NBER WORKING PAPER SERIES

THE INTERGENERATIONAL EFFECTS OF THE VIETNAM DRAFT ON RISKY BEHAVIORS

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Working Paper 27830
http://www.nber.org/papers/w27830

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
September 2020, Revised March 2021

This paper does not necessarily reflect the views of the Federal Reserve Board or the National Bureau of Economic Research. We are grateful to Sarena Goodman, Daniel Ringo, Kamila Sommer, Jason Fletcher, and Jeffrey Smith for detailed comments on earlier versions of this manuscript. We are also grateful to participants of the 2019 Southern Economics Association conference, 2020 Federal System Micro Conference and Economics department seminar participants at Tulane University, Temple University, Rutgers University, University of Connecticut, as well as the Center for Demography of Health and Aging at University of Wisconsin Madison, the Virtual Seminar on the Economics of Risky Health Behaviors (VERB), the O'Neill School's Health Policy Workshop, and the Online Economics of Crime Seminar.

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September 2020, Revised March 2021
JEL No. I1,J13

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 (Rohlfs, 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.[2] Merging these strands of literature, this paper explores the intergenerational effect of fathers' draft eligibility on their children's propensity to engage in risky 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 that focus on the generation directly affected by the Vietnam draft 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.[3] 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.[4] 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

[2] 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.

[3] 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.

[4] 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.

defined by substance use and delinquent acts. Our findings indicate that paternal draft eligibility 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 can disproportionately expose their children to an environment conducive to risky behaviors, whether it is through military service or through draft avoidance. More specifically, 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 (Rohlfs, 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). Additionally, draft eligibility could also lead to draft avoidance behaviors, such as engaging in criminal activity (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).[5] Draft eligibility could also lead to convictions and prison sentences if draft eligible men refused to serve, according to the draft law (Baskir and Strauss, 1978).[6] These direct negative effects of

[5] 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).

[6] 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 ultimate 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).

paternal draft eligibility can potentially lead to an environment more conducive to risky behaviors for their children.[7]

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 (e.g. drug consumption, suffering of PTSD or incarceration records), we find strong evidence that paternal draft eligibility negatively affects potential determinants of father-children relationship, such as parenting styles and attitudes towards the children, as well as the environment in which children were raised, potentially driving children of draft-eligible fathers to engage more in risky behaviors.[8] First, draft eligibility affects parenting styles of both parents, by increasing the likelihood that the father is "uninvolved" (unresponsive and undemanding) and the likelihood that the mother is "authoritarian" (unresponsive and demanding).[9] Second, draft-eligible fathers are less likely to help their children, and more likely to cancel plans on them (as reported by the children). Third, children of draft-eligible fathers are more likely to being exposed to school peers that are more likely to smoke[10] and more likely to reside in environments where the interviewer is less likely to report feeling safe.[11] Fourth, we find that children's scores on aptitude tests do not seem to differ by father's draft eligibility, so lower school performance does not appear to be behind the higher probability of children engaging in risky behaviors. Finally, we also present evidence that

[7] Evidence indicates that draft avoidance through exemptions was not prevalent for the group of fathers under our study. First, draft avoidance through spousal exemptions were no longer available at the time the lotteries occurred (Bitler and Schmidt, 2012). Second, avoidance through educational deferments were not prevalent (Card and Lemieux, 2001). Additionally, they would have presumably raised human capital of those draft-eligible, generating an environment less conducive of risky behaviors, working against the direction of our results. Finally, paternal exemptions were still available for men affected by the 1969 lottery, before Nixon eliminated them in 1970. Indeed, Bailey and Chyn (2020) find that draft eligibility significantly increased subsequent childbearing among these men. While some draft-eligible men in our sample may have been more likely to have children early during their adult life, in Section 5 we show that our main results hold even when we concentrate on the smaller sample of men affected by the 1970 and 1971 lotteries, when paternal deferments were not allowed anymore.

[8] 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.

[9] 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. In this case, draft eligibility leads to both parents being unresponsive but the paternal undemanding parenting style is to some extent balanced by the maternal demanding parenting style. We cannot disentangle whether the maternal parenting styles are a feature of selection or whether mothers adjusted their parenting styles in response to the father's parenting styles.

[10] 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.

[11] 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, 2019).

paternal draft eligibility affects maternal health negatively. While the 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), we find no evidence that paternal draft eligibility affects maternal pre-determined characteristics through assortative mating, as measured by the following variables: (a) whether the respondent's mother was living with her biological parents by age 14, (b) the maternal years of education and (c) whether the maternal grandparents had at most high school education.[12]

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).[13] 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, 2019; Johnson and Dawes, 2016).[14] 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.[15] To the best of our knowledge, this is the first study to establish that draft eligibility affected the next generation's

[12] The evidence that neither maternal pre-determined characteristics nor children's aptitude test score differ by paternal draft eligibility suggests that a direct effect of draft eligibility is more likely to be the cause of the differential maternal health.

[13] Identifying causal intergenerational effects of policies that affect parental inputs on children's risky behaviors is challenging due to the limited availability of household data that provide information on both parental inputs and children's risky 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 behaviors and find that increasing parental education reduces delinquent behaviors and substance use among children.

[14] More specifically, Goodman and Isen (2019) 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.

[15] 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).

propensity to engage in risky behaviors.[16] Additionally, we provide novel empirical evidence that parenting styles and attitudes differ among households with draft- and non-draft-eligible fathers.[17] 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 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.[18] 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.[19] 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

[16] An exception is Goodman and Isen (2019), who exploit incarceration data that the IRS receives on the incarcerated population, and find that sons 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 behaviors during adolescence might translate into more chances of spending time in prison as young adults. Additionally, exploiting the Kidlink dataset, Goodman and Isen (2019) find that sons of draft-eligible fathers are also more likely to have children as teenagers.

[17] Goodman and Isen (2019) also explore mechanisms behind the earnings and labor force participation differentials they document. However, the detailed administrative tax data they use do not contain information that allow them to directly test whether parental styles or attitudes (or parental inputs, in the authors language) differ by father's draft eligibility. While the authors conclude that parent inputs might be behind these differentials, they reach the conclusion by process of elimination, as they do not find evidence for other mechanisms (i.e., innate factors, differential enlistment rates, and other work-related preferences) that could explain their results.

[18] 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).

[19] 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).

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.[20] This highlights the relevance of this study, not only from a historical perspective, but also for 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.

[20] https://www.sss.gov/About/Events-after-Draft.

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.[21] 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 had 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

[21] For the remaining of the paper, we refer to men with a RSN below or at the corresponding APN as draft-eligible.

exemptions through educational deferments[22], marital or paternity reasons.[23] 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).[24]

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 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).[25] 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.[26] The later

[22] 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.

[23] 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).

[24] 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).

[25] 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.

[26] In order to account for this, we follow the standard literature and include paternal year by month of birth fixed effect in our main specifications (Angrist and Chen, 2011; Angrist, Chen and Frandsen, 2010; Conley and Heerwig, 2009; Eisenberg and Rowe, 2009).

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 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 extensive and intensive 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.[27] 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

[27] 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)), the particularly larger educational gains from preventing marijuana use at early ages (Olivier and Zolitz, 2017), 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). In addition, initiation into these substances tends to happen during adolescence.

in the month prior to the interview.[28] 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[29]) are very unlikely to end up in an arrest among minors (Levitt and Lochner 2001).[30] We create an indicator for whether the respondent committed any of these delinquent acts by age 18.[31] Additionally, we use a delinquency index created by the NLSY97.

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.[32] 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).[33] 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)[34], our main analysis focuses on estimating the effect of draft eligibility

[28] Our measure is the natural logarithm of days of consumption in the past month plus one.
[29] 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.
[30] 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).
[31] Table A10 in the appendix presents the correlation between these components of the criminal index we created.
[32] 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.
[33] 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.
[34] 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.

for every children whose father figure (whether biological or not) was born between 1944 and 1952, 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 reminder of the paper, we refer to the father figure (mother figure) simply as father (mother).[35]

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 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 four other potential data limitations. First, the longitudinal nature of the NLSY97 means that we only observe individuals who are not lost due to attrition. We address this issue of self-selection by estimating the effect of paternal draft eligibility on the following outcomes: (i) the number of rounds in which the individual is not lost

[35] 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.

due to attrition and (ii) an indicator for whether the respondent was not lost due to attrition entirely during the waves that occurred while the respondent was a minor. The estimates in Table A2 indicate that draft eligibility does not affect 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 and delinquency related questions.[36]

A third concern is the self-reported nature of the data. There are two reasons why we believe this is not an issue: (i) the 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-longitudinal major datasets on drug use (i.e., the National Study of Drug Use and Health, NSDUH, and Monitoring the Future, MTF).[37]

Fourth, we only observed the exact date of birth for fathers that reside with the respondent in 1997, which limits our ability to determine who is part of our main sample.[38] That said, Angrist and Chen (2011) and Goodman and Isen (2019) find no difference in marriage rates between draft- and non-draft-eligible men when they were sampled in their respective studies around the late 90's and the 2000 census (close to when the NLSY97 parents were interviewed in 1997). Also, Angrist and Chen (2008) and Conley and Heerwig (2011) find no evidence of an

[36] Questions regarding hard drugs were first answered in 1998, while questions regarding alcohol, marijuana, and cigarettes were asked starting in 1997.

[37] 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.

[38] In Table A3 of the Appendix, we examine whether there are disproportionately fewer respondents with a draft-eligible father than with a non-draft-eligible father. This could happen if there were disproportionately fewer draft-eligible fathers due to casualties or selection issues that disproportionately affected the probability that a draft-eligible father would be a resident father in 1997 and, hence, included in the sample. We estimate a t-test to evaluate whether the number of respondents that we have in any given paternal date of birth is statistically indistinguishable among draft-eligible birthdates and non-draft-eligible birthdates. We collapse the data at the exact date of birth, resulting in 207 exact paternal birthdates. Among those, 102 dates are non-draft-eligible dates and 105 are draft-eligible, according to the lotteries. The independent t-test on the sample of 207 paternal birthdates indicates that we cannot reject the null hypothesis that the number of respondents with paternal birthdates corresponding to draft-eligible fathers is the same as the number of respondents with paternal birthdates corresponding to non-draft-eligible fathers.

impact of Vietnam-era military service on veteran's mortality. Finally, while Bailey and Chyn (2020) find that draft eligibility significantly increased subsequent childbearing among men affected by the 1969 lottery (when paternity deferments were still allowed), in Section 5 we show that our results hold for the smaller sample of men affected only by the 1951 and 1952 lotteries.

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. 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.[39] The third and fourth columns split the subsample into respondents whose fathers were non-draft-eligible and draft-eligible, respectively, according to the lottery.

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 characteristics and outcomes other than the percent who consumed alcohol, the time-varying

[39] 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.

measures of substance consumption[40], parenting styles and attitudes towards their children[41], 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.[42] 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

[40]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.
[41] 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.
[42] 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 (2019) 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. While we could perform an IV-estimation strategy based on a two-sample IV (Angrist and Krueger, 1992)—where the first-stage is estimated using the Defense Manpower Data Center data—the exclusion restriction would be only satisfied if draft avoidance is negligible, i.e., only if draft eligibility affects children's risky behaviors through fathers' military service. As we will show in Section 5, most of the statistically significant estimates of risky behaviors due to draft eligibility (as well as the raw differences in means already shown in Table 1 for some of the outcomes of interest) are large. This, paired with evidence pointing to engaging in criminal activity as a way to avoid the draft (Baskir and Strauss, 1978; Kuziemko, 2010; Wang and Flores-Lagunes, 2020) calls into question if our estimates can only be driven by military service. Thus, we concentrate on the full effect of fathers' draft eligibility. Because the draft lottery was randomized, draft avoidance poses no threat to our estimation strategy.

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). Additionally, the involvement in these activities tend to peak early in life. 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

We estimate the following regression for time-invariant measures of risky behaviors on the sample of respondents whose father was born between 1944 and 1952.

$$(1) \qquad Y_{i,c,p} = \gamma_0 + \gamma_1 Eligible_{ip} + \gamma X_i + \gamma_c \ + \gamma_{pym}^{p} + \gamma_{ps}^{p} + \epsilon_{i,c,p}$$

$Y_{i,c,p}$ 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 $Eligible_{ip}$ 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, γ_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, γ_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 γ_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 γ_{pym}^{p} corresponds to the father's year-by-month of birth fixed effect and the vector γ_{ps}^{p} to the father's state of birth fixed effect.[43] Following Goodman and Isen (2019), 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.[44]

B. Robustness Checks, Alternative Specifications, and Falsification Diagnostics

We consider a robustness check where we restrict the sample to fathers born between 1951 and 1952, those affected by the 1970 and 1971 lotteries and more likely to be drafted based on the lottery results. The probability of induction upon draft eligibility was higher for these cohorts for two main reasons: (i) Men in their twenties who were affected by the 1969 lottery

[43] As previous literature, the father's year-by-month of birth fixed effect γ_{pym}^{p} adjusts 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). The father's state of birth fixed effect adjusts for the heterogeneity in levels of health and education across states which resulted in heterogeneity in pre-induction exam outcomes across states and ultimately created heterogeneity in the strength of the relationship between draft eligibility and military service across states (Semi-Annual Report of the Director of Selective Service 1967, Bitler and Schmidt, 2011).

[44] We also include a year fixed effect when estimating time-varying dependent variables.

and 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, 2019; Bailey and Chyn, 2020). While draft avoidance due to other factors is still a concern 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.[45]

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 lottery numbers assigned to the maternal date of birth 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).[46] 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

[45] Excluding cohorts affected by the lottery that took place in 1969 (e.g. cohorts born in 1948-1950) allows us to estimate equation (1) including only paternal year of birth fixed effects and a paternal month of birth fixed effects without their interaction, as we no longer need to account for the randomization imperfection that affected the 1969 lottery (Lindo and Stoecker, 2014; Conley and Heerwing, 2009; Eisenberg and Rowe, 2009; Angrist, Chen and Frandsen, 2010; Angrist and Chen, 2011).

[46] Regressions with a time-varying outcome include year fixed effects.

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 significantly affect any measure of alcohol consumption. In particular, having a draft-eligible father does not significantly 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 a 5 percent level. In particular, children of draft-eligible fathers are 7.1 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 5 percentage points, relative to 25 percent, as indicated by column 3, and in the number of days of usage in the past month by 10 percent.[47] In a nutshell, Panel B indicates that 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 (0.64 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, as the number of times (not days) hard drugs were used in the past month increases by 7.3 percent, but this result is statistically significant only at a 10 percent level. Overall, Table 2 indicates that paternal draft eligibility increases the respondent's propensity to consume substances.[48]

[47]Given the approximate 14.5 percentage point increase in the probability to serve caused by draft-eligibility for the 1950-1952 cohort, as reported by Angrist and Chen (2011), our point estimates are probably too large to be driven entirely by the military service component of the draft. That said, our reduced-form estimates reflect the total effect of the draft, whether driven by military service or draft avoidance. Moreover, while large, these estimates are very consistent across specifications and subsamples.

[48] 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 imprecisely estimated and smaller in magnitude (Table A8).

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, running away, and destroying property 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.[49] Panel E of Table 2 presents evidence that having a draft-eligible father increases the probability of committing a criminal act by approximately 5.8 percentage points, relative to a mean of 54 percent (column 1).[50]

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.[51] 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.[52]

C. Robustness Checks, Alternative Subsamples, and Falsification Diagnostics

Alternative Subsamples

We estimate these regressions separately on the subsample of male respondents and the subsample of female respondents and find that paternal draft eligibility effects on children are driven by its effect on sons (Table A7), but not daughters (Table A8). This is consistent with

[49] Table A9 reports regression results using each component of the indicator for criminal acts separately and shows that paternal draft eligibility positively affects most of them at least at a 10 percent confidence level. Table A10 shows the correlation between each of the components of the indicator for criminal acts. Finally, Table A11 reports similar results for the other acts that are associated with delinquent acts (owning a gun, running away, and destroying property and other property-destruction related acts), but are not part of our criminal activity indicator due to the ambiguous way in which they are defined. Except for owning a gun, the other effects are also positive and highly significant.

[50] 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.

[51] More information on the delinquency risk index can be found here: https://www.nlsinfo.org/site/nlsy97/nlsdocs/nlsy97/codesup/mapp9.html.

[52] 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.

findings in Goodman and Isen (2019), who find that Vietnam intergenerational transmissions are larger for sons, as well as with literature finding that sons are especially sensitive to household shocks (Autor and Wasserman, 2013).

We also estimate these regressions on the subsample of respondents whose fathers were affected only by the 1970 and 1971 lotteries. As discussed in Section 4.B, the relationship between draft eligibility and military service is stronger among those affected by these lotteries (Lindo and Stoecker, 2014), since access to educational deferments, marital, and paternity exemptions were more limited among them (Bitler and Schmidt, 2011; Goodman and Isen, 2019; Bailey and Chyn, 2020).[53] Additionally, these lotteries did not suffer from the randomization imperfection that affected the 1969 lottery (Fienberg, 1971), so simply controlling by paternal year of birth and paternal month of birth fixed effects is enough (as opposed to the year-by-month of paternal birth fixed effects needed to control the imperfection in the 1969 lottery, which becomes very costly in terms of statistical power in a setting like ours, where the sample size is very small).

While we lose several observations by restricting the sample to respondents with fathers born between 1951 and 1952, Table 3 presents evidence that the sign, magnitude, and statistical significance of the effects remain in line with those in Table 2. In particular, Table 3 indicates that paternal draft eligibility increased all measures of marijuana and most of cigarette consumption (Panel B and C, respectively). Similarly, the sign, magnitude, and statistical significance of the effect on criminal activity and the risk index also remain in line when restricting the analysis to the 1951-1952 cohort (Panel E Table 3).

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.

Alternative Specifications

Given that the main rationale for including a paternal year by month of birth fixed effect was to take into account the potential non-randomness of the first lottery only, we first explore in Table 4 with an additional specification where we include paternal year of birth and paternal month of birth fixed effects without including their interaction. Second, in Table A4 we explore

[53] That said, draft avoidance due to other factors remains a concern (Baskir and Strauss, 1978; Kuziemko, 2010; Wang and Flores-Lagunes, 2020)

with an alternative specification where we cluster the standard errors at the paternal state of birth level, as there was considerable variation in induction risk among states given the heterogeneity in the way local draft boards implemented the Federal policies regarding draft eligibility. Third, in Table A5 we weight each respondent by the individual weights provided by the NLSY97. Finally, Table A6 restricts the analysis to biological fathers instead of father figures.[54] All 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 suggest 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

[54] The NLSY97 only contains the exact date of birth for resident fathers, whether they are biological fathers or father figures. Therefore, this analysis uses the smaller subsample of biological resident fathers. Unfortunately, the sample size is not large enough to estimate the same regressions for non-biological resident fathers. For instance, there are only 50 observations with a non-missing age of initiation for hard drugs (which is only non-missing conditional on having consumed hard drugs) and a resident stepfather who was born in the United States between years 1944 and 1952.

behaviors. We divide these factors into the three following mechanisms: (1) parenting styles, (2) attitudes from father towards the respondent, and (3) environment.

In order to address multiple inference concerns regarding the multiple outcomes that we analyze as mechanisms, we follow previous literature (Huh and Reif, 2017, 2020; Jones, Molitor and Reif, 2019) and control for family-wise error rate using the Sidak-Holm step down correction. We report the p-values as well as the p-values adjusting for the number of different hypotheses tested in each family of outcomes.

Parenting Styles

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, raising 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. Table 6 indicates that paternal draft eligibility increases the likelihood of the father having an "uninvolved" (unresponsive and undemanding) parenting style by 6.7 percentage points, relative to a mean of 24 percent. This effect remains marginally significant after accounting for multiple inference (p-value=0.01, adjusted p-value=0.06).[55] Furthermore, it increases the likelihood that mothers of children living with draft-eligible fathers are more likely to be authoritarian (unresponsive and demanding) by 8 percentage points, relative to a 21 percent mean. This effect remains significant after accounting for multiple inference (p-value=0.002, adjusted-p-value=0.02)

This evidence suggests that the maternal parenting style follows the paternal parenting style on the dimension of being unresponsive but may partially offset the undemanding component of the paternal parenting style with a demanding component.[56]

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 answers are 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

[55] While authoritative parenting is more prevalent among military fathers than among civilian parents under the usual system where men self-select into the military (Speck and Riggs, 2013), this is not the case among draft-eligible fathers.

[56] While the estimated effects are particularly large, they are in line with the large differences in the raw summary statistics presented in Table 1, where 22.58% percent of non-draft-eligible fathers are reported to be uninvolved as opposed to 26.36% percent of draft-eligible fathers, and 19.4% percent of mothers associated with non-draft-eligible fathers are authoritarian as opposed to 23.65% percent of mothers associated with draft-eligible fathers.

respondents reported that the father never praises them and only 4 percent reported that the father 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; this effect is statistically significant at a 5 percent level and it remains marginally significant after accounting for multiple inference (p-value=0.01 and adjusted-p-value=0.07).Column 5 also presents evidence that draft-eligible fathers are less likely to never cancel plans with respondents, and the effect remains marginally significant after accounting for multiple inference (p-value=0.01 and adjusted-p-value=0.08).[57]

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.[58] None of these effects are significant at conventional levels, indicating that draft-eligible fathers do not significantly differ on how much they know about their children acquaintances and activities from non-draft-eligible fathers.

Overall, Table 7 presents some evidence that draft eligibility affect some paternal attitudes, such as frequently canceling plans and frequently helping the respondent.

Measures of Environment

[57] 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 unfrequently (never/rarely/sometimes), compared to 27 percent of non-draft eligible fathers.

[58] 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.

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 we divide in five categories: peers, residential, labor market outcomes of the father, labor market outcomes of the mother, and health/biological measures.[59]

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.[60] 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 (by 5.9 percentage points, relative to a 25 percent mean). The estimate remains significant after accounting for multiple inference (p-value=0.018 and family-wise p-value=0.05). While not statistically significant at conventional levels, the rest of the estimates also point to a lower probability of having almost no peers engaging in other risky health behaviors for respondents with draft-eligible fathers.

Panel B of Table 8 reports the interviewer's remarks about the respondent's home and neighborhood. The first column indicates that paternal draft eligibility decreased the probability of living in a residential (rural and residential, suburban and residential or urban and residential) neighborhood according to the interviewer's reports.[61] The second column indicates that paternal

[59] When estimating the adjusted family-wise p-values, we include outcomes from each subcategory in a given family. That is, each panel of Table 8 corresponds to a family.

[60] 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 had sex out of the entire sample of 8,984 respondents, as this question was only asked to those of age 16 or older.

[61] Non-residential categories include: rural-agricultural, suburban-commerce, urban-commerce, urban-wholesale, buildings for churches or vacant buildings or lots.

draft eligibility increased the probability that the interviewer reported 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.[62] These estimates remain marginally significant after accounting for multiple inference.

Panel C shows that paternal draft eligibility does not seem to affect socioeconomic characteristics of the household such as gross household income, net worth, parental education or parental hours of work.

Panel D provides evidence that paternal draft eligibility has no significant 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 significantly 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 or by the education level of the maternal grandparents.

Finally, 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 7.7 percentage points, relative to a mean of 68 percent), without significantly 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 suffer from bad health or the bad health is an outcome of being in a relationship with a draft-eligible man, based on the evidence that pre-determined characteristics of maternal family composition does not significantly differ by paternal draft eligibility (Panel D), the latter may be 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 (2019) that innate conditions do not seem to explain differences in children's education and labor market outcomes in young adulthood.

[62] 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.

Overall, Table 8 suggests 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 7.1 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, and increased other measures of cigarette consumption when we restrict the analysis to the subsample whose fathers were drafted in the later lotteries, where draft eligibility was a stronger predictor of military service.[63] Fifth, it increased the probability of engaging in delinquent behaviors by 5.8 percentage points, relative 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.

[63] There is some evidence that paternal draft eligibility increased hard drugs consumption, although this effect is only statistically significant at a 10 percent level.

We further explore potential mechanisms through which the children of draft-eligible men could be more likely to engage in risky 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 more likely to be "authoritarian" (unresponsive 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 may help 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 smoke 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 children's 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, 2019). 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.[64] In this context, knowing

[64] https://www.sss.gov/About/Events-after-Draft.

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 processed 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.[65] 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.[66] Finally, among the aspects that differ significantly from today's military practices (aside from enrollment based on voluntarism), one require 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.[67]

All in all, the large, negative results we find on children's risky behaviors call for additional research that can separately identified 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

[65] 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

[66] Source: testimony by Thomas R. Insel before the Committee of Oversign and Government Reform in 2007.

[67] There are limitations to the use of these courts. While there have been attempts to extent 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.

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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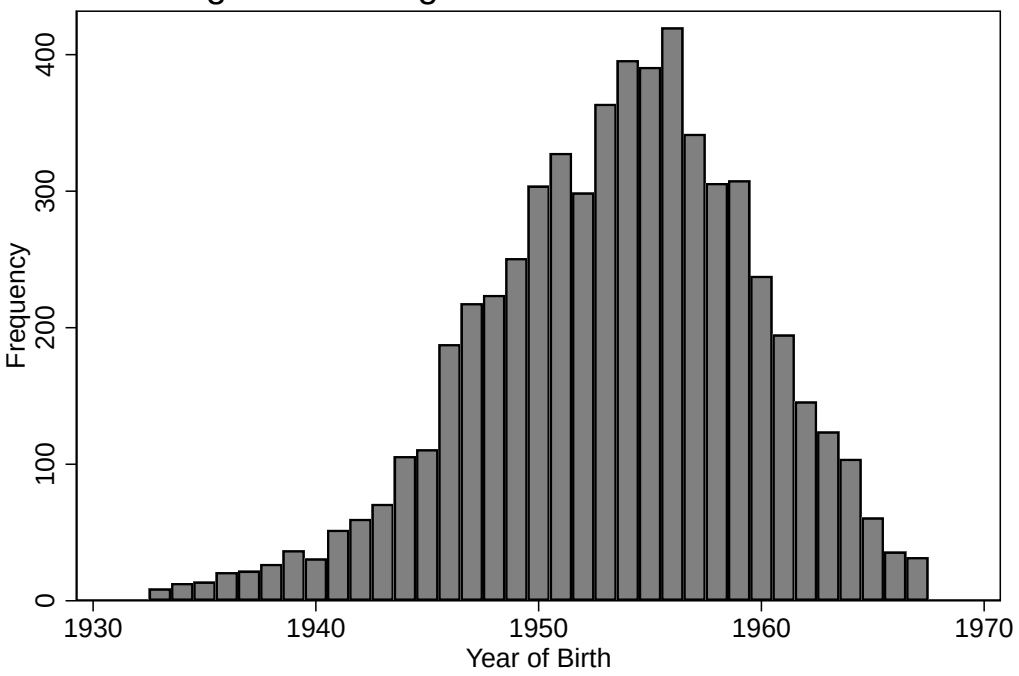
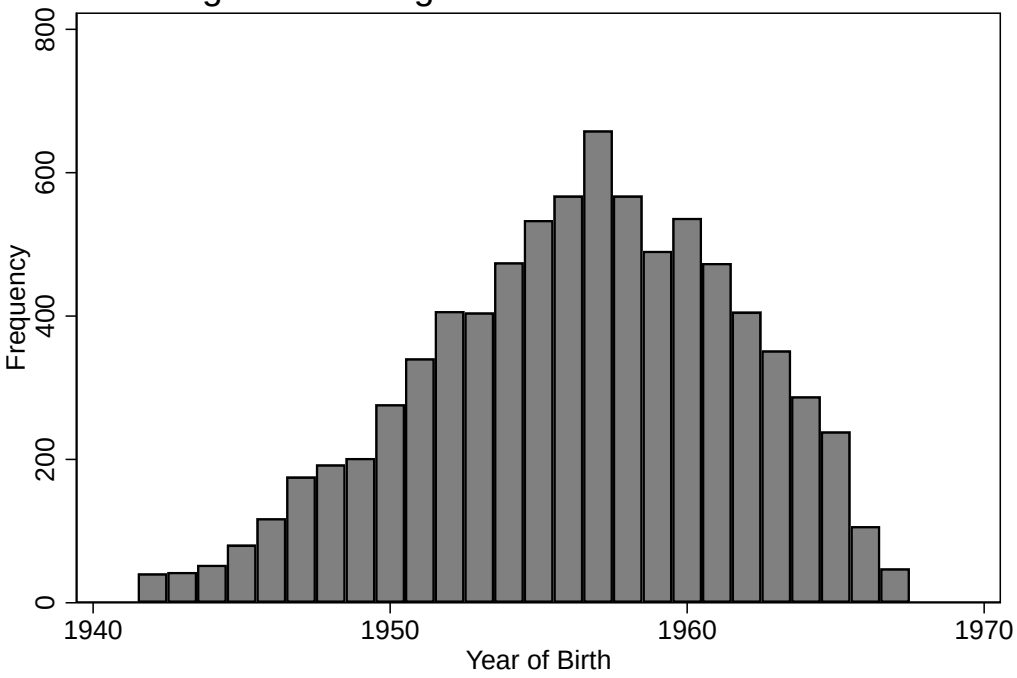
Figure 1: Histogram of Father's Year of Birth



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	
Panel A: Paternal Characteristics				
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%
Panel B: Maternal Characteristics				
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%
Panel C: Respondent's Demographics				
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%
Panel D: Risky Health Behaviors-Time Invariant				
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
Panel E: Substance Use -Time Varying				
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
Panel F: Parenting Styles of Resident Parent (Any Period)				
Father Uninvolved	28.28%	24.40%	22.58%	26.36%
Father Permissivve	47.06%	53.00%	52.72%	53.30%
Father Authoritarian	33.28%	29.08%	28.02%	30.23%
Father Authoritative	52.39%	55.55%	57.64%	53.30%
Mother Uninvolved	24.83%	20.40%	19.95%	20.88%
Mother Permissive	57.68%	61.19%	60.66%	61.75%
Mother Authoritarian	25.26%	21.45%	19.40%	23.65%
Mother Authoritative	58.55%	60.48%	61.48%	59.42%

(Continued) Table 1: Summary Statistics

	All		Subsample	
			Non Draft-Eligible	Draft-Eligible
Table G: Attitudes Towards Children				
Father praises respondent (Never/Rarely/Sometimes)	31.45%	27.80%	27.94%	27.65%
Father critics 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%
Panel H: Respondent's Environment				
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%

(Continued) Table 1: Summary Statistics

	All	Subsample		
			Non Draft-Eligible	Draft-Eligible
(Continued) Panel H: Respondent's Environment				
Residential Neighborhood	80.92%	84.32%	86.82%	81.65%
Interviewer is concerned for safety	10.60%	4.46%	3.05%	5.96%
Gross household income (first wave)	$46,392.49	$71,510.73	$71,644.05	$71,369.99
Family net worth (first wave)	$97,492.78	$187,841.40	$193,106.10	$182,377.30
Father's years of education (first wave)	12.88	14.20	14.25	14.15
Father hours worked per week (first wave)	44.69	45.21	45.45	44.95
Mother's years of education (first wave)	12.53	13.90	13.97	13.83
Mother hours worked per week (first wave)	37.38	36.92	37.35	36.46
Respondent's math score	93.90	97.90	98.35	97.39
Mother lived with biological parents at age 14	73.32%	82.57%	83.94%	81.11%
Maternal Grandmother at most HS	46.38%	34.61%	32.14%	37.34%
Maternal Grandfather at most HS	47.44%	40.31%	38.20%	42.59%
Father very good health	63.22%	64.27%	66.84%	61.51%
Mother very good health	58.75%	68.09%	72.69%	63.17%

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

Table 2: Measures of Substance Use and Criminal Activity

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.018	-0.031	0.005	0.015
	(0.027)	(0.252)	(0.024)	(0.034)
Observations	1,461	1,327	3,878	5,466
Mean	0.795	15.17	0.583	0.547
% Effect Size	-2.26%	-0.20%	0.86%	1.51%
Panel B: Marijuana				
Father Lottery	0.071*	-0.934*	0.050*	0.096*
	(0.033)	(0.415)	(0.023)	(0.044)
Observations	1,461	826	3,871	5,552
Mean	0.437	16.93	0.247	0.266
% Effect Size	16.25%	-5.52%	20.24%	10.08%
Panel C: Cigarette				
Father Lottery	0.009	-0.640*	-0.004	0.060
	(0.030)	(0.313)	(0.025)	(0.061)
Observations	1,461	1,041	3,879	5,484
Mean	0.603	15	0.383	0.637
% Effect Size	1.49%	-4.27%	-1.04%	6.18%
Panel D: Hard Drugs				
Father Lottery	0.031	0.240	0.016	0.071+
	(0.023)	(0.822)	(0.011)	(0.041)
Observations	1,413	334	3,974	3,930
Mean	0.132	17.95	0.0648	0.168
% Effect Size	23.48%	1.34%	24.69%	7.36%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.058+	0.326*		
	(0.035)	(0.138)		
Observations	1,461	1,461		
Mean	0.543	1.681		
% Effect Size	10.68%	19.39%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by 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-father) on measures of alcohol (panel A), marijuana (Panel

B), cigarette (Panel C) and hard drug consumption by age 18 (panel D). Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect. Cells in columns 1-2 (3-4) correspond to a respondent (respondent-year). Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Effect size (%) for column 4 is calculated as ((exp(β1)-1)*100)%.
**, *, + denote significance at 1%-5% and 10% level, respectively.

Table 3: Measures of Substance Use and Criminal Activity. Alternative Set of Years, 1951-1952

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	0.065	-0.508	0.084+	0.066
	(0.058)	(0.522)	(0.042)	(0.057)
Observations	445	407	1,222	1,712
Mean	0.767	15.37	0.573	0.532
% Effect Size	8.47%	-3.31%	14.66%	6.82%
Panel B: Marijuana				
Father Lottery	0.099+	-0.838	0.083**	0.140*
	(0.050)	(0.520)	(0.027)	(0.053)
Observations	445	252	1,219	1,728
Mean	0.462	16.61	0.234	0.230
% Effect Size	21.43%	-5.05%	35.47%	15.03%
Panel C: Cigarette				
Father Lottery	0.106+	-0.960	0.103*	0.226*
	(0.056)	(0.563)	(0.039)	(0.081)
Observations	445	314	1,220	1,709
Mean	0.599	15.12	0.401	0.665
% Effect Size	17.70%	-6.35%	25.69%	25.36%
Panel D: Hard Drugs				
Father Lottery	0.051	-0.641	0.020	0.073
	(0.034)	(1.416)	(0.014)	(0.063)
Observations	429	96	1,246	1,235
Mean	0.123	18.15	0.0545	0.127
% Effect Size	41.46%	-3.53%	36.70%	7.57%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.110+	0.478*		
	(0.062)	(0.230)		
Observations	445	445		
Mean	0.536	1.563		
% Effect Size	20.52%	30.58%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	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: Replicates Table 2 with universe of fathers born between 1951 and 1952. Cells in columns 1-2 (3-4) correspond to a respondent (respondent-year).Universe: Fathers born 1951-

1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Effect size (%) for column 4 is calculated as ((exp(β1)-1)*100)%. **, *, + denote significance at 1%-5% and 10% level, respectively,

Table 4: Measures of Substance Use and Criminal Activity, Alternative Specification

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.018	-0.007	0.018	0.033
	(0.024)	(0.217)	(0.023)	(0.031)
Observations	1,461	1,327	3,878	5,466
Mean	0.795	15.17	0.583	0.547
% Effect Size	-2.26%	-0.05%	3.09%	3.36%
Panel B: Marijuana				
Father Lottery	0.075*	-1.062**	0.059**	0.099*
	(0.029)	(0.353)	(0.021)	(0.039)
Observations	1,461	826	3,871	5,552
Mean	0.437	16.93	0.247	0.266
% Effect Size	17.16%	-6.27%	23.89%	10.41%
Panel C: Cigarette				
Father Lottery	0.011	-0.600*	0.011	0.071
	(0.027)	(0.266)	(0.023)	(0.054)
Observations	1,461	1,041	3,879	5,484
Mean	0.603	15	0.383	0.637
% Effect Size	1.82%	-4.00%	2.87%	7.36%
Panel D: Hard Drugs				
Father Lottery	0.041*	-0.260	0.016	0.063+
	(0.020)	(0.464)	(0.010)	(0.036)
Observations	1,413	334	3,974	3,930
Mean	0.132	17.95	0.0648	0.168
% Effect Size	31.06%	-1.45%	24.69%	6.50%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.066*	0.338**		
	(0.031)	(0.126)		
Observations	1,461	1,461		
Mean	0.543	1.681		
% Effect Size	12.15%	20.11%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	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: Replicates Table 2 but replaces paternal year by month of birth FE with paternal YOB and MOB). Cells in columns 1-2 (3-4) correspond to a respondent (respondent-year). Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Effect size (%) for column 4 is calculated as ((exp(β1)-1)*100)%. **, *, + denote significance at 1%-5% and 10% level, respectively.

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

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month + 1)
Panel A: Alcohol				
Mother Lottery	-0.022	0.143	-0.005	0.013
	(0.027)	(0.258)	(0.028)	(0.036)
Observations	1,390	1,253	3,512	5,033
Mean	0.788	15.18	0.570	0.523
% Effect Size	-2.79%	0.94%	-0.88%	1.31%
Panel B: Marijuana				
Mother Lottery	-0.026	-0.433	0.003	0.050
	(0.030)	(0.332)	(0.024)	(0.038)
Observations	1,390	784	3,509	5,117
Mean	0.432	17	0.249	0.274
% Effect Size	-6.02%	-2.55%	1.20%	5.13%
Panel C: Cigarette				
Mother Lottery	-0.013	-0.494	-0.008	0.050
	(0.033)	(0.344)	(0.029)	(0.068)
Observations	1,390	974	3,520	5,050
Mean	0.604	14.98	0.367	0.608
% Effect Size	-2.15%	-3.30%	-2.18%	5.13%
Panel D: Hard Drugs				
Mother Lottery	-0.000	-0.335	0.003	0.026
	(0.025)	(0.882)	(0.015)	(0.054)
Observations	1,350	314	3,608	3,572
Mean	0.128	18.17	0.0664	0.181
% Effect Size	0.00%	-1.84%	4.52%	2.63%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Mother Lottery	-0.005	0.033		
	(0.035)	(0.135)		
Observations	1,390	1,390		
Mean	0.555	1.680		
% Effect Size	-0.90%	1.96%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Mother Fig State of Birth	Y	Y	Y	Y
FE Mother Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Mother YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but defines draft eligibility based on the mother's date of birth.
Cells in columns 1-2 (3-4) correspond to a respondent (respondent-year).
Universe: Fathers born 1944-1952. SE are clustered at the maternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Effect size (%) for column 4 is calculated as ((exp(β1)-1)*100)%.
**, *, + denote significance at 1%-5% and 10% level, respectively.

Table 6: Parenting Styles

	Uninvolved	Permissive	Authoritarian	Authoritative
Panel A: Parenting Styles of the Father				
Father Lottery	0.067*	-0.000	0.008	-0.026
	(0.031)	(0.030)	(0.030)	(0.034)
Observations	1,448	1,448	1,448	1,448
Mean	0.244	0.530	0.291	0.555
p value	0.01	1.00	0.79	0.41
Family-wise p-value	0.06	1.00	1.00	0.95
% Effect Size	27.46%	0.00%	2.75%	-4.68%
Panel B: Parenting Styles of the Mother				
Father Lottery	-0.001	0.009	0.080**	-0.009
	(0.029)	(0.033)	(0.030)	(0.031)
Observations	1,414	1,414	1,414	1,414
Mean	0.204	0.612	0.215	0.605
p value	0.96	0.78	0.00	0.78
Family-wise p-value	1.00	1.00	0.02	1.00
% Effect Size	-0.49%	1.47%	-37.21%	-1.49%
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: This table reports OLS estimates where the dependent variable is an indicator for whether the parenting styles of the resident father (Panel A) or resident mother (Panel B) are the following: uninvolved (unresponsive and undemanding), permissive (responsive and undemanding), authoritarian (unresponsive and demanding), authoritative (responsive and demanding). Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect. Each cell corresponds to a respondent. Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Family-wise p-value is estimated using all outcomes in any given panel as one "family."

**, *, + denote significance at 1%-5% and 10% level, respectively.

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

Panel A: Frequency of Behaviors from the Father Towards the Respondent

	Praise Never/Rarely/ Sometimes	Criticizes Never	Helps Never/Rarely/ Sometimes	Blames Never	Cancel plans Never
Father Lottery	0.006	-0.050	0.111*	-0.065	-0.107*
	(0.042)	(0.043)	(0.045)	(0.048)	(0.050)
Observations	794	794	794	794	794
Mean	0.278	0.377	0.312	0.736	0.673
p value	0.88	0.24	0.01	0.10	0.01
Family-wise p-value	0.85	0.47	0.07	0.30	0.08
% Effect Size	2.16%	-13.26%	35.58%	-8.83%	-15.90%

Panel B: Father Knows Aspects of Respondent's Life

	Knows Nothing/ Little/Some Things Friends	Knows Nothing Friends' Parents	Knows Nothing/ Little/Some Things Resp is Doing		
Father Lottery	0.041	0.034	0.035		
	(0.047)	(0.034)	(0.051)		
Observations	794	794	792		
Mean	0.620	0.171	0.451		
p value	0.35	0.31	0.43		
Family-wise p-value	0.62	0.62	0.62		
% Effect Size	6.61%	19.88%	7.76%		
FE Year of Birth (YOB)	Y	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y	Y

Notes: Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect. Each cell corresponds to a respondent. Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Family-wise p-value is estimated using all outcomes in any given panel as one "family"

**, *, + denote significance at 1%-5% and 10% level, respectively.

Table 8: Measures of Environment

Panel A: Less than 10% of Peers Engage in the Following Risky Behaviors				
	Smoke	**Get Drunk**	**Use Drugs**	**Have Sex**
Father Lottery	-0.059*	-0.024	-0.031	-0.050
	(0.026)	(0.026)	(0.031)	(0.035)
Observations	1,449	1,439	1,432	724
Mean	0.250	0.423	0.404	0.220
p value	0.02	0.37	0.28	0.19
Family-wise p-value	0.05	0.38	0.38	0.36
% Effect Size	-23.60%	-5.67%	-7.67%	-22.73%

Panel B: Residential Characteristics				
	Residential	**Interviewer Concern Safety**		
Father Lottery	-0.045+	0.031+		
	(0.026)	(0.018)		
Observations	1,452	1,455		
Mean	0.843	0.0446		
p value	0.04	0.02		
Family-wise p-value	0.11	0.09		
% Effect Size	-5.34%	69.51%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

(Continued) Table 8: Measures of Environment

Panel C: Parental Socioeconomic Variables (Income, Education and Labor Market Outcomes)

	Ln Gross HH Income 1996	Ln Net Worth 1997	Father Ln Years Educ	Father Ln Hours	Mother Ln Years Educ	Mother Ln Hours
Father Lottery	0.029	-0.039	-0.015	-0.003	-0.003	-0.049
	(0.097)	(0.116)	(0.018)	(0.018)	(0.013)	(0.038)
Observations	1,180	1,075	1,422	1,336	1,362	1,099
Mean	10.87	11.51	2.631	3.778	2.615	3.550
p value	0.71	0.68	0.24	0.88	0.79	0.08
Family-wise p-value	0.99	0.99	0.8	0.99	0.99	0.57
% Effect Size	0.27%	-0.34%	-0.57%	-0.08%	-0.11%	-1.38%

Panel D: Children's Aptitude Test and Pre-Determined Maternal Demographics

	Respondent's Math Score	Mother Lived with Bio Parents at Age 14	Maternal Grandparents at Most HS	
			Grandmother	Grandfather
Father Lottery	-0.104	-0.023	0.050	0.018
	(1.115)	(0.031)	(0.040)	(0.041)
Observations	929	1,374	1,277	1,235
Mean	97.90	0.826	0.346	0.403
p value	0.92	0.32	0.11	0.58
Family-wise p-value	0.97	0.73	0.55	0.87
% Effect Size	-0.11%	-2.78%	14.45%	4.47%
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

(Continued) Table 8: Measures of Environment

Panel E: Parental Health

	Father Very good/Excellent Health	Mother Very good/Excellent Health
Father Lottery	-0.033	-0.077*
	(0.038)	(0.037)
Observations	1,458	1,379
Mean	0.643	0.681
p value	0.25	0.01
Family-wise p-value	0.36	0.07
% Effect Size	-5.13%	-11.31%
FE Year of Birth (YOB)	Y	Y
FE Father Fig State of Birth	Y	Y
FE Father Fig Birth Year by Month	Y	Y
Father YOB 1944-1952	Y	Y

Notes: Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect. Each cell corresponds to a respondent. Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) for columns 1-2-3 is calculated as (beta/mean)%. Family-wise p-value is estimated using all outcomes in any given panel as one "family."

**, *, + 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
Lifetime Drug Use			
Lifetime Alcohol	86.23	86.70	88.40
Lifetime Marijuana	52.52	53.80	56.10
Lifetime Cocaine (*)	18.67	15.40	12.90
Past Year Drug Use			
Alcohol	67.65	77.90	83.90
Marijuana	24.51	29.80	34.20
Cocaine (*)	6.03	6.70	6.50
Past Month Drug Use			
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 1), NSDUH (column 2), an MTF (column C). For a more detailed discussion about comparisons among these datasets, see Deza (2015)

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

Father Lottery	-0.009
	(0.027)
Observations	1,461
Mean	0.880
% Effect Size	-1.02%
FE Year of Birth (YOB)	Y
FE Father Fig State of Birth	Y
FE Father Fig Birth Year by Month	Y
Father YOB 1944-1952	Y

Notes: Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect.
Cells correspond to a respondent
Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) is calculated as (beta/mean)%.
**, *, + denote significance at 1%-5% and 10% level, respectively.

Table A3: Do the number of observations differ between treatment and control group?

Group	Observations	Mean	SE	95% Confidence Interval	
Non Draft Eligible Fathers	102	7.42	0.65	6.13	8.71
Draft Eligible Fathers	105	6.73	0.60	5.55	7.92

Notes: An independent two sample t-test was conducted on a sample of 207 dates of birth to determine if there were differences in the number of births per paternal date between by paternal draft eligibility. The group of non-draft eligible fathers consisted of 102 birth dates and the group of draft eligible fathers consisted of 105 birth dates. The results showed that birth dates corresponding to draft eligible fathers had statistically the same number of births compared to the non draft eligible fathers. In particular, the number of births corresponding to the paternal birth dates in the control group (7.42+-0.65) are statistically indistinguishable from the number of births corresponding to the paternal birth dates in the treatment group (6.73+-0.59)

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

	Ever Used by Age 18	Age of Initiation	Used in the Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.018	-0.031	0.005	0.015
	(0.026)	(0.219)	(0.023)	(0.036)
Observations	1,461	1,327	3,878	5,466
Mean	0.795	15.17	0.583	0.547
% Effect Size	-2.26%	-0.20%	0.86%	1.51%
Panel B: Marijuana				
Father Lottery	0.071+	-0.934*	0.050+	0.096*
	(0.037)	(0.401)	(0.027)	(0.037)
Observations	1,461	826	3,871	5,552
Mean	0.436	16.93	0.247	0.266
% Effect Size	16.28%	-5.52%	20.24%	10.08%
Panel C: Cigarette				
Father Lottery	0.009	-0.640*	-0.004	0.060
	(0.031)	(0.302)	(0.026)	(0.060)
Observations	1,461	1,041	3,879	5,484
Mean	0.603	15	0.383	0.637
% Effect Size	1.49%	-4.27%	-1.04%	6.18%
Panel D: Hard Drugs				
Father Lottery	0.031	0.240	0.016	0.071
	(0.024)	(0.791)	(0.013)	(0.045)
Observations	1,413	334	3,974	3,930
Mean	0.133	17.93	0.0648	0.168
% Effect Size	23.31%	1.34%	24.69%	7.36%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.058+	0.326*		
	(0.034)	(0.124)		
Observations	1,461	1,461		
Mean	0.544	1.681		
% Effect Size	10.66%	19.39%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but standard errors are clustered at the paternal state of birth level. **, *, + denote significance at 1%-5% and 10% level, respectively.

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

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.018	-0.004	0.002	0.003
	(0.027)	(0.274)	(0.026)	(0.038)
Observations	1,461	1,327	3,878	5,466
Mean	0.795	15.17	0.583	0.547
% Effect Size	-2.26%	-0.03%	0.34%	0.30%
Panel B: Marijuana				
Father Lottery	0.068+	-0.717+	0.051*	0.092*
	(0.034)	(0.396)	(0.022)	(0.045)
Observations	1,461	826	3,871	5,552
Mean	0.437	16.93	0.247	0.266
% Effect Size	15.56%	-4.24%	20.65%	9.64%
Panel C: Cigarette				
Father Lottery	0.006	-0.586+	0.005	0.074
	(0.031)	(0.322)	(0.028)	(0.070)
Observations	1,461	1,041	3,879	5,484
Mean	0.603	15	0.383	0.637
% Effect Size	1.00%	-3.91%	1.31%	7.68%
Panel D: Hard Drugs				
Father Lottery	0.033	0.430	0.016	0.071
	(0.024)	(0.807)	(0.012)	(0.046)
Observations	1,413	334	3,974	3,930
Mean	0.132	17.95	0.0648	0.168
% Effect Size	25.00%	2.40%	24.69%	7.36%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.059	0.320*		
	(0.037)	(0.141)		
Observations	1,461	1,461		
Mean	0.543	1.681		
% Effect Size	10.87%	19.04%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but observations are weighted. **, *, + denote significance at 1%-5% and 10% level, respectively.

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

	Ever Used by Age 18	Age of Initiation	Used in the Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.034	0.022	-0.023	-0.030
	(0.029)	(0.278)	(0.028)	(0.039)
Observations	1,254	1,141	3,342	4,699
Mean	0.796	15.20	0.589	0.553
% Effect Size	-4.27%	0.14%	-3.90%	-2.955%
Panel B: Marijuana				
Father Lottery	0.060	-1.026*	0.045+	0.067
	(0.037)	(0.447)	(0.024)	(0.045)
Observations	1,254	698	3,337	4,767
Mean	0.427	17.04	0.243	0.259
% Effect Size	14.05%	-6.02%	18.52%	6.930%
Panel C: Cigarette				
Father Lottery	-0.005	-0.654+	-0.023	0.015
	(0.034)	(0.337)	(0.028)	(0.068)
Observations	1,254	885	3,344	4,714
Mean	0.596	15.13	0.375	0.606
% Effect Size	-0.84%	-4.32%	-6.13%	1.511%
Panel C: Hard Drugs				
Father Lottery	0.028	0.842	0.008	0.043
	(0.025)	(0.873)	(0.012)	(0.043)
Observations	1,217	284	3,420	3,382
Mean	0.131	18.07	0.0623	0.162
% Effect Size	21.37%	4.66%	12.84%	4.394%
Panel D: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.037	0.260+		
	(0.040)	(0.149)		
Observations	1,254	1,254		
Mean	0.521	1.555		
% Effect Size	7.10%	16.72%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but subsample is restricted to those living with biological father. **, *, + denote significance at 1%-5% and 10% level, respectively.

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

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	0.004	-0.275	0.011	0.033
	(0.039)	(0.385)	(0.038)	(0.050)
Observations	781	709	2,084	2,930
Mean	0.799	15.04	0.574	0.576
% Effect Size	0.50%	-1.83%	1.92%	3.36%
Panel B: Marijuana				
Father Lottery	0.069	-1.407*	0.047	0.113+
	(0.051)	(0.600)	(0.030)	(0.062)
Observations	781	451	2,080	2,975
Mean	0.462	16.68	0.265	0.311
% Effect Size	14.94%	-8.44%	17.74%	11.96%
Panel C: Cigarette				
Father Lottery	0.020	-0.755+	-0.017	0.024
	(0.049)	(0.444)	(0.037)	(0.089)
Observations	781	569	2,085	2,932
Mean	0.607	14.96	0.376	0.638
% Effect Size	3.29%	-5.05%	-4.52%	2.43%
Panel D: Hard Drugs				
Father Lottery	0.034	-0.136	0.020	0.104
	(0.034)	(1.016)	(0.015)	(0.064)
Observations	756	191	2,132	2,111
Mean	0.142	17.92	0.0657	0.169
% Effect Size	23.94%	-0.76%	30.44%	10.96%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	0.073	0.344		
	(0.049)	(0.209)		
Observations	781	781		
Mean	0.621	2.109		
% Effect Size	11.76%	16.31%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but subsample is restricted to male respondents. **, *, + denote significance at 1%-5% and 10% level, respectively.

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

	Ever Used by Age 18	Age of Initiation	Used Past Year	Ln (Days Used Past Month +1)
Panel A: Alcohol				
Father Lottery	-0.039	0.457	-0.013	-0.040
	(0.043)	(0.435)	(0.037)	(0.057)
Observations	680	618	1,794	2,536
Mean	0.791	15.32	0.593	0.514
% Effect Size	-4.93%	2.98%	-2.19%	-7.78%
Panel B: Marijuana				
Father Lottery	0.011	-0.428	0.005	0.048
	(0.051)	(0.735)	(0.028)	(0.047)
Observations	680	375	1,791	2,577
Mean	0.407	17.23	0.227	0.213
% Effect Size	2.70%	-2.48%	2.20%	22.54%
Panel C: Cigarette				
Father Lottery	-0.023	-0.059	-0.030	-0.003
	(0.057)	(0.602)	(0.046)	(0.099)
Observations	680	472	1,794	2,552
Mean	0.599	15.05	0.391	0.637
% Effect Size	-3.84%	-0.39%	-7.67%	-0.47%
Panel D: Hard Drugs				
Father Lottery	0.006	4.504	0.000	0.014
	(0.036)	(3.461)	(0.021)	(0.067)
Observations	657	143	1,842	1,819
Mean	0.123	17.94	0.0638	0.167
% Effect Size	4.88%	25.11%	0.00%	8.38%
Panel E: Criminal Activity	**Indicator**	**Risk Index**		
Father Lottery	-0.005	0.121		
	(0.056)	(0.207)		
Observations	680	680		
Mean	0.455	1.192		
% Effect Size	-1.10%	10.15%		
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
FE Year	N	N	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Replicates Table 2 but subsample is restricted to female respondents. **, *, + denote significance at 1%-5% and 10% level, respectively.

Table A9: Components of Crime Indicator

	Attack	Steal	Sell Drugs	Gang
Father Lottery	0.045	0.066+	0.068*	0.028+
	(0.029)	(0.035)	(0.027)	(0.016)
Observations	1,460	1,460	1,460	1,461
Mean	0.243	0.447	0.165	0.0513
% Effect Size	18.52%	14.77%	41.21%	54.58%
FE Year of Birth (YOB)	Y	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y	Y

Notes: Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect.
Cells correspond to a respondent
Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) is calculated as (beta/mean)%.
**, *, + denote significance at 1%-5% and 10% level, respectively.

Table A10: Correlation Between Components of Crime Indicator

	Attack	Steal	Sell Drugs	Gang
Attack	1			
Steal	0.2807	1		
Sell Drugs	0.3135	0.328	1	
Gang	0.3123	0.1857	0.2522	1

Notes: Authors' calculations

Table A11: Other Measures of Delinquent Behavior

	Own a Gun	Runaway	Damage Property
Father Lottery	-0.003	0.061**	0.109**
	(0.014)	(0.022)	(0.034)
Observations	1,461	1,461	1,460
Mean	0.0548	0.151	0.364
% Effect Size	-5.47%	40.40%	29.95%
FE Year of Birth (YOB)	Y	Y	Y
FE Father Fig State of Birth	Y	Y	Y
FE Father Fig Birth Year by Month	Y	Y	Y
Father YOB 1944-1952	Y	Y	Y

Notes: Regressions include respondent's year of birth, father's year by month of birth fixed effect and paternal state of birth fixed effect.
Cells correspond to a respondent
Universe: Fathers born 1944-1952. SE are clustered at the paternal date of birth. Effect size (%) is calculated as (beta/mean)%.
**, *, + denote significance at 1%-5% and 10% level, respectively.