, the extrapolation of our results to the current environment of voluntary enlistments should be done with care. That said, under the current context, it is still relevant to understand the unintended consequences—whether through draft avoidance or military service—of a lottery draft system designed to increase the number of individuals available to serve during times of war, as a lottery system similar to the one applied during the Vietnam War is expected to be resumed in times of national emergency, as reported by the Selective Service System.<sup>18</sup> This highlights the relevance of this study, not only from a historical perspective, but also for

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<sup>16</sup> Consuming soft drugs during adolescence is more likely to lead to consuming harder drugs than consuming soft drugs during adulthood (Lynskey et al, 2006; Deza, 2015; Yu and Williford, 1992).

<sup>17</sup> U.S. students have one of the highest rates of drug use when compared with 36 European countries for which comparable representative samples exist (Mezza and Buchinsky, forthcoming).

<sup>18</sup> <https://www.sss.gov/About/Events-after-Draft>.

future reference. In the conclusions section we expand on additional factors that should be considered when interpreting our results in the current context.

The remainder of the paper is organized as follows. Section 2 describes the background. Section 3 describes the data. Section 4 describes the main regressions specifications, robustness checks, and falsification diagnostics. Section 5 describes the results for the main findings as well as the mechanisms. Finally, Section 6 summarizes and concludes.

## **2. Background**

Due to the shortage of voluntary enlistments over the Vietnam War from 1965 to 1975, the Selective Service system implemented the Vietnam draft lottery in order to increase the number of men who could serve in the military. Not everybody qualified to serve in the Armed Forces. Men were required to register with their local draft board upon turning 18, where they would be classified as exempted, deferred or available for service based on information provided in a classification questionnaire. Those who were classified as available for service were required to report for a pre-induction exam (consisting of a physical health, mental health, and moral evaluation), which determined whether they would be required to report for induction if they were draft-eligible according to the Vietnam draft lottery (Bitler and Schmidt, 2011).

Three national lotteries led to induction. The first lottery, which occurred in 1969, applied to men born between 1944 and 1950. The second and third lotteries took place in 1970 and 1971, respectively, but these lotteries only applied to men who turned 18 in the year of the lottery, hence men born in 1951 and 1952, respectively.

The Vietnam lottery draft randomly assigned each potential birthday to a Random Sequence Number (RSN). For instance, those born in September 1 in years 1944-1950 were assigned a RSN of 1 in the 1969 lottery. The RSN determined the order in which an individual was asked to report to the local draft board for potential induction, where those with a RSN of 1 were the first group at risk of induction. Additional RSN numbers were called in increasing order until the military manpower requirements for that lottery were met. The military manpower requirements were determined by the Secretary of Defense and the Selective Service through monthly requests at the national level for a particular number of men to be included into the Armed Forces. The last RSN called for service in the 1969 lottery was 195, which is referred to as the highest Administrative Processing number (APN). The APN for the second and third



lotteries were 125 and 95, respectively. Men with a RSN below or at the corresponding APN are referred to as draft-eligible.<sup>19</sup> That number (APN) would be divided among states according to a formula and the local draft boards would deliver the number of registrants to induct (Bitler and Schmidt, 2011).

While draft eligibility had a significant effect on military service, it does not perfectly predict military participation for the following reasons. First, men who were not draft-eligible could have still served in the military by volunteering. Lindo and Stoecker (2014) present evidence that for the cohorts affected by the 1969 lottery, military participation of those born earlier was less likely affected by the national lottery, as they may have already been called to serve in the military by the local drafts by the time the national lottery occurred. As a result, draft eligibility is a particularly stronger predictor of military service for men born between 1948 and 1952 (Lindo and Stoecker, 2014). Second, men born in draft-eligible days could fail to classify as available for service if they failed their pre-induction exam, which resulted in vast heterogeneity in the extent to which individuals served in the military, conditional on being draft-eligible across states (Bitler and Schmidt, 2011). Third, draft-eligible men could apply for exemptions through educational deferments<sup>20</sup>, marital or paternity reasons.<sup>21</sup> However, educational deferments were not so prevalent (Card and Lemieux, 2001) and educational gains among those affected by the lottery are most likely a consequence of service rather than avoidance (Angrist and Chen, 2011). Fourth, draft-eligible men could refuse to serve, becoming draft offenders (Baskir and Strauss, 1978).<sup>22</sup>

According to the Military Training and Service Act of 1951, men who were drafted were required to serve for two years. However, the duration of obligations for enlisted men varied depending on the military branch, ranging from two years for the Marine Corps, three years for

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<sup>19</sup> For the remaining of the paper, we refer to men with a RSN below or at the corresponding APN as draft-eligible.

<sup>20</sup> Card and Lemieux (2001) present evidence that draft avoidance through educational deferments was not very prevalent, as the national cohort induction risk only increased college attendance rates for men relative to women by 4 to 6 percentage points in the late 1960s. Educational deferments, which allowed delay or forgo service, were available for full-time male college students seeking a four-year degree, as long as they remained in good standing until they turned 24. Also, graduate school deferments were available for college graduates, but were only issued until 1968, before the lottery was implemented. New educational deferments were not given after 1971, but existing deferments still grandfathered. Finally, occupational deferments were issued until 1970.

<sup>21</sup> Paternity deferments were available until 1970 due to executive order 11527, which stated that paternity deferments were not going to be granted for children conceived on or after April 23, 1970. Marital deferments, meanwhile, ended in the mid-1960s (Bitler and Schmidt, 2012; Davis and Dolbeare, 1969).

<sup>22</sup> Almost half of the 570,000 traceable draft avoiders were accused of draft offenders and about 22,000 of them were convicted in trial (Peterson, 1998).

the Army, and four years for the Navy and Air Force (Moskos, 1970; Bitler and Schmidt, 2011). Men drafted were sometimes assigned to a particularly type of training (e.g. infantry, cooking, and construction, among others) before receiving their permanent assignments (Moskos, 1970).<sup>23</sup> The combination of time spent in training and on military duty combined resulted in most drafted individuals being in service for approximately two years (Moskos, 1975, Bitler and Schmidt, 2011).

The 1969 lottery had an issue that potentially affected the nature of the randomized process involved in the lottery and, as a result, individuals born later in the year were more likely to be draft-eligible (Fienberg, 1971). The process involved coding each potential birthday onto a capsule, which was added month by month into a drawer and only shuffled after each month was added. As a result, birthdays corresponding to later months in the year were more easily reachable and those born in later months were more likely to be draft-eligible.<sup>24</sup> The later lotteries implemented a different process as a response to the potential imperfect random nature of the first lottery. The process for the 1970 and 1971 lotteries involved coding each potential birthday onto balls that were drawn from a glass container. Just like before, the RSN was assigned based on the order in which the balls were drawn.

### 3. Data

The National Longitudinal Survey of Youth 1997 (NLSY97) collects longitudinal information for a nationally representative sample of 8,984 respondents between the ages of 12 and 18 in 1997. More important, the NLSY provides four sets of variables that are crucial for this study: Self-reported data on risky health behaviors, self-reported measures of delinquent behaviors, the exact date of birth of the parents, and measures of parenting styles and family environment. Given that the goal of this study is to identify the causal effect of the Vietnam lottery on risky behaviors, as well as on potential family circumstances and parenting styles that might lead to those behaviors, the NLSY97 is a nearly ideal dataset, as it allows us to match the

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<sup>23</sup> Draft-eligible men often preferred to enlist prior to being called to report for service, as that could allow them to enter military service in branches under better circumstances.

<sup>24</sup> We include paternal month of birth fixed effects in all our specifications. In addition, we explore with one additional specification where we control for year-by-month of birth fixed effects to overcome the potential omitted variable bias that would occur if people born in later months are differentially likely to have children who are more likely to engage in risky behaviors (Angrist and Chen, 2011; Angrist, Chen and Frandsen, 2010; Conley and Heerwig, 2009; Eisenberg and Rowe, 2009).

father's exact date of birth to a lottery number to indicate whether the father was draft-eligible or not. That said, a drawback is the relatively small sample size.

The first set of variables is the self-reported measures of risky health behaviors. This is, alcohol, marijuana, cigarettes, and hard drug consumption at the intensive and extensive margins, as well as the age of initiation into the use of these substances. In particular, the NLSY97 asked each respondent whether they had ever consumed each of these drugs at the initial wave (and if missing at the initial wave, the NLSY97 asked them this question in early, subsequent rounds). Additionally, every year after the initial wave, respondents were asked whether they had consumed each of these drugs in between interviews. Using this information, we compute two time-invariant measures of drug use: Ever used each of these substances by age 18 and the age of initiation.<sup>25</sup> We also estimate the effect of draft eligibility on two time-varying measures: An indicator for whether the respondent consumed each of these drugs in the past year (i.e., since the last interview) and the natural logarithm of the number of days in which the substance was used in the month prior to the interview.<sup>26</sup> An exception is for hard drug consumption, where we only have information about whether the drug was consumed in the last year and the number of times (not days) in which the respondent consumed it in the past year.

The second set of variables is the self-reported measures of delinquent activities. There are tradeoffs to measuring criminal activity using self-reported data as opposed to administrative or arrest data. Given that we are focusing on juvenile delinquency, self-reported data of delinquent activity is particularly relevant as the delinquent acts we are focusing on (attacking somebody, stealing, selling drugs, or belonging to a gang<sup>27</sup>) are very unlikely to end up in an arrest among minors (Levitt and Lochner 2001).<sup>28</sup> We create an indicator for whether the respondent committed any of these delinquent acts by age 18. Additionally, we use a delinquency index created by the NLSY97.

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<sup>25</sup> We focus on substance use early in life due to the vast literature that highlights the particularly detrimental role of early initiation in substance use on cognitive abilities (Giedd, 2004; Meier et al, 2012; Winters and Arria, 2011; Casey et al, 2008; Bossong et al., 2012a, 2012b)) and the particular increase in the probability of transitioning into harder drugs among those who start alcohol and marijuana consumption at early ages (Deza, 2015).

<sup>26</sup> Our measure is the natural logarithm of days of consumption in the past month plus one.

<sup>27</sup> The NLSY97 also provides indicators for whether the respondent ever owned a gun, destroyed property, runaway or committed other property-related delinquent acts. Since these behaviors are vaguely defined and are ambiguously considered a delinquent behavior, we focus on the previously mentioned set of delinquent acts (i.e., attacking somebody, stealing, selling drugs, or belonging to a gang), which are unambiguously defined as criminal behaviors.

<sup>28</sup> While minor delinquent acts among teenagers may be largely missed if we rely on arrest data, crime self-reports are usually highly correlated with official arrest data (Farrington, 1973).

The third set of variables is the exact date of birth of the parents, which allows us to link the date of birth with an exact lottery number for those born between 1944 and 1952.<sup>29</sup> The NLSY97 collected the exact date of birth of parents only in the first wave. Additionally, the exact day of birth is only reported for parents who lived with the respondent in the first wave, independently of whether the parent was the biological parent or a “parent figure” (such as a step-parent or adoptive parent).<sup>30</sup> For the biological parents who did not live with the respondent in 1997, the most we observe is the year of birth, which is not sufficient to link the parent to a lottery number. Thus, we can only estimate the effect of having a draft-eligible biological father (or father figure) on children who are living with their biological father (or father figure) in 1997. As the NLSY97 is a small sample (and only a relatively small share of fathers were born between 1944 and 1952)<sup>31</sup>, our main analysis focuses on estimating the effect of draft eligibility for every children whose father figure (whether biological or not) was affected by the Vietnam lottery, with the intention to maximize statistical power. That said, we present estimates in the online appendix that indicate the results are similar when we constraint the sample to biological fathers. For the remainder of the paper, we refer to the father figure (mother figure) simply as father (mother).<sup>32</sup>

The fourth set of variables contains measures of parenting styles and family environment. The psychology literature has classified two dimensions of parenting styles (responsive/unresponsive and demanding/undemanding) into four types using the Baumrid typology (Baumrid, 1968; Maccoby and Martin, 1983; Doepke and Zilibotti, 2017): authoritative (responding and demanding), authoritarian (unresponsive and demanding), permissive (responsive and undemanding), and uninvolved (unresponsive and undemanding). Authoritative parenting style is expected to maximize cultural intergenerational transmission, as it is defined by parents trying to shape their children’s behaviors to their own preferences. Previous literature

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<sup>29</sup> Following the literature, we use the crosswalk relating birthdates to the numbers that determine draft eligibility from Angrist (1990), available in: <https://economics.mit.edu/faculty/angrist/data1/data/angrist90>.

<sup>30</sup> Out of the 8,984 children in the NLSY97, 7,862 reported a valid year of birth for their biological mother, 8,233 for their mother figure, 4,853 for their biological father and 5,958 for their father figure.

<sup>31</sup> Father figures of the NLY97 (whether biological or not) were born between 1920 and 1973, with 34 percent of them born between 1944 and 1952. Figure 1 presents the histogram for paternal year of birth.

<sup>32</sup> While the lottery number was only attached to the father’s date of birth, we also use the mother’s date of birth as a falsification test. 22 percent of the mothers were born between 1944 and 1952. Figure 2 presents the histogram for maternal year of birth.

indicates that authoritative parenting is more likely among military parents than among civilian parents (Speck and Riggs, 2013). In addition to parenting styles, the NLSY97 reports aptitude test results for the respondent and measures of environment, such as the share of peers that smoke, get drunk, use drugs or have sex. The NLSY97 also reports variables about the household, such as whether the respondent lives in a residential neighborhood, whether the interviewer was concerned for his or her safety in the respondent's neighborhood, the household income, and wealth. Moreover, the NLSY97 reports separately labor market outcomes of the father and the mother, such as education, average hours of work, and self-reported health. Finally, it also reports attitudes from the parents towards the respondent, such as whether they praise, criticize, help or blame the respondent, or whether they cancel plans on the respondent or know information about the respondent as well as the respondent's friends.

Besides the small sample size, there are three other potential data limitations. First, the longitudinal nature of the NLSY97 means that we only observe individuals who are not lost due to attrition and who answered questions related to their risky behaviors. We address this issue of self-selection by estimating the effect of paternal draft eligibility on the probability the respondent was not lost due to attrition until age 18 and present the null results in Table A2. We find draft eligibility has no effect on the probability of attrition.

Second, even conditional on not being lost due to attrition, respondents with a draft-eligible father could be differentially likely to respond questions related to drug consumption and delinquent behaviors. However, this is not the case, as over 99 percent of respondents who were not lost due to attrition in 1998 have a valid response to the substance use related questions.<sup>33</sup>

A third concern is the self-reported nature of the data. There are two reasons why we believe this is not an issue: (i) NLSY97 collects answers to sensitive questions, such as about substance use and delinquent behaviors, using computer-assisted self-interviews (ACASI), which reduces underreporting of risky behaviors compared to other interview methods (Brener et al, 2003); (ii) the reported rates of use presented in the NLSY97 are consistent with two non-

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<sup>33</sup> Questions regarding hard drugs were first answered in 1998, while questions regarding alcohol, marijuana, and cigarettes were asked starting in 1997.

longitudinal major datasets on drug use (i.e., the National Study of Drug Use and Health, NSDUH, and Monitoring the Future, MTF).<sup>34</sup>

From the entire sample of 8,984 adolescents, 5,958 respondents had a non-missing paternal date of birth, and only 2,029 of these fathers were born between 1944 and 1952. Among those, 1,759 respondents had a father with non-missing place of birth and 1,464 of them were born in the United States. We limit our sample to the 1,464 respondents whose fathers were born in the U.S. between 1944 and 1952 to ensure fathers were affected by the lottery (as the NLSY97 does not contain information on fathers' citizenship status). Table 1 presents summary statistics for the overall sample of 8,984 respondents in the first column. The second column presents summary statistics for the subsample of interest that is composed of 1,464 respondents whose father is born in the U.S. between 1944 and 1952 and hence were subject to the lottery.<sup>35</sup> The third and fourth columns are composed of the subsample of respondents whose fathers' draft-eligibility status was determined by the lottery (non-draft-eligible for column 3 and draft-eligible for column 4).

The descriptive statistics presented in Table 1 regarding the full sample (column 1) relative to the subsample of interest (column 2) can be summarized as follows. First, the share of mothers born in the U.S in our subsample of interest is 96 percent, relative to 84 percent in the full sample. The difference reflects that the subsample of interest is restricted to U.S. born fathers. Second, respondents in the subsample of interest are less likely to be black (15 percent relative to 26 percent) or Hispanic (10 percent relative to 21 percent). Regarding risky health behaviors, the share of respondents who had consumed the different substances in the subsample of interest and the full sample is, in most cases, very similar. For example, 43.7 percent and 44.2 percent consumed marijuana, 60.3 percent and 60.2 percent consumed cigarettes, and 13.3 percent and 13.5 percent consumed hard drugs in the subsample of interest and the full sample, respectively. Similarly, the starting ages are very similar between the subsample of interest and the full sample. Overall, the subsample of interest and the full sample are very similar in

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<sup>34</sup> See Table A1, that corresponds to Table A3 in Deza (2015), which compares the rates of past year drug use, past month drug use, lifetime drug use, and starting age of drug consumption in the NLSY97, NSDUH, and MTF. For a more detailed discussion about comparisons among these datasets, see Deza (2015), Online Appendix B.

<sup>35</sup> Fathers who were not subject to the lottery (excluded from the subsample of interest) are those born outside the U.S., born before 1944, or born after 1952. Those excluded had a lower share of mothers born in the U.S. (81 percent relative to 84 percent in the overall sample) and were more likely to be minorities (28 percent black and 23 percent Hispanic relative to 26 percent and 21 percent in the overall sample).

characteristics and outcomes other than the percent who consumed alcohol, the time-varying measures of substance consumption<sup>36</sup>, parenting styles and attitudes towards their children<sup>37</sup>, and age of the father and age of the respondent.

Within the subsample of interest, the last two columns present summary statistics for the subsample of respondents whose father was non-draft-eligible (column 3) and whose father was draft-eligible (column 4), respectively, which provide the following salient stylized facts that motivate the paper. First, the starting age of marijuana, cigarette, and hard drug consumption are lower among respondents with a draft-eligible father. Second, the probability of having ever consumed marijuana, cigarettes, and hard drugs by age 18 are higher among respondents with a draft-eligible father. Similarly, the time-varying consumption of marijuana, alcohol, and hard drugs are also higher among respondents with a draft-eligible father. Third, the probability of reporting engaging in delinquent behaviors by age 18 is also higher among respondents with a draft-eligible father. Fourth, respondents with a draft-eligible father are more likely to have a father that is uninvolved, critical, less helpful, more likely to cancel plans on them and more likely to know very little about the respondent, friends of the respondent or parents of the respondent's friends.<sup>38</sup> Finally, respondents with a draft-eligible father have school peers with higher prevalence of using substances (alcohol, tobacco and dugs) and reside in neighborhoods that are less residential and perceived as less safe by the interviewer. Overall, raw summary statistics indicate that respondents with draft-eligible fathers have higher rates of participation in risky behaviors and measures of parental inputs and environment that are more conducive to engaging in risky behaviors than respondents with draft-ineligible fathers.

## 4. Methods

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<sup>36</sup>The fact that respondents in the subsample of interest have higher measures of time-varying substance consumption can be reconciled with the fact that the respondents are older, on average, in the subsample of interest.

<sup>37</sup> The fact that parents are more permissive and less uninvolved in the subsample of interest could be reconciled with the fact that parents in the subsample of interest are born in the U.S. and hence the differences could be attributed, in part, to cultural characteristics in parenting across countries. Additionally, the subsample of interest excludes households where the father was not living with the respondent in the first wave, which could also be behind the differences in parenting styles.

<sup>38</sup> The potential answers for attitudes from the father towards the respondent (praises, criticizes, helps, blames, and cancels plans) are: never, rarely, sometimes, usually, and always. We group them into different bins due to small cell sizes in some of the choices. The potential answers for how much the father knows about the respondent (knows the respondent's friends, the parents of the respondent's friends, and what the respondent is usually doing) are: nothing, just a little, some things, most things, and everything. Similarly, we group them into different bins as some cells have very few observations. The grouping is described in detail in the results section.

The goal of this study is to estimate the effect of the Vietnam draft lottery on the next generation's risky behaviors exploiting the exogeneity of the draft lottery (Angrist, 1990). Following Goodman and Isen's (2020) main strategy, in this study we estimate the full effect of fathers' draft-eligibility on the next generation's risky behaviors, independently of whether it is driven by military service or draft avoidance.

The main outcomes of interest are measures of alcohol, cigarette, marijuana, and hard drugs use as well as criminal participation by age 18. We focus on substance use during adolescence due to the particularly significant and negative long-term effects on human capital accumulation and labor market outcomes (Mezza and Buchinsky, forthcoming), brain development and substance misuse (Giedd, 2004; Winters and Arria, 2011; Casey et al., 2008; Bossong et al. 2012a, 2012b), and stepping-stone effects towards harder drugs, relative to adult consumption (Deza, 2015). Similarly, we also focus on criminal participation by age 18 due to the evidence that indicates that entering the criminal justice system at early ages increases the chances of a criminal career later in life (Aizer and Doyle, 2015).

### A. Main Analysis

In particular, we estimate the following difference in differences regression for time-invariant measures of risky health behaviors on the sample of respondents whose father was born between 1944 and 1952.

$$(1) \quad Y_{i,c,p} = \gamma_0 + \gamma_1 \text{Eligible}_{ip} + \gamma X_i + \gamma_c + \gamma_{py}^p + \gamma_{pm}^p + \epsilon_{i,c,p}$$

$Y_{i,c,p}$  is an indicator for time-invariant dependent variables that measure risky behaviors, such as whether respondent  $i$ , born in year  $c$ , whose father was born on exact date of birth  $p$ , ever consumed alcohol, cigarettes, marijuana or hard drugs by age 18 or committed delinquent acts by age 18. The exact date of birth  $p$  includes the day, month, and year. The variable  $\text{Eligible}_{ip}$  is an indicator for whether the father's exact date of birth  $p$  corresponded to a lottery number at or below the threshold in the relevant year.

The coefficient of interest,  $\gamma_1$ , compares children of fathers who were at or below the threshold in a given year (and, hence, who were at risk of conscription) with children of fathers who were above the threshold (and, hence, who were not at risk of conscription). In other words,



$\gamma_1$  measures the causal effect of having a father who was eligible to be drafted, regardless of whether the father actually served in the military or avoided being drafted.

The vector of covariates  $X_i$  includes indicators for whether the respondent is male, black or Hispanic. The vector  $\gamma_c$  corresponds to the respondent's year of birth fixed effect, which addresses—among other things—that children born in different years might have faced different environments that could make them more or less prone to engage in risky behaviors. Finally, the vector  $\gamma_{py}^p$  corresponds to the father's year of birth fixed effect and the vector  $\gamma_{pm}^p$  to the father's month of birth fixed effect.<sup>39</sup> Following Goodman and Isen (2020), we cluster standard errors at the father's exact date of birth  $p$ , but we also cluster standard errors at the paternal state of birth level in some specifications.<sup>40</sup>

### **B. Robustness Checks, Alternative Specifications, and Falsification Diagnostics**

Following Lindo and Stoecker (2014), we first consider a robustness check where we restrict the sample to fathers born between 1948 and 1952, those more likely to be drafted based on the lottery results. The probability of induction upon draft eligibility was higher for the 1948-1952 cohorts for two main reasons: (i) Men born earlier who were able to serve in the military had probably already been called to serve by the time the 1969 lottery took place (Lindo and Stoecker, 2014) and (ii) Access to exemptions through educational deferments, marital or paternity reasons were more limited among the younger cohorts (Bitler and Schmidt, 2011, Goodman and Isen, 2020). While draft avoidance due to other factors is still a possibility for this cohort (Baskir and Strauss, 1978; Kuziemko, 2010; Wang and Flores-Lagunes, 2020), sizable and significant results for this subsample might indicate that at least part of the estimated effects are driven by military service.

We also explore with a specifications where we incorporate year-by-month of paternal birth fixed effects to account for the fact that different months of birth may have been disproportionately more likely to have lower lottery numbers in the first lottery (Lindo and Stoecker, 2014; Conley and Heerwing, 2009; Eisenberg and Rowe, 2009; Angrist, Chen and Frandsen, 2010; Angrist and Chen, 2011).

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<sup>39</sup> As previous literature, we also explore with an additional specification where we substitute the father's year of birth fixed effect,  $\gamma_{py}^p$ , and the father's month of birth fixed effect,  $\gamma_{pm}^p$ , with a father's year-by-month of birth fixed effect to adjust for the potential imperfection in the randomization of the 1969 lottery, where men born in certain months had a disproportionately higher likelihood of being draft-eligible (Fienberg, 1971; Angrist and Chen, 2011).

<sup>40</sup> We also include a year fixed effect when estimating time-varying dependent variables.

Additionally, while there were Federal policies regarding draft eligibility, there was heterogeneity in the way local draft boards interpreted them (Davis and Dolbeare, 1968; Malamud and Wosniak, 2010), which resulted in considerable variation in induction risk between states.<sup>41</sup> As such, we consider a specification where we incorporate father's state of birth fixed effects to account for heterogeneity across states that is invariant across time.

Moreover, we present several alternative specifications such as clustering standard errors at the paternal state of birth, population-weighted regressions, and restricted to biological fathers. Results remain robust.

Finally, we also estimate a falsification diagnostic which consists of determining draft-eligibility using the exact date of birth of the mother, even though women were not eligible to be drafted. Regressions using these fake lottery numbers should speak to whether results are driven by draft eligibility or something unrelated that correlates with the exact date of birth of parents.

## 5. Results

### **A. Measures of Substance Use**

The first and second columns of Table 2 present the effect of paternal draft eligibility on two time-invariant measures: The probability of having ever consumed alcohol, marijuana, cigarettes, and hard drugs by age 18 and the age of initiation into consumption, respectively. The last two columns of the table focus on two time-varying measures of substance use, which is why the number of observations increases from being one per respondent in the time-invariant outcomes (columns 1 and 2) to one per respondent-year in the time-varying outcomes (columns 3 and 4).<sup>42</sup> The outcome of interest in column 3 is an indicator of whether the respondent used a certain drug in the year prior to the interview, while the one in column 4 is the natural logarithm of the number of days in which a substance was consumed in the past month plus one, to avoid dropping the observations with zero days of consumption.

Panel A focuses on measures of alcohol consumption and indicates that paternal draft eligibility does not affect any measure of alcohol consumption. In particular, having a draft-

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<sup>41</sup> Some of these idiosyncrasies were exerted during the pre-induction examinations performed at local draft boards, where draft-eligible men were subjected to a medical and mental health exams and a moral examination (Semi-Annual Report of the Director of Selective Service, 1967; Bitler and Schmidt 2011). Bitler and Schmidt (2011) exploit this resulting heterogeneity in induction, deferment or exemption rates.

<sup>42</sup> Regressions with a time-varying outcome include year fixed effects.

eligible father does not affect the probability that an adolescent will consume alcohol by age 18, age of alcohol initiation or intensity of use.

In contrast, as Panel B indicates, paternal draft eligibility affects all measures of marijuana consumption and all these effects are statistically significant at least at a 5 percent level. In particular, children of draft-eligible fathers are 6.9 percentage points more likely to have consumed marijuana by age 18, relative to a base of 44 percent of respondents who report to having ever consumed marijuana by that age. Similarly, age of marijuana initiation decreases by one year relative to the mean of 17 years old. Regarding time-varying measures of marijuana consumption, there is an increase in the probability of using marijuana in the past year of 4.6 percentage points, relative to 25 percent, as indicated by column 3, and in the number of days of usage in the past month by 9.4 percent. In a nutshell, Panel B can be summarized as father's draft eligibility increases every measure of marijuana consumption, as measured by higher probability of ever use, younger marijuana starting age, use in the past year, and more days of consumption in the month prior to the interview.

Panel C indicates that father's draft eligibility lowers age of initiation into cigarette consumption (0.56 years, relative to a mean of 15 years) and this effect is statistically significant at a 5 percent level. Finally, Panel D presents some evidence of an increase in hard drug consumption, but the effects are only statistically significant at a 10 percent level. The probability of ever using hard drugs by age 18 increases by 3.7 percentage points, from a baseline of 13 percent. The probability of using hard drugs in the past year increases by 1.7 percentage points (relative to a 6.5 percent mean) and the number of times hard drugs were used in the past month increases by 6.7 percent. Overall, Table 2 indicates that paternal draft eligibility increases the respondent's propensity to consume substances.<sup>43</sup>

## **B. Measures of Criminal Activity**

The NLSY97 asks respondents to report whether they committed certain delinquent or criminal acts (attacking somebody, stealing, selling drugs, belonging to a gang) in addition to other acts that are associated with delinquent acts (owning a gun, destroying property, running

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<sup>43</sup> We also examine the effects separately by gender of the respondent and find that the effects are in line with the ones already discussed and are statistically significant at the conventional level for male respondents (Table A7). On the other hand, the effects for female respondents are imprecise and smaller in magnitude (Table A8).

away, and other property-destruction related acts). We focus on the delinquent or criminal acts and create a time-invariant indicator for whether the respondent ever committed any of them while being under age 18. Panel E of Table 2 presents evidence that having a draft-eligible father increases the probability of committing a criminal act by approximately 6.7 percentage points, relative to a mean of 54 percent (column 1).<sup>44</sup>

The NLSY97 also reports risk index measures calculated based on the raw data reported by respondents. In particular, we look at whether having a draft-eligible father has an effect on the delinquency risk index.<sup>45</sup> A higher delinquency risk score means a higher risk. Consistent with the findings on delinquent behaviors, the second column of Panel E Table 2 presents evidence that having a draft-eligible father increases the delinquency risk index of the respondent and this increase is statistically significant at a 1 percent level.<sup>46</sup>

### **C. Robustness Checks, Alternative Specifications, and Falsification Diagnostics**

#### **Earlier Cohorts Service and Draft Avoidance Through Exemptions**

While fathers born between 1944 and 1952 were subjected to the Vietnam lottery draft, previous literature (Angrist and Chen, 2010; Lindo and Stoecker, 2014) indicates that draft eligibility had the strongest effect on service for the later cohorts, those born between 1948 and 1952 (i.e., those who were closer to 19 years of age when affected by the lottery) for two reasons. First, “capable men” in the earlier cohorts affected by the 1969 lottery could have either volunteered or been called by local drafts prior to the implementation of the lottery and, hence, their service was less responsive to the national lottery. Second, access to educational deferments and marital or paternity exemptions were limited among the younger cohorts (Bitler and Schmidt, 2011, Goodman and Isen, 2020).

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<sup>44</sup> While 54 percent seems high, some of these delinquent behaviors have a vague definition. For example, the category “attack somebody” could be aggravated assault or could be simply being in a fight.

<sup>45</sup> More information on the delinquency risk index can be found here: <https://www.nlsinfo.org/site/nlsy97/nlsdocs/nlsy97/codesup/mapp9.html>.

<sup>46</sup> While the effect of paternal draft eligibility on measures of delinquency seem unusually large, these large differences are consistent even in the raw summary statistics presented in Table 1, where 58 (51) percent of respondents with a draft eligible (draft ineligible) father engaged in delinquency by age 18.

While we lose several observations and, hence, lose precision by restricting the sample to respondents with fathers born between 1948 and 1952, Table 3 presents evidence that the sign and magnitude of the effects remain in line with those in Table 2. In particular, Table 3 indicates that paternal draft eligibility decreased the age of marijuana initiation by 1 year relative to an average of 17 and this decrease is statistically significant at a 5 percent level. Similarly, Panel E of Table 3 shows that the sign and magnitude of the effect on criminal activity and the risk index remain in line with the main effects after restricting the analysis to the 1948-1952 cohort and remain significant.

In a nutshell, the effects on substance use and criminal activity are robust to restricting the analysis to a group that was more likely to have served in the military as a result of the Vietnam lottery and was less likely to have access to service exemptions. However, statistical significance is somewhat compromised as the samples become significantly smaller.

### **Random Assignment of Month of Birth**

The 1969 lottery suffered from an imperfection in the randomization that led to a higher likelihood of draft eligibility among men subjected to that lottery who were born in later months (Fienberg, 1971). If father's month of birth is correlated with children's risky behaviors, this imperfection in the randomization would lead to an omitted variable bias. To deal with this issue, and following previous literature (Lindo and Stoecker, 2014; Conley and Heerwing, 2009; Eisenberg and Rowe, 2009; Angrist, Chen and Frandsen, 2010; Angrist and Chen, 2011), we extend our main analysis by incorporating year-by-month of paternal birth fixed effects. Table 4 indicates that controlling for father's year-by-month of birth does not change the main findings.

### **Alternative Specifications**

Finally, we also explore alternative specifications in the online appendix. Table A3 presents estimates corresponding to an alternative specification where we include father's state of birth fixed effects to account for potential heterogeneity across states that is invariant across time. Table A4 presents the results clustering the standard errors at the paternal state of birth level. Table A5 presents the results where each observation is weighted by the weights assigned

to each respondent provided by the NLSY97. Table A6 restricts the analysis to biological fathers instead of father figures.<sup>47</sup> Results are robust to these alternative specifications.

### **Falsification Diagnostics**

We consider a falsification diagnostic that exploits the fact that women were not eligible for the draft to test whether results are driven by father's draft eligibility or something specific to the exact date of birth of the parents. If the lottery was truly random and the effects on children's substance use were driven by fathers' draft eligibility, we would expect that draft eligibility based on mothers' date of birth should not be relevant. Otherwise, mothers' draft eligibility could be significant in determining children's risky behaviors. In Table 5 we present estimates when we define draft eligibility based on the mother's exact date of birth. Results indicate that the effects are not driven by the date of birth, but instead by the fact that fathers born in those dates were draft-eligible.

### **D. Potential Mechanisms**

Our main results indicate that paternal draft eligibility increases substance use, decreases age of substance use initiation, and increases delinquent acts among their children. A remaining question is to explore potential mechanisms through which paternal draft eligibility could affect risky behaviors of the next generation. While we do not observe whether draft eligibility had a direct effect on determinants of an environment conducive of their children engaging in risky behaviors (e.g. opioid use, PTSD, drug consumption, or incarceration records among others), we observe a rich set of information about several factors that could have been influenced by military service and draft avoidance that can act as mechanisms for children to engage in risky behaviors. We divide these factors into the three following mechanisms: (1) Parenting Styles, (2) Attitudes from father towards the respondent, and (3) Environment.

### **Parenting Styles**

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<sup>47</sup> The NLSY97 only contains the exact date of birth for resident fathers whether they are biological fathers or father figures. It only provides year of birth (but not the exact date of birth) for nonresident biological fathers. Therefore, this analysis uses the smaller subsample of biological resident fathers.

There are many potential mechanisms through which being draft-eligible could have affected parenting styles. The psychology literature classifies two dimensions of parenting (responsive/unresponsive and demanding/undemanding) into four parenting styles: authoritative (responding and demanding), authoritarian (unresponsive and demanding), permissive (responsive and undemanding), and uninvolved (unresponsive and undemanding) (Baumrid, 1968; Maccoby and Martin, 1983; Doepke and Zilibotti, 2017). According to the literature, the authoritative parenting, defined as responsive and demanding, is more prevalent among military parents than among civilian parents (Speck and Riggs, 2013) and is expected to maximize intergenerational transmissions as it involves parents strictly shaping their children to their preferences.

We estimate equation 1 using as the dependent variable an indicator for whether having a draft-eligible father affects the parenting style of the father, as well as the parenting style of the mother. For instance, if being draft-eligible makes the father “aware that life is too short” and, hence, makes him be more concerned about having a strong relationship with his children and being lenient with them, the father may be less likely to be demanding and hence his parenting styles will be more likely to be permissive (responsive and undemanding) or uninvolved (unresponsive and undemanding). Alternatively, if being draft-eligible makes the father feel “life is tough” and children should be prepared for potential future adverse conditions such as war, the father may be more demanding and, hence, his parenting style may be more likely to be authoritarian (unresponsive and demanding) or authoritative (responsive and demanding).

While the mother was not exposed to draft eligibility, having a child with a draft-eligible man could have changed her parenting style as well. For instance, the mother may decide to offset the father’s permissive or uninvolved (authoritarian or authoritative) style by being more authoritarian or authoritative (permissive or uninvolved). Alternatively, the mother may complement the father’s parenting style and reinforce the effects of being permissive/uninvolved or authoritarian/authoritative.

We evaluate the effect of paternal draft eligibility on the parenting style of each parent individually and then also on an indicator of whether either parent has any given parenting style. Panel A of Table 6 presents evidence that being draft-eligible makes the father significantly more likely to have an “uninvolved” (unresponsive and undemanding) parenting style by 4.3 percentage points, relative to a mean of 12 percent, with no effect on the father being permissive,

authoritarian or authoritative. Interestingly, having a draft-eligible father also affects the mother's parenting style. Panel B shows that mothers of children living with draft-eligible fathers are less likely to be authoritative (responsive and demanding) by 6.5 percentage points, relative to a 44 percent mean, and this decrease is statistically significant at a 5 percent level. There is some evidence that these mothers are also more likely to be authoritarian (increasing the probability by 2.8 percentage points, relative to an 11 percent mean), but this effect is statistically significant only at a 10 percent level.<sup>48</sup>

Finally, when we focus on the indicator for the parenting style of either parent, Panel C indicates that having a draft-eligible father increases the probability that either parent would be more uninvolved (unresponsive and undemanding) and less authoritative (responsive and demanding), with no effect on being permissive or authoritarian. This evidence suggests that the maternal parenting style follows the paternal parenting style on the dimensions of being unresponsive and undemanding.

Overall, paternal draft eligibility switches the parenting of the household to be less responsive and less demanding, and this could affect the propensity to engage in risky outcomes.<sup>49</sup>

### **Attitude from Father Towards the Child**

We also examine whether paternal draft eligibility affects attitudes from the father to the child, such as whether the father praises, criticizes, helps, blames or cancels plans on the child, as well as whether the father knows about the respondent's friends, friends' parents or overall things about the respondent's life.

The NLSY97 asks respondents to report whether their father praises, criticizes, helps, blames or cancels plans on them and the answer is reported as never, rarely, sometimes, usually, or always. Some attitudes are very prominent in paternal attitudes such that there are only few children who report that the behavior never happens. For example, only 3.6 percent of respondents reported that the father never praises them and only 4 percent reported that the father

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<sup>48</sup> While the estimated effects are particularly large, it is in line with the large differences in the raw summary statistics presented in Table 1, where 15 percent of non-draft-eligible parents are reported to be uninvolved as opposed to 20 percent of draft-eligible fathers.

<sup>49</sup> While authoritative parenting is more prevalent among military parents than among civilian parents under the usual system where men self-select into the military (Speck and Riggs, 2013), draft eligible parents are less likely to be authoritative.



never helps them. Alternatively, 38 percent of respondents reported that the father never criticizes them, 73 percent reported that the father never blames them, and 67 percent reported that the father never cancels plans on them. We focus on indicators for whether the father never has those given attitudes towards the respondent, except in the cases where never is a rare occasion, in which we group never/rarely/sometimes together. Column 3 of Table 7 presents evidence that paternal draft eligibility increases the probability that the father is rarely helpful and this effect is statistically significant at a 5 percent level. Column 5 presents some evidence that the father is less likely to never cancel plans with the respondent, but this effect is only statistically significant at a 10 percent level.

Panel B examines whether paternal draft eligibility affects the extent to which the father knows the respondent. The NLSY97 asks the respondent how much the father knows about his or her friends, friends' parents, and overall about what the respondent is doing. The answers are recorded in the following five categories: knows nothing, just a little, some things, most things, and knows everything. Consistent with the previous behaviors, we focus on an indicator of whether the father knows nothing, unless having a father that knows nothing is unlikely, in which case we group knows nothing/just a little/some things together.<sup>50</sup> None of these effects are significant at conventional levels, indicating that draft-eligible fathers do not differ on how much they know about their children acquaintances and activities from non-draft-eligible fathers.

Overall, Table 7 presents evidence that draft eligibility is associated with having a father that cancels plans frequently and helps the respondent infrequently.<sup>51</sup>

## **Measures of Environment**

Having a draft-eligible father could have also affected household circumstances, as well as potentially exposing the respondent to a different environment and different peers. We examine a variety of measures of environment which could potentially be mechanisms through which paternal draft eligibility affects children's propensity to engage in risky behaviors, which

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<sup>50</sup> While 22 percent of respondents report that their father knows nothing about their friends' parents, only 14 percent and 10 percent report that their father knows nothing about their friends or how they are doing, respectively. Therefore, we group knows nothing/just a little/some things together for knowledge about the respondent's friends and for how the respondent is doing.

<sup>51</sup> While the estimated significant effects are large in magnitude, the differences are in line with unconditional differences presented in Table 1. In particular, 35 percent of draft-eligible fathers help the respondent only infrequently (never/rarely/sometimes), compared to 27 percent of non-draft eligible fathers.

we divide in five categories: peers, residential, labor market outcomes of the father, labor market outcomes of the mother, and health/biological measures.

First, we evaluate whether having a draft-eligible father exposes respondents to a different subset of peers that may have differential propensities to engage in risky health behaviors such as smoking, getting drunk, using drugs or having sex. The NLSY97 defines peers as kids in the grade of the respondent. Thus, peers reflect the choice of where the parents decided to live rather than a choice based on friendship of the respondent. We use the NLSY97 indicator for whether almost none of the respondent's peers engaged in a particular risky health behavior—define as less than 10 percent.<sup>52</sup> Panel A of Table 8 presents evidence that respondents whose fathers were draft-eligible are less likely to report that almost none of their peers smoke or have sex. In particular, having a draft-eligible father decreases the probability of having almost none of their peers smoke by 6.9 percentage points, relative to a 25 percent mean, and decreases the probability of having almost none of their peers have sex by 6.5 percentage points, relative to a 22 percent mean. While not statistically significant at conventional levels, having a draft-eligible father also decreases the probability of having almost none of their peers get drunk or use drugs. Thus, overall, paternal draft eligibility increases the share of peers who engage in risky health behaviors.

Panel B of Table 8 reports the interviewer's remarks about the respondent's home and neighborhood. The first column reports an estimate of draft eligibility on an indicator of whether the interviewer would describe the area where the respondent lived as residential (rural and residential, suburban and residential or urban and residential). Non-residential categories include: rural-agricultural, suburban-commerce, urban-commerce, urban-wholesale, buildings for churches or vacant buildings or lots. The estimate indicates that having a draft-eligible father decreases the probability of living in a residential neighborhood according to the interviewer's reports, and the effect is significant at a 10 percent level. The second column reports an estimate

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<sup>52</sup> The NLSY97 reports categorical indicators for whether less than 10 percent, about 25 percent, about 50 percent, about 75 percent, and almost all or above 90 percent of the peers engage in the given behaviors. These variables reflect the behavior of current school peers at the moment of the interview or the behavior of the last set of peers before the respondent stopped attending school. Values for these variables are rarely missing, as these questions were asked during the first wave, before attrition can happen. For instance, 8,871 respondents reported percent of peers who smoke, 8,799 reported percent of peers who get drunk at least once a month, and 8,752 reported percent of peers who have ever used marijuana, inhalants or other drugs. That said, only 3,965 reported percent of peers who have had sex out of the entire sample of 8,984 respondents, as this question was only asked to those of age 16 or older.

of draft eligibility on an indicator for whether the interviewer felt concerned for his or her safety when he or she went to the respondent's neighborhood/home. Having a draft-eligible father increases the probability of the interviewer reporting feeling unsafe at the neighborhood or home during the interview. Unfortunately, we cannot distinguish whether this feeling of unsafety is from the home or the neighborhood.<sup>53</sup> The last two columns of Panel B indicate that paternal draft eligibility does not affect the household income or net worth of the household in the NLSY97 sample.

Similarly, Panel C shows that paternal draft eligibility does not affect the probability that the father has at most 12 years of education, but there is some evidence that paternal draft eligibility decreases the probability that the father works at least 40 hours per week, but this effect is statistically significant only at a 10 percent level.

Panel D shows that draft-eligible men were not differentially likely to marry less educated women than non-draft-eligible men. However, paternal draft eligibility lowers the average number of hours the mother works.

Finally, panel E provides evidence that paternal draft eligibility has no effect on children's aptitude test-math scores, suggesting that lower school performance is not driving children of draft-eligible fathers to engage in risky behaviors. Additionally, paternal draft eligibility does not affect pre-determined maternal characteristics through assortative mating, as measured by the probability that the respondent's mother was living with her biological parents by age 14. Panel E also provides evidence that paternal draft eligibility results in women being less likely to report that they are in very good or excellent health (by 8.4 percentage points, relative to a mean of 68 percent), without affecting the probability that the draft-eligible father himself would report being in very good or excellent health. The health of the mother could either be the product of draft-eligible men being more likely to marry unhealthy women than non-draft-eligible men or the product of living with draft-eligible men affecting women's health negatively even if draft- and non-draft-eligible men married women with similar initial health conditions. This could be the case particularly for mental health. While we cannot determine whether draft-eligible men get involved in relationships with women more prone to have bad

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<sup>53</sup> The effect of paternal draft eligibility on whether the neighborhood is residential and whether the interviewer feels safe (columns 1 and 2 of Panel B) are robust to the inclusion of household wealth as a control. Results available upon request.

health or the bad health is an outcome of being in a relationship with a draft-eligible man, based on the evidence in Panel E, which indicates that maternal family composition while growing up is unaffected by paternal draft eligibility, the latter is more likely to be the case. Thus, our results on risky behaviors by fathers' draft eligibility seem to be consistent with evidence in Goodman and Isen (2020) that innate conditions do not seem to explain differences in children's education and labor market outcomes in young adulthood.

Overall, Table 8 indicates that paternal draft eligibility exposes respondents to peers that are more likely to engage in risky health behaviors, to an environment less likely to be perceived as safe, and to unhealthier mothers. Exposure to those environments are more conducive to the respondents engaging in risky behaviors.

## **6. Summary and Conclusions**

This study contributes to the literature on identification of causal intergenerational effects of shocks and policies and, more specifically, to the nascent literature on intergenerational effects of the Vietnam lottery draft. Additionally, it contributes to the literature on the role of household circumstances on adolescents' risky behaviors. To the best of our knowledge, it is the first study to establish causal evidence of the intergenerational effects of fathers' draft eligibility on children's risky behaviors.

Our results indicate that while there may have been positive effects of draft eligibility (e.g., access to GI Bill benefits, learning discipline or receiving training during military service, or increased college attendance in order to avoid being drafted), any of the potential positive effects were not large enough to offset the large negative effects of being draft-eligible on risky behaviors among their children. More specifically, we first find that paternal draft eligibility increased the propensity to consume marijuana during adolescence by 6.9 percentage points, relative to a mean of 44 percent. Second, it reduced marijuana initiation age by 1 year, relative to a mean of 17. Third, it increased time-varying measures of marijuana consumption (last year use and number of days it was consumed in the month prior to the interview). Fourth, it decreased age of cigarette initiation by approximately half a year, relative to a mean of 15 years old.<sup>54</sup> Fifth, it increased the probability of engaging in delinquent behaviors by 6.7 percentage points, relative

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<sup>54</sup> There is some evidence that paternal draft eligibility increased the propensity to consume hard drugs during adolescence and their consumption, although these effects are only statistically significant at a 10 percent level.

to a mean of 54 percent. Finally, these results are robust to a variety of specifications, different subsamples, and falsification diagnostics where we use the maternal exact date of birth to determine draft eligibility.

We further explore potential mechanisms through which the children of draft-eligible men could be more likely to engage in risky health behaviors. In particular, we explore three sets of mechanisms: parenting styles, attitudes from the father towards the respondent, and household environment. The results can be summarized as follows. First, parenting styles are more likely to be “uninvolved” (unresponsive and undemanding) and less likely to be “authoritative” (responsive and demanding). While previous literature indicates that military parents are more likely to have an “authoritative” parenting style, our results are not driven by fathers who volunteered, but by fathers who were pushed to serve in the military or engaged in avoidance strategies because of the lottery, which helps reconcile our results with previous findings. Second, attitudes from draft-eligible fathers are less conducive to a strong father-children relationship, as draft-eligible fathers are less likely to help and more likely to cancel plans on the respondent than their non-draft-eligible counterparts. Third, paternal draft eligibility promoted environmental factors that are more conducive to risky behaviors. In particular, children’s peers are more likely to engage in risky health behaviors (smoke and have sex) and their residence or neighborhood of residence is less likely to be perceived as safe by the interviewer. Additionally, differences in the probability of engaging in risky behaviors among children of draft- and non-draft-eligible fathers cannot be attributed to differences in pre-determined characteristics of the mothers—at least among the characteristics that we observe—nor on differences in aptitude test scores.

To conclude, because this study is based on the effects of draft eligibility during the Vietnam draft period, it is important to discuss the extent to which our results speak to the current U.S. context. Military service nowadays is only based on volunteering. Men who volunteer to serve could be different in several unobservable ways to men who serve because a lottery pushed them to. Additionally, incentives to change behaviors to avoid serving disappeared, eliminating potential negative effects on fathers that could arise from some avoidance strategies. Thus, the extrapolation of our results to the current environment of voluntary enlistments should be done with care. That said, our results can be informative for several countries where military drafts are still in place, such as in Russia, China, Brazil,

Denmark, and Egypt (Goodman and Isen, 2020). Additionally, while not currently in place, a lottery system similar to the one applied during the Vietnam War is expected to resume in times of national emergency, as reported by the Selective Service System.<sup>55</sup> In this context, knowing the unintended consequences of its application (whether through draft avoidance or military service) is extremely valuable for performing cost-benefits analyses.

Other aspects of military service, albeit more minor, deserve consideration. Among the aspects that remain unchanged since the Vietnam draft, two of them require special mention. First, as a response to the documented low firing rates for U.S. soldiers who served in WWII, the military transitioned into more realistic training simulations where bulls-eye targets were replaced with silhouettes. This desensitization process prepared soldiers for faster reactions when exposed to the enemy in the late 1960s (Grossman, 2009; Slone and Friedman, 2008). The realism of this training has escalated over time and recently, the military used Iraqi nationals as role-players in order to add realism to the training.<sup>56</sup> Second, the rate of mental health issues among Vietnam veterans and veterans from more recent wars are similar (Kulka et al, 1990; Tanielian and Jaycox, 2008), with rates between 18 percent and 20 percent for Vietnam veterans and between 14 percent and 25 percent for those of the Iraq and Afghanistan wars.<sup>57</sup> Finally, among the aspects that differ significantly from today's military practices (aside from enrollment based on voluntarism), one requires a special mention. Today's military better acknowledges the difficulties to transition into civilian life and provides programs to help with this transition. These programs are particularly helpful for soldiers without severe mental health issues (Adler et al, 2009; Castro et al, 2006; Stahl, 2009). Today's military also provides courts that focus on veteran cases and are more likely to provide rehabilitation and treatment instead of incarceration.<sup>58</sup>

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<sup>55</sup> <https://www.sss.gov/About/Events-after-Draft>.

<sup>56</sup> This desensitization that was required in order to increase firing rates in split seconds may contribute to difficulties adjusting back to civilian life, which could ultimately affect parenting and create an environment conducive to risky health behaviors for their children. Lindo and Stoecker (2014) provide more details about the transition to this more realistic training and the source is as follows:

[https://www.army.mil/article/40960/iraqi\\_role\\_players\\_add\\_realism\\_to\\_cadet\\_training](https://www.army.mil/article/40960/iraqi_role_players_add_realism_to_cadet_training)

<sup>57</sup> Source: testimony by Thomas R. Insel before the Committee of Oversight and Government Reform in 2007.

<sup>58</sup> There are limitations to the use of these courts. While there have been attempts to extend them nationally, they exclude violent offenders. Previous literature suggests that these are the offenses more likely to respond to military service. Details on these courts can be found at the Vietnam Treatment Court Clearinghouse, which is hosted by the National Association of Drug Court Professionals.

All in all, the large, negative results we find on children's risky behaviors call for additional research that can separately identify the effect of the current military system based on volunteering and the negative unintended consequences that a system based on a lottery to draft individuals can have by potentially inducing some negative draft avoidance behaviors. Our study suggests that the potential negative consequences of serving in the military in times of war and of implementing once again a lottery draft on future generations could be large and should not be overlooked.

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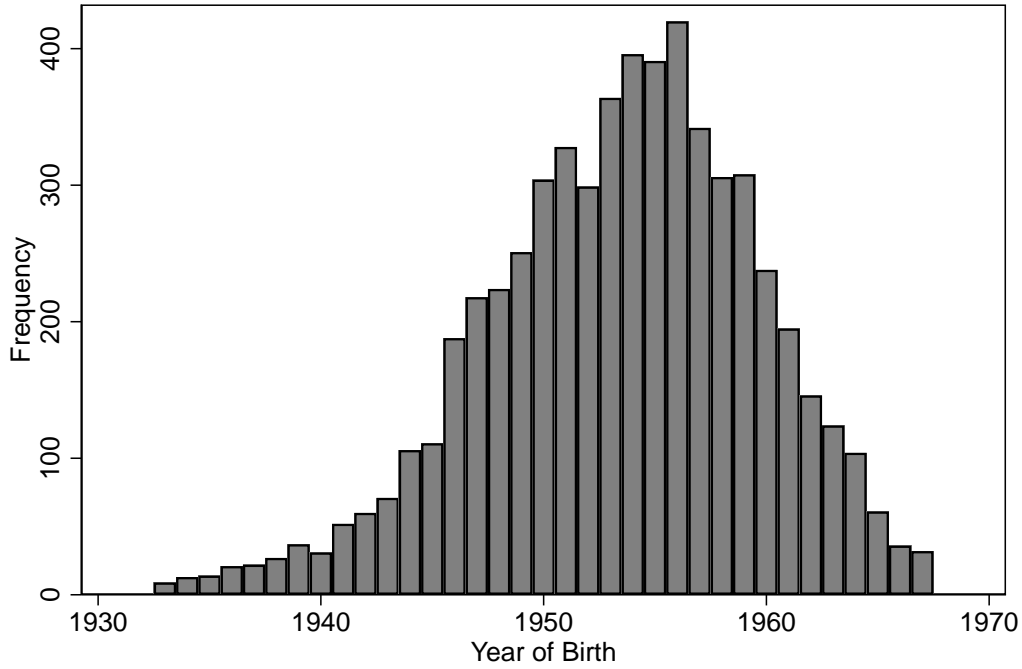
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Figure 1: Histogram of Father's Year of Birth



Source: Author's calculations

Notes: Displayed is the histogram for the resident father (whether biological, adoptive, or step-father) year of birth for the whole sample with a non-missing value for year of birth.



Figure 2: Histogram of Mother's Year of Birth



Source: Author's calculations

Notes: Displayed is the histogram for the resident mother (whether biological, adoptive, or step-mother) year of birth for the whole sample with a non-missing value for year of birth.

**Table 1: Summary Statistics**

	All		Subsample	
			Non-Draft-Eligible	Draft-Eligible
<b>Panel A: Paternal Characteristics</b>				
Father's Year of Birth	1953.39	1948.91	1949.50	1948.27
Father Draft-Eligible	16.62%	48.29%	0.00%	100.00%
Father U.S. Born	83.35%	100.00%	100.00%	100.00%
<b>Panel B: Maternal Characteristics</b>				
Mother's Year of Birth	1956.27	1952.47	1952.99	1951.90
Mother-"Draft Eligible"	10.53%	24.35%	21.70%	27.20%
Mother U.S. Born	84.44%	95.58%	95.52%	95.65%
<b>Panel C: Respondent's Demographics</b>				
Year of Birth	1982.01	1981.86	1981.89	1981.83
Male	51.19%	53.35%	52.44%	54.31%
Black	25.99%	15.16%	14.00%	16.41%
Hispanic	21.16%	9.70%	9.38%	10.04%
<b>Panel D: Risky Health Behaviors-Time Invariant</b>				
Ever Alcohol by 18	76.76%	79.51%	80.05%	78.93%
Starting Alcohol Age	15.13	15.17	15.17	15.17
Ever Marijuana by 18	44.20%	43.65%	41.35%	46.11%
Starting Marijuana Age	16.78	16.93	17.28	16.55
Ever Cigarette by 18	60.23%	60.31%	59.97%	60.68%
Starting Cigarette Age	14.73	15.00	15.21	14.78
Ever Hard Drugs by 18	13.48%	13.28%	11.58%	15.10%
Starting Hard Drugs Age	17.97	17.93	18.08	17.79
Ever Delinquent Behavior	56.76%	54.37%	51.12%	57.85%
Observations	8984	1464	757	707

(Continued) Table 1: Summary Statistics

	All		Subsample	
			Non-Draft-Eligible	Draft-Eligible
<b>Panel E: Substance Use -Time Varying</b>				
Alcohol, Past Year	52.08%	58.30%	57.91%	58.73%
Alcohol, Days Last Month	1.54	1.81	1.73	1.89
Marijuana, Past Year	23.20%	24.73%	22.41%	27.29%
Marijuana, Days Last Month	1.28	1.43	1.12	1.76
Cigarette, Past Year	36.16%	38.32%	38.42%	38.20%
Cigarette, Days Last Month	4.34	4.45	4.16	4.77
Hard Drugs, Past Year	5.94%	6.48%	5.46%	7.60%
Hard Drugs, Times Past Year	3.38	3.59	2.37	4.95
Observations	24900	3885	2041	1844
<b>Panel F: Parenting Styles</b>				
Father Uninvolved	16.47%	12.10%	10.60%	13.71%
Father Permissive	28.23%	32.75%	32.89%	32.61%
Father Authoritarian	21.13%	17.66%	17.58%	17.75%
Father Authoritative	37.84%	39.36%	40.94%	37.66%
Mother Uninvolved	11.45%	8.53%	7.20%	9.94%
Mother Permissive	35.42%	37.62%	36.55%	38.76%
Mother Authoritarian	12.68%	11.12%	10.46%	11.82%
Mother Authoritative	42.58%	43.64%	46.47%	40.63%
Either Parent Uninvolved	21.21%	17.55%	15.67%	19.55%
Either Parent Permissive	43.06%	48.39%	48.87%	47.88%
Either Parent Authoritarian	25.15%	23.51%	23.11%	23.94%
Either Parent Authoritative	51.65%	53.46%	56.71%	50.00%
Observations	8903	1459	753	706

(Continued) Table 1: Summary Statistics

	All		Subsample	
			Non-Draft-Eligible	Draft-Eligible
<b>Table G: Attitudes Towards Children</b>				
Father praises respondent (Never/Rarely/Sometimes)	31.45%	27.80%	27.94%	27.65%
Father criticizes respondent (Never)	38.59%	37.74%	40.44%	34.88%
Father helps respondent (Never/Rarely/Sometimes)	34.33%	31.19%	27.45%	35.14%
Father blames respondent (Never)	74.09%	73.58%	74.51%	72.61%
Father cancels plans on respondent (Never)	63.51%	67.30%	70.83%	63.57%
Father knows respondent's friends (Nothing/A little/Some things)	66.80%	62.01%	60.78%	63.31%
Father knows respondent's friends' parents (Nothing)	22.05%	17.11%	15.20%	19.12%
Father knows respondent (Nothing/A little/Some things)	45.84%	45.15%	44.09%	46.25%
Observations	3956	795	408	387
<b>Panel H: Respondent's Environment</b>				
Less than 10% peers smoke	26.18%	25.00%	27.47%	22.36%
Less than 10% peers get drunk	43.71%	42.30%	44.52%	39.91%
Less than 10% peers use drugs	38.00%	40.42%	43.13%	37.52%
Less than 10% peers had sex	17.55%	22.04%	23.84%	20.22%

Notes: Displayed are summary statistics for the whole sample with non-missing values (column 1), and for the subsample of resident fathers (whether biological, adoptive, or step-fathers) born between 1944 and 1952 (column 2), separated into non-draft-eligible (column 3) and draft-eligible (column 4) fathers.

**Table 2: Measures of Substance Use and Criminal Activity**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.016 (0.025)	-0.008 (0.213)	0.008 (0.025)	0.025 (0.031)
Observations	1,464	1,330	3,885	5,476
Mean	0.795	15.17	0.583	0.547
<b>% Effect Size</b>	-2.013%	-0.053%	1.372%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.069* (0.030)	-1.031** (0.350)	0.046* (0.022)	0.091* (0.038)
Observations	1,464	827	3,878	5,562
Mean	0.436	16.93	0.247	0.266
<b>% Effect Size</b>	15.826%	-6.090%	18.623%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.013 (0.026)	-0.561* (0.253)	0.005 (0.022)	0.070 (0.051)
Observations	1,464	1,043	3,886	5,494
Mean	0.603	15	0.383	0.637
<b>% Effect Size</b>	2.156%	-3.740%	1.305%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.037+ (0.020)	0.063 (0.435)	0.017+ (0.010)	0.065+ (0.035)
Observations	1,416	335	3,981	3,935
Mean	0.133	17.93	0.0648	0.168
<b>% Effect Size</b>	27.820%	0.351%	26.235%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.067* (0.031)	0.328** (0.119)		
Observations	1464	1464		
Mean	0.544	1.681		
<b>% Effect Size</b>	12.316%	19.512%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig YOB	Y	Y	Y	Y
FE Father Fig Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table reports OLS estimates of the effect of father's draft eligibility (whether the father is biological, adoptive, or step-fathers) on the probability that children consumed alcohol

(panel A), marijuana (panel B), cigarettes (panel c), and hard drugs (panel D) or committed a crime (panel E) by age 18 (column 1), on the age of initiation into the consumption of those substances (column 2), on whether children consumed those substances in the year prior to the interview (column 3), and on the log of days children used those substances in the month prior to the interview (column 4). Regressions include children's and fathers' year of birth fixed effects, and fathers' month of birth fixed effects. Columns 3 and 4 also include year of interview fixed effects. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table 3: Measures of Substance Use and Criminal Activity, Alternative Set of Years 1948-1952**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.011 (0.030)	0.051 (0.243)	0.012 (0.028)	0.028 (0.037)
Observations	1,042	943	2,805	3,934
Mean	0.784	15.28	0.567	0.524
<b>% Effect Size</b>	-1.40%	0.33%	2.12%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.061 (0.037)	-0.957* (0.408)	0.035 (0.027)	0.081 (0.049)
Observations	1,042	577	2,799	3,997
Mean	0.425	16.94	0.228	0.233
<b>% Effect Size</b>	14.35%	-5.65%	15.35%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.012 (0.030)	-0.476 (0.301)	0.005 (0.026)	0.061 (0.061)
Observations	1,042	718	2,804	3,949
Mean	0.585	15.02	0.378	0.613
<b>% Effect Size</b>	2.05%	-3.17%	1.32%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.026 (0.025)	0.133 (0.546)	0.010 (0.012)	0.058 (0.044)
Observations	1,007	220	2,869	2,834
Mean	0.126	17.92	0.0582	0.149
<b>% Effect Size</b>	20.63%	0.74%	17.18%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.070+ (0.037)	0.299* (0.149)		
Observations	1,042	1,042		
Mean	0.540	1.603		
<b>% Effect Size</b>	12.963%	18.653%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1948-1952	Y	Y	Y	Y

Notes: This table replicates Table 2, limiting the sample to fathers born between 1948 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.



**Table 4: Alternative Specification, Controlling for Father's Year-Month**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.017 (0.028)	-0.068 (0.245)	-0.008 (0.027)	0.005 (0.034)
Observations	1,464	1,330	3,885	5,476
Mean	0.795	15.17	0.583	0.547
<b>% Effect Size</b>	-2.14%	-0.45%	-1.37%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.058+ (0.033)	-0.950* (0.409)	0.035 (0.023)	0.084+ (0.043)
Observations	1,464	827	3,878	5,562
Mean	0.436	16.93	0.247	0.266
<b>% Effect Size</b>	13.30%	-5.61%	14.17%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.005 (0.029)	-0.607* (0.286)	-0.015 (0.024)	0.054 (0.057)
Observations	1,464	1,043	3,886	5,494
Mean	0.603	15	0.383	0.637
<b>% Effect Size</b>	0.83%	-4.05%	-3.92%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.025 (0.023)	0.096 (0.680)	0.015 (0.011)	0.070+ (0.040)
Observations	1,416	335	3,981	3,935
Mean	0.133	17.93	0.0648	0.168
<b>% Effect Size</b>	18.80%	0.54%	23.15%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	-0.320 (0.333)	0.057 (0.035)		
Observations	1,464	1,464		
Mean	14.40	0.544		
<b>% Effect Size</b>	-2.22%	10.48%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2, but includes father's year-by-month fixed effects and father's state of birth fixed effects. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table 5: Falsification Diagnostics, Using Maternal Exact Date of Birth**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Used Past Month + 1)</b>
<b>Panel A: Alcohol</b>				
Mother Lottery	-0.013 (0.025)	0.060 (0.225)	-0.007 (0.028)	0.013 (0.033)
Observations	1,391	1,254	2,650	3,768
Mean	0.789	15.18	0.570	0.523
<b>% Effect Size</b>	-1.65%	0.40%	-1.23%	
<b>Panel B: Marijuana</b>				
Mother Lottery	-0.031 (0.026)	-0.130 (0.310)	-0.020 (0.024)	0.005 (0.040)
Observations	1,391	785	2,645	3,842
Mean	0.433	17	0.249	0.274
<b>% Effect Size</b>	-7.16%	-0.76%	-8.03%	
<b>Panel C: Cigarette</b>				
Mother Lottery	0.001 (0.031)	-0.511+ (0.272)	-0.009 (0.028)	-0.037 (0.065)
Observations	1,391	975	2,655	3,791
Mean	0.604	14.97	0.367	0.608
<b>% Effect Size</b>	0.17%	-3.41%	-2.45%	
<b>Panel D: Hard Drugs</b>				
Mother Lottery	-0.028 (0.022)	0.704 (0.437)	-0.012 (0.013)	-0.023 (0.041)
Observations	1,351	315	2,717	2,705
Mean	0.129	18.15	0.0664	0.181
<b>% Effect Size</b>	-21.71%	3.88%	-18.07%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Mother Lottery	-0.001 (0.030)	-0.060 (0.114)		
Observations	1,391	1,391		
Mean	0.555	1.680		
<b>% Effect Size</b>	-0.18%	-3.57%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Mother YOB	Y	Y	Y	Y
FE Mother Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2, but defines draft eligibility based on mother's exact date of birth (whether the mother is biological, adoptive, or step-mother). Standard errors clustered at

the mother's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table 6: Parenting Styles at the Initial Wave**

	<b>Uninvolved</b>	<b>Permissive</b>	<b>Authoritarian</b>	<b>Authoritative</b>
<b>Panel A: Parenting Styles of the Father</b>				
Father Lottery	0.043*	0.005	-0.008	-0.041
	(0.020)	(0.026)	(0.022)	(0.031)
Observations	1,438	1,438	1,438	1,438
Mean	0.121	0.328	0.177	0.394
<b>% Effect Size</b>	<b>35.537%</b>	<b>13.110%</b>	<b>24.294%</b>	<b>10.914%</b>
<b>Panel B: Parenting Styles of the Mother</b>				
Father Lottery	0.024	0.020	0.028+	-0.065*
	(0.018)	(0.031)	(0.016)	(0.030)
Observations	1,430	1,430	1,430	1,430
Mean	0.0853	0.376	0.111	0.436
<b>% Effect Size</b>	<b>28.136%</b>	<b>5.319%</b>	<b>25.225%</b>	<b>-14.908%</b>
<b>Panel C: Parenting Styles of Either Parent</b>				
Father Lottery	0.048+	-0.003	0.015	-0.074**
	(0.025)	(0.032)	(0.024)	(0.028)
Observations	1,459	1,459	1,459	1,459
Mean	0.175	0.484	0.235	0.535
<b>% Effect Size</b>	<b>27.429%</b>	<b>-0.620%</b>	<b>6.383%</b>	<b>-13.832%</b>
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table reports OLS estimates of the effect of father's draft eligibility (whether the father is biological, adoptive, or step-fathers) on the probability that the father's (panel A), the mother's (panel B) or either parent's (panel C) parenting style is uninvolved (column 1), permissive (column 2), authoritarian (column 3), or authoritative (column 4). Regressions include children's and fathers' year of birth fixed effects, and fathers' month of birth fixed effects. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table 7: Attitude from Father Towards Child, At the Initial Wave**

<b>Panel A: Frequency of Behaviors from the Father Towards the Respondent</b>					
	<b>Praise Never/Rarely/ Sometimes</b>	<b>Criticizes Never</b>	<b>Helps Never/Rarely/ Sometimes</b>	<b>Blames Never</b>	<b>Cancel plans Never</b>
Father Lottery	0.004 (0.035)	-0.058 (0.041)	0.086* (0.039)	-0.035 (0.039)	-0.080+ (0.042)
Observations	795	795	795	795	795
Mean	0.278	0.377	0.312	0.736	0.673
<b>% Effect Size</b>	1.439%	-15.385%	27.564%	-4.755%	-11.887%
<b>Panel B: Father Knows Aspects of Respondent's Life</b>					
	<b>Knows Nothing/ Little/Some Things Friends</b>	<b>Knows Nothing Friends' Parents</b>	<b>Knows Nothing/ Little/Some Things Resp is Doing</b>		
Father Lottery	0.017 (0.041)	0.038 (0.031)	0.020 (0.041)		
Observations	795	795	793		
Mean	0.620	0.171	0.451		
<b>% Effect Size</b>	2.742%	22.222%	4.435%		
FE Year of Birth (YOB)	Y	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y	Y

Notes: This table reports OLS estimates of the effect of father's draft eligibility (whether the father is biological, adoptive, or step-fathers) on the probability the father rarely praises (column 1), never criticizes (column 2), rarely helps (column 3), never blames (column 4), and never cancels plans (column 5) in panel A and on the probability the father knows little about children's friends (column 1), knows nothing about the parents of the friends (column 2), and knows little about what the children do (column 3). Regressions include children's and fathers' year of birth fixed effects, and fathers' month of birth fixed effects. Sample is restricted

to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table 8: Measures of Environment**

<b>Panel A: Less than 10% of Peers Engage in the Following Risky Behaviors</b>				
	<b>Smoke</b>	<b>Get Drunk</b>	<b>Use Drugs</b>	<b>Have Sex</b>
Father Lottery	-0.069** (0.023)	-0.037 (0.024)	-0.041 (0.029)	-0.065* (0.028)
Observations	1,452	1,442	1,435	726
Mean	0.250	0.423	0.404	0.220
<b>% Effect Size</b>	-27.60%	-8.75%	-10.15%	-29.55%
<b>Panel B: Residential Characteristics</b>				
	<b>Residential</b>	<b>Interviewer Concern Safety</b>	<b>Ln Gross HH Income 1996</b>	<b>Ln Net Worth 1997</b>
Father Lottery	-0.053+ (0.027)	0.033* (0.016)	-0.014 (0.095)	-0.106 (0.108)
Observations	1,454	1,458	1,182	1,076
Mean	0.843	0.0446	10.87	11.51
<b>% Effect Size</b>	-6.29%	73.99%	-0.13%	-0.92%
<b>Panel C: Education and Labor Market Outcomes of the Father</b>				
	<b>Father &lt;=12 Years</b>	<b>Father Hours&gt;=40</b>	<b>Father Hours&gt;=30</b>	<b>Father Ln Hours</b>
Father Lottery	0.053 (0.035)	-0.022+ (0.013)	-0.010 (0.008)	-0.011 (0.019)
Observations	1,425	1,339	1,339	1,339
Mean	0.368	0.959	0.981	3.778
<b>% Effect Size</b>	14.40%	-2.29%	-1.02%	-0.29%
<b>Panel D: Education and Labor Market Outcomes of the Mother</b>				
	<b>Mother &lt;=12 Years</b>	<b>Mother Hours&gt;=40</b>	<b>Mother Hours&gt;=30</b>	<b>Mother Ln Hours</b>
Father Lottery	0.042 (0.034)	-0.054 (0.047)	-0.063* (0.032)	-0.052+ (0.030)
Observations	1,365	1,102	1,102	1,102
Mean	0.402	0.638	0.820	3.550
<b>% Effect Size</b>	10.45%	-8.46%	-7.68%	-1.46%
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y



(Continued) Table 8: Measures of Environment

	Lived Bio Mother		Father	Mother
	Math Score	Mother	Vgood/Excellent Health	Vgood/Excellent Health
Father Lottery	-0.785 (1.002)	-0.021 (0.028)	-0.034 (0.035)	-0.084* (0.034)
Observations	930	1,377	1,461	1,382
Mean	97.90	0.826	0.643	0.681
<b>% Effect Size</b>	-0.80%	-2.54%	-5.29%	-12.33%
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table reports OLS estimates of the effect of father's draft eligibility (whether the father is biological, adoptive, or step-fathers) on the probability that less than 10 percent of children's peers smoke (column 1), get drunk (column 2), use drugs (column 3), and have sex (column 4) in panel A; on the probability that the children lived in a residential area in 1997 (column 1) and that the interviewer had concerns over her/his safety during the 1997 interview (column 2), as well as on the log of the 1996 gross household income (column 3) and the log of the 1997 net worth (column 4) in panel B; on the probability the father (mother) had less than 12 years of education (column 1), worked more than 40 hours (column 2) and worked more than 30 hours (column 3) in 1996 and on the log of hours the father (mother) worked in 1996 (column 4) in panel C (panel D); and on the children's aptitude math score (column 1), on the probability the mother lived with her biological parents by age 14 (column 2), that the father and the mother had at least very good health (columns 3 and 4, respectively) in panel E. Regressions include children's and fathers' year of birth fixed effects, and fathers' month of birth fixed effects. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A1: Comparing the NLSY97 with Other Sources of Data Among Young Adults (18-25) in 2002**

	NLSY97(a)	NSDUH (b)	MTF(c)
Min Age in 2002	18	18	19
Max Age in 2002	23	25	24
<b>Lifetime Drug Use</b>			
Lifetime Alcohol	86.23	86.70	88.40
Lifetime Marijuana	52.52	53.80	56.10
Lifetime Cocaine (*)	18.67	15.40	12.90
<b>Past Year Drug Use</b>			
Alcohol	67.65	77.90	83.90
Marijuana	24.51	29.80	34.20
Cocaine (*)	6.03	6.70	6.50
<b>Past Month Drug Use</b>			
Alcohol	56.98	60.50	67.70
Marijuana	18.57	17.30	19.80
Cocaine (*)	-	2.00	2.50
N	7896		

Notes: This table compares the rates of past year drug use, past month drug use, lifetime drug use, and starting age of drug consumption in the NLSY97 (column a), NSDUH (column b), and MTF (column c). For a more detailed discussion about comparisons among these datasets, see Deza (2015).

**Table A2: Effect of Paternal Draft Eligibility on Attrition While Being a Minor**

Father Lottery	-0.005 (0.023)	-0.011 (0.023)	-0.009 (0.027)
Observations	1,464	1,461	1,461
Mean	0.880	0.880	0.880
<b>% Effect Size</b>	-0.57%	-1.25%	-1.02%
FE Year of Birth (YOB)	Y	Y	Y
FE Father YOB	Y	Y	N
FE Father Birth Month	Y	Y	N
Father YOB 1944-1952	Y	Y	Y
FE Father YMOB	N	N	Y
State of Father's Birth	N	Y	Y

Notes: This tables reports OLS estimates of the effect of father's draft eligibility (whether the father is biological, adoptive, or step-fathers) on the probability of children leaving the sample before or at age 18. Column 1 includes children's and fathers' year of birth fixed effects, and fathers' month of birth fixed effects. Column 2 includes fathers' state of birth fixed effects as well. Column 3 includes children's year of birth and father's year-by-month fixed effects, as well as fathers' state of birth fixed effects. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A3: Measures of Substance Use and Criminal Activity, Controlling for Father's State of Birth**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.018 (0.024)	-0.007 (0.217)	0.018 (0.023)	0.033 (0.031)
Observations	1,461	1,327	3,878	5,466
Mean	0.795	15.17	0.583	0.547
<b>% Effect Size</b>	-2.26%	-0.05%	3.09%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.075* (0.029)	-1.062** (0.353)	0.059** (0.021)	0.099* (0.039)
Observations	1,461	826	3,871	5,552
Mean	0.436	16.93	0.247	0.266
<b>% Effect Size</b>	17.20%	-6.27%	23.89%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.011 (0.027)	-0.600* (0.266)	0.011 (0.023)	0.071 (0.054)
Observations	1,461	1,041	3,879	5,484
Mean	0.603	15	0.383	0.637
<b>% Effect Size</b>	1.82%	-4.00%	2.87%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.041* (0.020)	-0.260 (0.464)	0.016 (0.010)	0.063+ (0.036)
Observations	1,413	334	3,974	3,930
Mean	0.133	17.93	0.0648	0.168
<b>% Effect Size</b>	30.83%	-1.45%	24.69%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.066* (0.031)	0.338** (0.126)		
Observations	1,461	1,461		
Mean	0.544	1.681		
<b>% Effect Size</b>	12.132%	20.107%		
Year of Birth (YOB)	Y	Y	Y	Y
Father YOB	Y	Y	Y	Y
Father Birth Month	Y	Y	Y	Y
Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y
State of Father's Birth	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, including fathers' state of birth fixed effects. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A4: Measures of Substance Use and Criminal Activity with Standard Errors Clustered at Father's State of Birth**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used in the Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.016 (0.025)	-0.011 (0.197)	0.007 (0.025)	0.028 (0.037)
Observations	1,461	1,327	3,878	5,009
Mean	0.795	15.17	0.583	0.598
<b>% Effect Size</b>	-2.01%	-0.07%	1.20%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.068* (0.031)	-1.018*** (0.278)	0.045+ (0.025)	0.103** (0.037)
Observations	1,461	826	3,871	5,138
Mean	0.436	16.93	0.247	0.266
<b>% Effect Size</b>	15.60%	-6.01%	18.22%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.011 (0.029)	-0.560+ (0.291)	0.004 (0.027)	0.092 (0.065)
Observations	1,461	1,041	3,879	4,935
Mean	0.603	15	0.383	0.708
<b>% Effect Size</b>	1.82%	-3.73%	1.04%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.036 (0.025)	0.078 (0.539)	0.015 (0.014)	0.064 (0.042)
Observations	1,413	334	4,099	3,930
Mean	0.133	17.93	0.0614	0.168
<b>% Effect Size</b>	27.07%	0.44%	24.43%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.067* (0.032)	0.318** (0.114)		
Observations	1,461	1,461		
Mean	0.544	1.681		
<b>% Effect Size</b>	12.32%	18.92%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, but clusters standard errors at the fathers' state of birth. Sample is restricted to fathers born between 1944 and 1952. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A5: Measures of Substance Use and Criminal Activity, Weighted**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used in the Past Year</b>	<b>Ln (Days Used Past Month +1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.022 (0.027)	0.040 (0.233)	0.008 (0.027)	0.017 (0.040)
Observations	1,464	1,330	3,885	5,017
Mean	0.808	15.07	0.604	0.626
<b>% Effect Size</b>	-2.72%	0.27%	1.32%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.061+ (0.031)	-0.816* (0.349)	0.049* (0.021)	0.100* (0.043)
Observations	1,464	827	3,878	5,146
Mean	0.448	16.86	0.256	0.299
<b>% Effect Size</b>	13.62%	-4.84%	19.14%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.002 (0.027)	-0.479+ (0.261)	0.012 (0.024)	0.102+ (0.060)
Observations	1,464	1,043	3,886	4,943
Mean	0.626	14.91	0.401	0.754
<b>% Effect Size</b>	0.32%	-3.21%	2.99%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.038+ (0.022)	0.226 (0.456)	0.016 (0.011)	0.067+ (0.040)
Observations	1,416	335	4,106	3,935
Mean	0.139	17.94	0.0658	0.182
<b>% Effect Size</b>	27.34%	1.26%	24.32%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.064* (0.031)	0.313** (0.119)		
Observations	1,464	1,464		
Mean	0.544	1.680		
<b>% Effect Size</b>	11.76%	18.63%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father YOB	Y	Y	Y	Y
FE Father Birth Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, but weights each children by the corresponding weight assigned to them by the NLSY97. Sample is restricted to fathers born



between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A6: Measures of Substance Use and Criminal Activity for Those Living with Biological Father**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used in the Past Year</b>	<b>Ln (Days Used Past Month+1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.021 (0.027)	0.094 (0.227)	-0.011 (0.027)	-0.009 (0.041)
Observations	1,255	1,142	3,343	4,317
Mean	0.796	15.20	0.589	0.602
<b>% Effect Size</b>	-2.64%	0.62%	-1.87%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.061+ (0.033)	-1.126** (0.364)	0.040+ (0.023)	0.081+ (0.044)
Observations	1,255	698	3,338	4,424
Mean	0.426	17.04	0.243	0.279
<b>% Effect Size</b>	14.32%	-6.61%	16.46%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.014 (0.029)	-0.687* (0.264)	-0.002 (0.024)	0.075 (0.063)
Observations	1,255	885	3,345	4,248
Mean	0.595	15.13	0.375	0.673
<b>% Effect Size</b>	2.35%	-4.54%	-0.53%	
<b>Panel C: Hard Drugs</b>				
Father Lottery	0.041+ (0.022)	0.049 (0.425)	0.013 (0.010)	0.061 (0.037)
Observations	1,218	284	3,520	3,383
Mean	0.131	18.07	0.0591	0.162
<b>% Effect Size</b>	31.30%	0.23%	69.37%	
<b>Panel D: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.055 (0.036)	0.285* (0.130)		
Observations	1,255	1,255		
Mean	0.521	1.555		
<b>% Effect Size</b>	10.56%	18.33%		
Year of Birth (YOB)	Y	Y	Y	Y
Father YOB	Y	Y	Y	Y
Father Birth Month	Y	Y	Y	Y
Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, but limits the sample to children living with biological father in the first interview. Sample is restricted to biological fathers born between 1944 and 1952. Standard errors clustered at the biological father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A7: Measures of Substance Use and Criminal Activity for Males**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Past Month+1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	0.010 (0.031)	-0.327 (0.305)	0.025 (0.032)	0.093+ (0.050)
Observations	781	709	2,084	2,673
Mean	0.799	15.04	0.574	0.632
<b>% Effect Size</b>	1.25%	-2.17%	4.36%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.084* (0.042)	-1.267** (0.454)	0.071** (0.027)	0.156** (0.060)
Observations	781	451	2,080	2,743
Mean	0.462	16.68	0.265	0.337
<b>% Effect Size</b>	18.18%	-7.60%	26.79%	
<b>Panel C: Cigarette</b>				
Father Lottery	0.037 (0.037)	-0.710* (0.331)	0.014 (0.033)	0.119 (0.081)
Observations	781	569	2,085	2,637
Mean	0.607	14.96	0.376	0.709
<b>% Effect Size</b>	6.10%	-4.75%	3.72%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.040 (0.030)	-0.042 (0.622)	0.022+ (0.013)	0.089+ (0.049)
Observations	756	191	2,210	2,111
Mean	0.142	17.92	0.0624	0.169
<b>% Effect Size</b>	28.17%	-0.23%	35.26%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.071+ (0.040)	0.365* (0.162)		
Observations	781	781		
Mean	0.621	2.109		
<b>% Effect Size</b>	11.43%	17.31%		
Year of Birth (YOB)	Y	Y	Y	Y
Father YOB	Y	Y	Y	Y
Father Birth Month	Y	Y	Y	Y
Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, but limits the sample to male children. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.

**Table A8: Measures of Substance Use and Criminal Activity for Females**

	<b>Ever Used by Age 18</b>	<b>Age of Initiation</b>	<b>Used Past Year</b>	<b>Ln (Days Past Month+1)</b>
<b>Panel A: Alcohol</b>				
Father Lottery	-0.043 (0.036)	0.357 (0.347)	-0.005 (0.038)	-0.044 (0.053)
Observations	683	621	1,801	2,344
Mean	0.791	15.32	0.593	0.559
<b>% Effect Size</b>	-5.44%	2.33%	-0.84%	
<b>Panel B: Marijuana</b>				
Father Lottery	0.055 (0.046)	-0.850+ (0.464)	0.026 (0.033)	0.042 (0.051)
Observations	683	376	1,798	2,403
Mean	0.407	17.23	0.227	0.230
<b>% Effect Size</b>	13.51%	-4.93%	11.45%	
<b>Panel C: Cigarette</b>				
Father Lottery	-0.013 (0.047)	-0.350 (0.425)	0.001 (0.041)	0.054 (0.092)
Observations	683	474	1,801	2,306
Mean	0.599	15.05	0.391	0.708
<b>% Effect Size</b>	-2.17%	-2.33%	0.26%	
<b>Panel D: Hard Drugs</b>				
Father Lottery	0.035 (0.029)	0.197 (0.717)	0.012 (0.015)	0.048 (0.051)
Observations	660	144	1,896	1,824
Mean	0.123	17.94	0.0601	0.167
<b>% Effect Size</b>	28.46%	1.10%	19.97%	
<b>Panel E: Criminal Activity</b>				
	<b>Indicator</b>	<b>Risk Index</b>		
Father Lottery	0.057 (0.041)	0.280+ (0.154)		
Observations	683	683		
Mean	0.455	1.192		
<b>% Effect Size</b>	12.53%	23.49%		
Year of Birth (YOB)	Y	Y	Y	Y
Father YOB	Y	Y	Y	Y
Father Birth Month	Y	Y	Y	Y
Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table replicates Table 2 in the main text, but limits the sample to female children. Sample is restricted to fathers born between 1944 and 1952. Standard errors clustered at the father's exact date of birth. \*\*, \*, + denote significance at 1%, 5%, and 10% level, respectively.