Gender Norms and the Gender Gap in Teenagers' Risky Behaviors and Later-Life Outcomes: Longitudinal Evidence for the US

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Abstract

Using the National Longitudinal Study of Adolescent Health, we explore the causal effect of gender norms on female teenagers' engagement in risky behaviors in the US, relative to their male counterparts. To do so, we exploit idiosyncratic variation in the proportion of mothers of high-school classmates with traditional versus non-traditional gender beliefs across adjacent grades within schools. Interestingly, we find that less traditional gender norms reduce risky behaviors among boys, but increase girls' risk taking, both in the short- and medium-run. We then study the longer-term effects of high-school classmate mothers' gender norms on adult women's family and labor-market choices relative to their male counterparts, finding that more gender-equal norms in high school increase women's relative income and decrease their relative welfare prevalence. Results are robust to a battery of sensitivity analysis, including placebo tests, and alternative identification strategies. Our findings suggest that the relaxation of traditional gender norms in high school reduces female teenagers' and young adults' historical inhibition from engaging in behaviors traditionally more prevalent among men.

Keywords: Culture, short and medium-run risky behaviors, family and labor market choices, and AddHealth.

JEL Codes:

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1. Introduction

Despite recent improvements,[1] youth's engagement in risky behaviors in the United States remains alarming with 23 percent of 12- to 17-year-olds reporting illicit drug use in their lifetime,[2] 28.4 percent reporting lifetime alcohol use, and 15.3 percent reporting lifetime tobacco use (2016 National Survey on Drug Use and Health). To put this into context, the US ranks 15th among 30 OECD countries on an index measuring youth risk-taking based on the rate of 15-year-olds who smoke regularly, the rate of 13- and 15-year-olds who report having been drunk on more than two occasions, and birthrates to females aged 15 to 19.[3] According to the US Department of Health and Human Services, about 64,000 people died from drug overdoses in 2016, more than 480,000 from smoking-related diseases (including deaths from secondhand smoke) and 30,700 from alcohol-induced causes, including alcohol poisoning and cirrhosis, in 2014,[4] leaving no doubt that mortality associated with the intake of these substances has become a major public health problem. In addition, the consumption of these substances has also been associated with depression, violence, addiction, and other health risks (Miller et al. 2007; Durant et al. 2000; and Munafo et al., 2008), magnifying the public health crisis. Because most people initiate substance intake as teenagers (see Gruber, 2001) a better understanding of the factors driving or preventing youth's risk taking is a highly policy relevant priority.[5]

Even though adult males are more likely to engage in risky behaviors than adult women, this is not necessarily the case among teenagers. Indeed, gender differences in youth risk taking in the US are small, with girls often being higher users than boys. Averaging estimates from 1999 to 2004 National Health and Nutrition Examination Survey, Fryar et al. (2009) find small gender differences in the prevalence of self-reported smoking, alcohol, and illicit drug use.[6]

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[1] From 2002 to 2016, past-month consumption of illicit drugs among 12- to 17-year olds in the US has declined from 11.6 percent to 7.9 percent, smoking from 15.2 percent to 5.3 percent, and drinking from 17.6 percent to 9.2 percent (2016 National Survey on Drug Use and Health).

[2] Illicit drug use includes the misuse of prescription psychotherapeutics or the use of marijuana, cocaine (including crack), heroin, hallucinogens, inhalants, or methamphetamine. Marijuana use was 15.7 percent. Illicit drug use other than marijuana was 15.9 percent.

[3] This index was for 2009, which is the latest available common year (OECD 2009).

[4] The number of deaths from overdoses has soared in recent years. In 2014, more people died from alcohol-induced causes (30,722) than from overdoses of prescription painkillers and heroin combined (28,647), according to the Center for Control Disease and Prevention (Katz, 2017).

[5] On October 26, 2017, President Trump declare the opioid crises a public health emergency (Hirshchfeld Davis, 2017).

[6] For instance, these authors find that 12- to 17-year-old females had a higher prevalence of smoking regularly (8.3 percent versus 5.6 percent), nicotine use in the past 5 days (11.6 versus 9.9 percent), alcohol use in the past 30 days (23.1 versus 19.2 percent), and lifetime cocaine, crack or freebase consumption (2.8 versus 2 percent) than their male counterparts. These authors also estimate that girls were at least as likely to have had at least a

Estimates from the 2016 National Survey on Drug Use and Health also reveal higher consumption of illicit drugs other than marijuana from teenage girls than boys and no gender differences in alcohol intake.[7] This similarity in risk taking across genders is a relative new phenomenon, with girls catching up to boys.[8] Most importantly, this gender convergence in tobacco, alcohol, and illicit drug use is not unique to the US (Warren et al. 2006, and Hibell et al. 2004).[9] Hence, a better understanding of what may be driving this gender convergence in risk taking is needed to better inform policy and programming of harm-reduction and drug-treatment services.

At the same time, human-capital and labor-market gender gaps have decreased and (sometimes reversed) in the US and much of the developed world. For instance, the gender gap in educational attainment has reversed with girls outperforming boys in high-school graduation (Murnane, 2013), years-of-schooling completion (Charles and Luoh, 2003), and college enrollment (Goldin, Katz, and Kuziemko, 2006; and Fortin et al., 2015). One explanation for women's human-capital and labor-market convergence to those of men is the relaxation of gender norms (Bertrand 2010; Fernandez 2011; Goldin et al., 2006; and Fortin et al., 2015). Indeed, focusing on high achievement on test scores in historically male-dominated subjects, Pope and Sydnor (2010) find that the most gender-equal regions in the US have lower gender gaps among the top performers on science and math tests scores. Using cross-country data, Guiso et al., (2008), Fryer and Levitt (2010), and Nollenberger, Rodríguez-Planas, and Sevilla (2016) find that greater gender equality around the world is also directly related with girls' performance on math test scores relative to that of boys. Expanding the analysis to subjects historically female-dominated, Guiso et al. (2008), and Nollenberger, and Rodríguez-Planas (2017) present evidence that gender norms affect the development of girls' cognitive skills, more generally. An earlier and complimentary line of research has focused on gender

drink of alcohol (39.8 versus 37.8), and less likely (although not statistically significantly different) to smoke marijuana (20 versus 23 percent) than boys.

[7] In particular, the 2016 National Survey on Drug Use and Health reveals higher consumption of illicit drug use (other than marijuana) among 12- to 17-year olds girls than boys (26 percent versus 24.6 percent), no gender differences in lifetime alcohol use (28.4 percent), and lower marijuana and tobacco use for girls than boys (15.3 and 19.1 versus 16.1 and 15.3 percent). National Survey on Drug Use and Health data for illicit drug use other than marijuana and marijuana use is from the 2015 survey as it was unavailable in the 2016.

[8] Using data from the National Youth Risk Behavior Survey, Esser et al. (2017) report that, from 1991 to 2015, the percentage-point decline in the prevalence of current drinking in the month prior to the survey was greater among male high-school students than their female counterpart (20.5 percentage points compared to 15.3 percentage points). Findings are similar for binge drinking with a decline of 17.9 percentage points among boys and 9.1 percentage points among girls.

[9] Warren et al. (2006) find that smoking take-up rates among girls and boys around the world are converging, and Hibell et al. (2004) observes a similar gender-convergence pattern in alcohol and illicit-drug use among students in 35 European countries.

norms and adult women's family and labor-market decisions (as opposed to gender gaps). For instance, Antecol (2000), Fernandez and Fogli (2006 and 2009), Furtado, Marcén, and Sevilla (2011), Blau et al. (2013), Bertrand, Pan, and Kamenica (2015), and Olivetti, Patacchini, and Zenou (2017) find that gender norms are also an important determinant of US adult women's fertility, divorce, mariage satisfaction, labor force participation, hours worked, and income conditional on working.

Given the evidence that the relaxation of gender norms reduces women's historical inhibition from engaging in human capital and labor market attainment, it is plausible that gender equality also reduces girls' and women's inhibition from engaging in other behaviors traditionally more prevalent among men such as smoking, drinking, and illicit drug use, among others. To put it differently, as women's sphere expands from the domestic to the public sphere, women's possibilities with regard to smoking, drinking, and intoxication increase (Green et al. 1987 and Hey, 1986), relaxing the gender-specific norms on respectable behavior boundaries and, hence, women's need for self-control. As Sznitman (2007) explains, women are traditionally thought of as "*generally weak, careful, obedient, socially responsible and sensible, well-behaved, and anxious about and responsive to others' opinion*", whereas men are described as "*independent, daring, and fearless, inherently curious, and holders of relaxed attitudes*". Because traditional gender roles exert more rigorous social control over women than men (Rubin 1984), when they are relaxed, women may well increase their experimentation with tabaco, alcohol and illicit drugs. Conservative gender norms, which subordinate women to childrearing and domestic tasks, also prevent them from losing control and being selfish, which tends to be associated with the consumption of illicit drugs (Sznitman, 2007). Abrahamson (2004) notes that women are aware of gender-specific norms establishing invisible boundaries of respectable behavior for them when drinking, while men do not articulate such concerns. Crespigni et al. (1999) also note that bar and nightclub staff felt that self-control was particularly appropriate for women due to their relative vulnerability. Warner et al. (1999) find that there are two separate normative systems, one for men and one for women, which render marijuana use morally acceptable among males but not among females. However, with gender equality, the boundaries of appropriate gendered behavior are challenged. For instance, Pini (2001) argues that part of the process of challenging appropriate gendered behavior involves the use of drugs (such as ecstasy in raves) and "going mental", something which was exceptional in terms of the traditional patterns in which women's drug consumption had been strictly controlled both by men and women. Similarly, Henderson

(1996) points out that in the rave set up, women become active participants in the dance scene, and not dependent on male friends.

The main objective of the current paper is to explore whether female and male teenagers' risk taking in the US is explained by gender norms, and whether those gender norms also affect their family and labor-market choices when they grow up. We exploit the longitudinal design of the school-based National Longitudinal Study of Adolescent Health (hereafter, AddHealth) to estimate the differential gender effect of gender norms on short- and medium-term risky behaviors of teenagers (in waves I and III), as well as long-term family structure and employment outcomes (in wave IV). Our primary interest is on the following risky behaviors: smoking regularly, getting drunk in the past year, ever smoking marijuana, ever using illicit drugs other than marijuana, being expelled from school, and having sex before age 16. Family and labor-market choices are measured with: number of children, ever divorce, welfare receipt, full-time employment, and income.

The paper begins by documenting that girls living in less traditional states are more likely to engage in risky behaviors than those living in more traditional states relative to their male counterparts. Interestingly, these correlates persists over time as youths grow up from being, on average, 16-years old to 22-years old. Moreover, we find that the less traditional states in the US also have lower fertility and welfare rates, and higher full-time employment and income among adult women relative to men than more traditional states, corroborating earlier findings on the importance of gender norms as an important mechanism behind culture on women's family and labor-force decisions.

To explore the causal effect of gender norms on girls' risk taking relative to boys and their subsequent family and employment choices, we exploit idiosyncratic variation in the proportion of mothers of students with non-traditional beliefs across adjacent grades within schools. For each student, the "school/grade"-gender-norms indicator is constructed using *only* information on other students, that is, we exclude the respondent himself or herself. [10] We use school- and grade-fixed effects, as well as school-specific time trends, to control for unobserved factors that might confound the gender norms effect in schools. This effect measures the influence of classmates mothers' attitudes, [11] also known as the *oblique socialization channel* (Dohmen et al., 2012), which emphasizes the role played by the gender

[10] Note that our identification strategy, here, is the same as that in the education literature, which exploits variation in the student composition across cohorts, within schools, to avoid the endogeneity of friendship networks (Angrist and Lang, 2004; Friesen and Krauth, 2007; Hanushek et al. 2002; Hoxby, 2000; Lavy and Schlosser, 2011; Lavy et al., 2012; Bifulco et al., 2011; and Olivetti, Patacchini, and Zenou, 2017).

[11] "Classmates" refer to students in an individual's school specific grade.

norms of the classmates' mothers on teenagers' risk taking choices and their family and employment choices later in life. While Olivetti, Patacchini, and Zenou (2017) also study the oblique socialization channel, their analysis focuses on adult women's hours worked, and uses as proxy of gender norms the hours worked by high-school classmates' mothers. Our work differs in at least three ways. First, instead of only focusing on women, we study the gender differential effect of gender norms as gender norms can potentially affect both men and women and do so differentially. Second, we more directly estimate gender norms by using self-reported mothers' beliefs as opposed to self-reported mothers' hours worked.[12] More specifically, our measure of non-traditional gender norms is the share of high-school classmates' mothers who think that to "*think for herself*" or "*work hard*" is "*the most important thing for a girl to learn*" (as opposed to "*be well-behaved*", "*be popular*" or "*help others*"). Finally, we study the effect of the oblique socialization channel on contemporaneous risky behaviors as well as subsequent risky behaviors and family and employment choices as adults. To account for multiple hypotheses testing, adjusted p-values are estimated using the Romano and Wolf (2005) step-down procedure that asymptotically controls for the family-wise error rate—the probability of rejecting at least one true null hypothesis among a set of hypotheses we seek to test jointly.

To support the validity of our identification strategy, we follow Lavy and Schlosser (2011), and use Monte-Carlo simulations to show that the within-school variation in the proportion of mothers with non-traditional gender beliefs is as good as random. Furthermore, we do not find that this within-school variation is related to within-school variation in students' predetermined characteristics.

We find that a greater share of high-school classmates' mothers with non-traditional gender beliefs increases: girls' regular smoking and lifetime marijuana consumption relative to that of boys in both the short- and medium-run; girls' relative likelihood of getting drunk in the last year in the short-run (and marginally in the medium-run) and their lifetime likelihood of being expelled from school in both the short- and medium-run relative to those of their male counterparts. Interestingly, our evidence suggests that gender equality has a beneficial effect on boys as it prevents their engagement in risk taking. Indeed, we find that a greater share of high-school classmates' mothers with non-traditional gender beliefs decreases: boys' short-term likelihood of being expelled and lifetime marijuana consumption; boys' medium-run

[12] Olivetti, Patacchini, and Zenou (2017) construct the measure of gender social norms using mothers' self-reported hours worked from wave I of AddHealth. Particularly, this study analyses "direct vertical socialization" by computing the effect of mother's work behavior on women's labor supply and "oblique socialization" by computing the effect of work behavior of female peers' mothers on women's labor supply.

regular smoking and lifetime marijuana consumption, getting drunk in the last year (marginally) and having sex before the age of 16. Crucially, we find that societal behavior experienced during adolescence shapes women's labor market decision as adults relative to that of men. For instance, we find that a higher share of high-school classmate mothers with non-traditional beliefs increases women's income and reduces their likelihood of being in welfare (relative to that of men) later in life . All of these effects remain even *after* we control for a large set of youth and parental characteristics measured in wave I, including children's Picture Vocabulary Test (PVT) score as a measure of verbal ability, and family income, parental education, and family structure (presence of both parents in the household).

Finally, as an alternative and complimentary strategy we use the epidemiological approach which restricts the analysis to second-generation immigrants who share the economic institutions, rules and regulations regarding illicit drug, tobacco and alcohol use, distribution, and advertisement of tobacco and alcohol products, as well as the costs and taxes of tobacco and alcohol products, but are affected by gender norms from their parents' country of ancestry. Evidence that gender equality in the country-of-ancestry affects second-generation-immigrant girls' risk taking in the US relative to that of their male counterparts would provide additional support that gender norms affect the gender gap in risky behaviors and, hence, are not gender neutral. Indeed, we find that greater gender equality in the parents' country of ancestry increases second-generation immigrant girls' regular smoking and lifetime marijuana consumption in both the short- and medium-run, getting drunk in the last year in the short-run, lifetime illicit-drug use other than marijuana and lifetime expelled from school in the medium-run relative to that of their male counterparts. Similar to our earlier findings, we find that greater gender equality in the country of ancestry decreases second-generation immigrant boys' likelihood of getting drunk in the last year in the short-run, and lifetime marijuana and illicit-drug consumption as well as likelihood of being expelled from school in the medium-run. Finally, we also find that gender equality in the country of ancestry shapes second-generation immigrants' family and employment choices by increasing adult women's decision to work full-time in the US, decreasing their likelihood of being on welfare, and their fertility (the latter only marginally) in the US. Our results are robust to different specifications, alternative measures of gender social norms, the inclusion of additional country-of-ancestry controls, geographic sorting into the host country, and changes in sample criteria. Additionally, the effect of gender social norms on the gender gaps remain even *after* we control for a large set of youth and parental characteristics, as well as family structure and children's PVT. While some of these variables may present endogeneity issues (and hence we do not include them all

in our preferred specification), the fact that our main results are robust to their inclusion is nonetheless reassuring. We also performed falsification tests to assess whether our results are spuriously picking up the effect of unobserved confounders at the country-of-ancestry level or merely due to chance. Our placebo estimations suggest that this is not the case as when we use placebo values for our cultural proxies (rather than their true values) we only find statistically significant results at the 5 percent level in less than 3.5 % of the cases. Most importantly, our results resemble those found earlier with a different sample and identification strategy.

Our paper contributes to the following three lines of research. First, it adds to recent papers using cross-cohort, within school strategy to analyze the effect of school peers on in-school non-academic outcomes (Lavy, Paserman, Schlosser 2009, Carrell and Hoekstra 2010, Lavy and Schlosser 2011, Fletcher 20??, and Bifulco et al 2011).[13] Nonetheless, most of these studies focus on the socio-demographic composition of the classmates or their parents as opposed to the composition of the classmate parents' beliefs.[14] Moreover, our study is the first to take a gender perspective by exploring whether high-school classmate parents' beliefs are gender neutral on short-, medium-run non-academic outcomes. Last but not least, our study takes a more comprehensive approach as it also analyzes the long-term effects of high-school classmate parents' beliefs on adult family and labor force choices.

Second, our paper complements recent papers documenting boys' behavioral and non-cognitive difficulties relative to those of girls, and the extent to which family and school environment explain these gender differences (REF). For instance, Bertrand and Pan (2013) find that family structure is an important correlate of boy's behavioral deficit, and that the non-cognitive development of boys, but not that of girls, is most responsive to parental input.[15] Focusing on the sibling gender gap, Autor et al. (2016) find that boys' behavioral and academic outcomes are differentially affected by family circumstances. In contrast with this literature, our paper finds that non-traditional gender norms decrease boys' risk taking while increasing girls' risk taking. Our paper also studies the longer-term consequences of non-traditional

[13] Non-academic outcomes include classroom disruption and violence and students' satisfaction in school (Lavy and Schlosser, 2011, and Bifulco et al., 2011), student-student and student-teacher quality (Lavy and Schlosser, 2011, Lavy, Paserman, Schlosser, 2009, and Bifulco et al., 2011), classmates misbehavior (Carrell and Hoekstra, 2010), smoking (Fletcher, 20??, and Bifulco et al., 2011), and smoking marijuana and binge drinking (Bifulco et al., 2011). Bifulco et al. (2011) also exploit the longitudinal AddHealth structure to analyze long-term school peer effects on post-secondary outcomes such as binge drinking, college attendance and idleness.

[14] Lavy and Schlosser (2011) study the effect of the share of females students; Lavy, Paserman, and Schlosser (2009) the share of low-ability students; Carrell and Hoekstra (2010) the share of children from troubled families; Fletcher (20??) the share of students who smoke; and Bifulco et al. (2011) the share of minority students or with college-educated parents.

[15] These authors focus on externalizing behavior such as frequency of arguments, fights, anger episodes, impulsive acts or disturbing activities.

gender norms on family and labor-market decisions finding that they affect positively women but have no effect on men.

Finally, our work contributes to the work on gender norms and gender gaps (Guiso et al., 2008; Fryer and Levitt, 2010; Pope and Sydnor, 2010; Nollenberger, Rodríguez-Planas, and Sevilla, 2016; Nollenberger, and Rodríguez-Planas, 2017), as well as that on culture and women's family and labor market choices (Antecol, 2000; Fernandez and Fogli, 2006 and 2009; Furtado, Marcén, and Sevilla, 2011; Blau et al., 2013; Bertrand, Pan, and Kamenica, 2015; and Olivetti, Patacchini, and Zenou, 2017). While the first set of papers have mainly focused on how different indices of gender equality relate to the gender gaps in test performance of children or adolescents, the latter have focused on how different societal or cultural influences determine adult women's work or family choices. Nonetheless, all of these papers reveal that gender equality improves girls' or women's wellbeing by closing the gender gap. Our paper instead shows that, with gender equality, girls also mimic boys' risk taking during high-school and as young adults. Two papers are particularly worth mentioning. The first is that of Olivetti, Patacchini, and Zenou (2017) who use AddHealth and the work behavior of adolescent classmates' mothers, to show that gender identity shapes women's hours worked. We show that gender norms of high-school classmates' mothers shape both adolescent and adult-women risk taking differentially than their male counterparts. We also show that gender identity shapes women's employment and family decisions, but not that of men. Hence, not only gender norms persist across generations, but also within a cohort over her lifetime, affecting different dimensions in women's life. The second paper that is relevant to the current work is that of Rodriguez-Planas and Sanz-de-Galdeano (2017) who find that gender norms from the parents' country of ancestry affect second-generation immigrants' teenage smoking in Spain. The current paper corroborates that this pattern: (1) holds in the other countries (the US in this case) and among a different population (all US residents regardless of their citizenship status and second-generation immigrants); (2) expands to a wide array of risky behaviors and adult behavioral outcomes; and (3) is robust to a very different identification strategy (idiosyncratic cross-cohort, within school variation).

2. Descriptive State-Level Evidence

This section presents descriptive evidence on the relationship between gender norms and the gender gap in the prevalence of risky behaviors among youths in the US and other family and labor market outcomes during young adulthood. To do so, we merge state-level aggregated

data on gender social norms from the General Social Survey (GSS, hereafter) with state-level aggregated data on the prevalence of risky behaviors and other family and labor market outcomes from AddHealth. From the GSS, we extracted the same measure of adults' cultural attitudes and gender stereotypes used in Sydnor and Pope (2010), namely, the percentage of respondents who answered "*yes*" to the question: "*Is it much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family?*" This question, which provides information about traditional values of adults across states in the United States, averages 45.1 percent of adults responding "yes" nationwide.[16]

We constructed different state-level measures of risky behaviors' prevalence and family and labor market outcomes using *in-home* survey of AddHealth, a school-based longitudinal survey nationally representative of the US population of 7th to 12th graders during school year 1994/95.[17] The *in-home* survey of AddHealth collects comprehensive information on health-related behaviors of adolescents and other behavioral outcomes during their young adulthood.[18] We estimated behavioral state-level measures at three different points in time: in 1994/95 when youths averaged 16 years old (wave I); in 2000/01 when youths averaged 22 years old (wave III); and in 2006/07 when youths were about 28 years old (wave IV).[19] The first two waves allowed us to estimate risky behaviors during adolescence and when youths transition into adulthood, whereas wave IV provided us with the data to estimate family and labor-market outcomes when AddHealth respondents are settling into young adulthood and assuming adult roles and responsibilities. To estimate state averages, we pooled all youths available in each of the waves for whom sampling cross-sectional weights were available. This gave us a sample of 18,924 individuals ranging between 11 and 21 years old in wave I, 14,322 individuals ranging between 18 and 27 years old in wave III, and 14,799 individuals ranging between 24 and 34 years old in wave IV. Because of state-variable item non-response, we lost 105 observations in wave I, 65 observations in wave III and 73 observations in wave IV.

Below we proceed to describe the different state-level measures of risky behaviors that

[16] We thank Devin Pope and Justin Sydnor who have kindly provided us with this state-level data. They constructed these variable pooling data from 1972 to 2006, and limiting to the 37 states where at least 100 respondents answered the question.
[17] Detailed information on AddHealth's survey design is provided in the data sub-section of Section III, Within-School/Across-Cohort Analysis, below.
[18] AddHealth also collects a much larger *in-school* sample in which *all* students of the sampled schools that were present in a fixed interview date responded to a small survey that lacks the detailed information on risky behaviors collected in the in-home questionnaire. In addition, the *in-school* sample was not followed over time.
[19] wave II was collected in 1996. Because we are interested in analyzing the short-, medium- and long-run behavioral effects of high-school gender norms, we preferred focusing our attention to Waves 1, 3 and 4 as they were each separated by 6 years. Nonetheless, results using wave II are similar to those from wave I and available from authors upon request.

we estimated using Waves I, III and IV:

- The percentage of youths who answered at least 10 out of 30 to the question: "*During the past 30 days, on how many days did you smoke cigarettes?"*
- The percentage of youths who answered "*one or more days*" to the question: "*Over the past 12 months, on how many days have you gotten drunk or "very, very high" on alcohol?*"
- The percentage of students who reported an age to the question: "*How old were you when you tried marijuana for the first time?*" in wave I, and those who reported "*yes*" to the question: "*Since June 1995, have you used marijuana?*" in wave III and "*Have you ever used any of the following drugs: marijuana?*" in wave IV.
- The percentage of youths who answered "*one or more days*" to the questions: "*How old were you when you tried any kind of cocaine— including powder, freebase, or crack cocaine—for the first time?*" or "*How old were you when you first tried any other type of illegal drug such as LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills, without a doctor's prescription?"* in wave I, and those who reported "*yes*" to the questions: "*Since June 1995, have you used any kind of cocaine—including crack, freebase, or powder?*", "*Since June 1995, have you used crystal meth?*", or "*Since June 1995, have you used any other types of illegal drugs, such as LSD, PCP, ecstasy, mushrooms, inhalants, ice, heroin, or prescription medicines not prescribed for you?*" in wave III and to the question "*Have you ever used any of the following drugs: cocaine, crystal meth or other types of illegal drugs, such as LSD, PCP, ecstasy, heroin, or mushrooms; or inhalants?"* in wave IV.
- The percentage of youths who answered "*yes*" to the question: "*Have you ever been expelled from school?*". This indicator was constructed using waves I and III only, because at wave IV this question is not asked.
- The percentage of youths who responded "*16 years old or younger*" to the question: "*How old were you the first time you had vaginal intercourse?*". This indicator was only constructed for wave III because many of wave I respondents were younger than 16 years old.

Using wave IV, we estimated the following state-level measures of family structure and labor market:

- The percentage of individuals who answered "*yes*" to the question "*Have you ever worked full time at least 35 hours a week at a paying job while you were not primarily a student? Do not include summer work."*
- We measure personal income using the question "*Now think about your personal earnings. In {2006/2007/2008}, how much income did you receive from personal earnings before taxes—that is, wages or salaries, including tips, bonuses, and overtime pay, and income from self-employment?"*
- The percentage of individuals who answered "*yes*" to the question "*Between {1995/2002} and {2006/2007/2008}, did you or others in your household receive any public assistance, welfare payments, or food stamps?"*
- The number of children is measure using the question "*How many live births resulted from (this pregnancy/these pregnancies)?"*
- The percentage of individuals who answered "*divorce*" to the question "*How did your marriage to {initials} end?*"

Columns 1 and 2 in Table 1 display descriptive statistics for males and females risky behaviors' prevalence, family structure and labor-market averages, respectively. Columns 3 and 4 display the gender gap (male average minus female average) and the gender gap after controlling for state fixed effects, respectively. Nationwide, there were no statistically significant gender differences in the share of regular smokers (17 percent), the share of youths getting drunk (28 percent), and the share of illicit drug users (12 percent) in wave I.[20] In the other dimensions, boys were 4 percentage points more likely to consume marijuana and be expelled than girls (with the share of girls using marijuana and being expelled averaging being 26 and 2.5 percent, respectively).

Not surprisingly, as respondents grow up and enter adulthood (in wave III), males are more likely to engage in risky behaviors than females in all dimensions except for vaginal intercourse before age 16 (31.2 versus 28.6 percent). More precisely, nationwide 32.8 percent of males versus 29.1 percent of females were regular smokers; 57.1 percent of males versus 47.2 percent of females got drunk at least once in the prior year; 61.3 percent of males versus 52.8 percent females ever smoked marijuana; 32 percent of males versus 25.8 percent of females had ever tried illicit drugs other than marijuana; and 14.1 percent of males versus 5.9

[20] The gender gap in getting drunk (2 percentage points) is not statistically significant once we control for state fixed effects.

percent of females were ever expelled from school.

In wave IV, when respondents are between 24 and 34 years old, these differences increase. Particularly, 34.7 percent of males versus 27.7 percent of females were regular smokers; 57.6 percent of males versus 43 percent of females got drunk at least once in the prior year; 69.4 percent of males versus 60.3 of females had ever smoked marijuana and 42.1 percent of males versus 31.8 percent of females had ever tried illicit drugs. For labor market and family outcomes measured at wave IV we observe that women are less likely to have ever worked full-time by 2.3 percentage points and earn 46 percent lower income, on average, than their male counterparts (92.7 percent have worked full-time at some point in their life and earn on average $28,044 US dollars). In contrast, they are more likely to be divorced (12.8 versus 9.4 percent), have more children (1.3 versus 0.9) and receive welfare (29.8 versus 19.7 percent).

Figure 1 shows the correlations between the share of respondents who reported engaging in risky behaviors in Waves 1 (panel A) and 3 (panel B) across states and the states' gender norms. In both waves, we observe a strong correlation by which states with more traditional gender norms (that is, where people are more likely to answer that it is better if women take care of the home) have lower levels of female teenagers' smoking, getting drunk, using marijuana and other illicit drugs. In contrast, the correlation is considerably smaller among male teenagers, implying that in states with more traditional gender norms the gender gap (defined as the difference in the prevalence of male and female users) widens. While this main finding holds for ever expelled and having vaginal intercourse before 16, in these cases, we observe no correlation with gender norms among females, but instead a strong correlation among males, by which those in more traditional states males are more likely to be expelled or have had vaginal intercourse before age 16.[21]

Panel C in Figure 1 shows the correlations between the share of respondents who reported being divorced, receiving welfare, working full-time, their income and number of children in wave IV across states and the states' gender norms. Again, we observe a strong correlation by which states with more traditional gender norms have lower levels of female income and divorce rates, and higher levels of female welfare receipt and fertility. As these correlations are again weaker among men, the gender gap (positive for income, and negative

[21] This pattern holds if instead of this measure of gender norms, we use Pope and Sydnor's measure on youths' gender norms, measuring the share of youths reporting that: "*math is for boys*" (shown in Appendix Figure 1).

for fertility, divorce prevalence and welfare receipt) widens in more traditional states.

While these results *only* capture correlations, they illustrate the stylized fact that in less traditional states in the US teenage girls are more likely to engage in risky behaviors relative to boys than in more traditional states. Findings that in less traditional states women are also more likely to be divorce, earn higher income, have less children, but less like to be welfare recipients suggest that the relaxation of traditional gender norms reduces women's historical inhibition from engaging in behaviors traditionally more prevalent among men. In the next section, we estimate whether there is a causal effect of gender norms while growing up on contemporaneous female risk taking relative to male and their subsequent behaviors as they move and settle into young adulthood.

3. Within-School/Across-Cohort Estimation and Main Results

3.1 Identification and Estimation Strategy

In this section, we estimate the causal effect of high-school gender norms on female teenagers' risk taking relative to male teenagers and their subsequent risky behaviors and family and employment choices. For this purpose, we exploit across cohort variation within schools in the proportion of high-school students' mothers with gender neutral beliefs. The identification problem arises if the effect of the proportion of non-traditional mothers is confounded by the effect of unobserved correlated factors. To address this issue we exploit within school variation in the proportion of non-traditional mothers across adjacent grades and include school- and cohort-fixed effects as well as school-specific/cohort trends in all our estimations. Most importantly, our identification strategy requires having multiple cohorts within school.

We estimate the following model:

$$Y_{igs,w} = \beta_0 + \beta_2 NonTraditionalMothers_{gs,1} + \beta_3 Female_{igs} + \beta_4 NonTraditionalMothers_{gs,1} * Female_{igs} + X'_{igs,1}\alpha + \delta_g + \rho_s + \pi_s(Grade_g) + \varepsilon_{igs,w} \quad (1)$$

where *i* denotes students, *g* denotes grades or cohorts, *s* denotes schools, and *w* denotes the AddHealth wave. $Y_{igcs,w}$ is the outcome of interest for student *i* from grade *g* and school *s* at wave *w*. δ_g is a grade or cohort fixed effect, ρ_s is a school fixed effect and $\pi_s(Grade_g)$ is school-specific/cohort trend. $X'_{igs,1}$ is a vector of student-specific covariates measured at wave

I. $NonTraditionalMothers_{gs,1}$ is a proportion of non-traditional mothers in grade g and school s and $Female_{igs}$ takes the value 1 if i is female and 0 otherwise. For each student, the "school/grade"-gender-norms indicator is constructed using *only* information on other students, that is, we exclude the respondent himself or herself.

Since we are examining whether gender norms affect the gender gap in risky behaviors and labor market outcomes, our coefficient of interest is that of the interaction between $NonTraditionalMothers_{gs,1}$ and the female indicator, that is, β_4. For instance, if Y is smoking, a positive and significant β_4 would suggest that a higher proportion of non-traditional mothers in cohort g and school s is associated with a higher prevalence of smoking among female teenagers relative to their male teenagers from the same grade and school, and thus a *smaller* male-female gender gap in smoking. Note that the coefficient β_2 captures the effect of the proportion of non-traditional mothers on the outcomes of interest for boys.

We use OLS to estimate equation (1) to estimate the impacts of the variation within schools and across cohorts of the proportion of non-traditional mothers on the gender gap in several outcomes measured at different ages. In particular, outcomes on risky behaviors include smoking regularly, getting drunk in the past year, ever smoking marijuana, ever using illicit drugs other than marijuana, being expelled from school and having sex before age 16. They are measured at wave I, wave III, and wave IV. Outcomes on family and labor market choices later in life include: number of children, ever divorce, welfare receipiency, full-time employment, and income. Since we examine multiple outcomes we must address the concern that an increase in the number of tests increases the likelihood of rejecting the null hypothesis using traditional inferential techniques. To address this issue we apply the Romano and Wolf (2005) stepwise multiple testing procedure that asymptotically controls the familywise error rate to estimate adjusted p-values. Following Heckman *et al.* (2010), we group hypotheses into economic and substantially meaningful categories by survey waves. Thus, the analysis focuses on several outcomes from two key families of outcomes: risky behaviors, and family and labor market decisions, measured at three different points in time (waves I, II and IV).

3.2. The AddHealth Dataset

In this section, we exploit the longitudinal characteristics of the *in-home* sample of AddHealth. AddHealth follows a clustered sample design in which schools are sampled and then, within schools, students are sampled. More specifically, using a stratified sample frame to be representative of the US school population in school year 1994/95, a sample of 80 high schools

was selected. Then, for each high school selected, one feeder school (typically a middle school) was selected with probability proportional to its student contribution to the high school, yielding one school pair in each of the 80 different communities. Within each school and grade, a random sample of 17 males and 17 females were followed longitudinally from wave I (collected in 1994/95) to wave III (collected in 2001/02) to wave IV (collected in 2008). Within each high school (middle school) up to four (two) different grades were initially sampled in wave I.[22] In waves III and IV, the same sample is observed but they are now six and twelve years older, respectively.

As we are interested in exploring whether high-school gender norms affect risk taking during high school and six years later, as well as family and employment choices twelve years later, we first restrict our sample to those 12,288 individuals who are followed from wave I to wave IV.[23] We alco dropped 22 individuals for whom age or race was missing. Second, we restrict our sample to wave I high-school students, dropping those in 8th grade or younger (3,333 students).[24] Because our key variable of interest is a cohort-level variable representing the proportion of non-traditional mothers in high school during school year 1995/96, we dropped wave I students from all grades with less than 10 individuals (764 students).[25] These restrictions leave us with a final longitudinal sample of 8,169 students (of which 53.8% are females) from 72 schools and 283 school-grade combinations. Following AddHealth protocols, our analysis uses longitudinal sample weights so that our estimates are nationally representative of the US high-school student population in school years 1994/95.

Table 2 provides descriptive statistics by gender. About 53% of students from our sample are females and 73 % are white. At wave I males from our sample had on average 17 years old and females were approximately 1.5 months younger. Also males have on average slightly higher PVT score than females (the difference is statistically significant but constitute just 1.1 % of female PVT). About 57% of students lived in the high quality residential building, 28% have college graduated mother, 32% have college graduated father and 64% lived with

[22] A small fraction of schools (14 over 72 schools) had up to six grades as they began in middle school and went up to high school. Because AddHealth spanned from 7th to 12th grade, only two grades were included in middle schools, even though most middle schools begin in 6th in the US.

[23] This implies loosing 8,466 individuals from the initial 20,000 interviewed in wave I. Not surprisingly, the longitudinal sample is smaller than the cross-sectional sample used in Section II, where precision of our state-level estimates was our priority.

[24] Most US high schools cover 9th to 12th grade. In the case of three-year high schools, we only kept individuals in grades 10th to 12th. Only 5 over 72 schools from our sample are 3-year schools, which 15.3% of students from our sample have attended.

[25] This restriction is common practice in papers analyzing peer effects of high-school students and AddHealth data (see Bifulco, Fletcher and Ross, 2011; and Olivetti, Patacchini and Zenou, 2017).

both parents. Table 2 also compares by gender characteristics of grademates, such as average age, average PVT, share of black grademates, share of females, share of non-immigrants, share of grademates with college educated parent and, in addition, average grade size. In summary, we do not find gender differences in these characteristics.

Share of Non-Traditional Mothers Among High-School Classmates

Our regressor of interest is a grade-level variable that we create using the parents' questionnaire collected in wave I. A parent, usually the resident mother, also completed a 30-minute op-scan interviewer-assisted interview. [26] The parent questionnaire gathered data on family background, including parental beliefs. In particular, to estimate a measure of high-school classmates' mothers' gender norms, we use the question: "*Of the following, which do you think is the most important thing for a girl to learn? (1) to be well-behaved; (2) to be popular; (3) to think for herself; (4) to work hard; or (5) to help others*", where respondents had to select one of the possible 5 answers. Using this question, we classified as non-traditional beliefs those where the mother answered "*to think for herself*" or "*to work hard*", while we classified as traditional if they answered any of the other three choices. Using this binomial variable we calculated, for each student in our sample, the proportion of non-traditional mothers in his or her grade and school excluding his or her own mother.

Panel A in Table 2 shows that 72 percent of high-school classmates' mothers are non-traditional. This average is not statistically different for teenage girls and for teenage boys once we control for state fixed effects. Most importantly, we explore whether this measure of gender norms reflects gender stereotypes across states as estimated from the GSS. We do so by constructing a state-level measure of the proportion of mothers in AddHealth with traditional gender norms in each state and plot it against the state-level variable from GSS used in Section 2 above.[27] Appendix Figure 2 shows that there is a strong positive correlation between the two measures (of 49 percent), corroborating that the AddHealth measure does indeed reflect gender social norms.

Outcome Variables

[26] Over 85 percent of the parents of participating adolescents completed the parental interview in the first wave. In our sample 93.3% percent of the parents were mothers.

[27] We calculate the proportion of traditional mothers at state level as the percentage of mothers in state who answered that the most important thing for a girl to learn is (1) to be well-behaved; (2) to be popular; or (5) to help others using cross-sectional sample described in section 2 and wave 1 cross-sectional weights.

In Waves I, III and IV we consider as outcomes six types of risky behaviors: smoking, getting drunk, marijuana consumption, illicit drugs (other than marijuana) consumption, being expelled from school, and having intercourse before age 16. While the first two outcomes are measured currently (smoking) or in the last 12 months (getting drunk), the other four outcomes are measured in the respondents' lifetime. Having intercourse before age 16 is measured only in wave III as in wave I most respondents were under the age of 16. We also do not measure the probability to be expelled from school at Wave IV, since this questions is not asked.

Our outcome variables are binary variables indicating whether the respondent had engaged in that particular risky behavior based on the questions reported in Section II above. While these are self-reported behaviors, the fact that the questions were asked through computer-assisted self-interviews (CASI) where the questions were played to the participants via headphones and the answers anonymously typed into the laptop without being shown to the interviewer minimizes the danger of misreporting due to peer pressure or fear (Elsner and Isphording, 2017).

In wave IV we also consider as outcomes five types of family and labor market outcomes: ever divorced, ever working full-time, welfare receipt, yearly income and number of children. While the last two outcomes are measured currently, the first two are measured in the respondents' lifetime. The first three outcome variables are binary variables indicating whether the respondent had ever experienced a divorce, worked full-time or is currently on welfare, whereas the other two variables are continuous variables. They are based on the questions reported in Section II above.

Table 3 compares outcomes by gender using this sample. All summary statistics are computed using longitudinal sample weights, designed to make the sample nationally representative of students in high schools in the US during school year 1994-1995. Gender differences in risky behaviors described in Table 3 are similar to those described in Table 1, when using the cross-sectional as opposed to the longitudinal sample. The major difference is that now the gender gap in getting drunk in wave I is statistically significantly different from zero.

Descriptive Statistics

Table 2 provides descriptive statistics for the variables used in our primary analyses, including our main regressor, the share of non-traditional mothers of high-school classmates, the different outcomes, and the different control variables used in various model specifications.

Validity of the Identification Strategy

Our key identifying assumption postulates that changes across grades in the proportion of non-traditional mothers within a school result from random fluctuations, and hence are uncorrelated with unobserved differences across cohorts in students' characteristics that may affect students' outcomes. In order to fruitfully rely on this identification strategy two things must happen: (1) the data needs to display enough variation in grades' composition within schools to estimate the effects of interest with precision; and (2) changes across grades in the proportion of non-traditional mothers within a school must result from random fluctuations.

Table 4 examines the extent of variation in grade composition that is left after removing grade and school fixed effects and after removing grade fixed effects, school fixed effects and school cohort trends. Removing school fixed effects reduces the standard deviation in the proportion of students with non-traditional mothers by 40 percent, and additionally removing school cohort trends reduces this variation by an additional 9 percent. There seems to be sufficient variation in the data to estimate the effects of interest even after one controls for grade fixed effects, school fixed effects and school-grade trends. This assessment is, indeed, reinforced by the fact that we do estimate statistically significant impacts for many of our outcomes, as we will discuss in the next section. Nonetheless, the variation in our explanatory variable is relatively small and, hence, our strategy does not allow one to assess what would happen if there were drastic changes in the proportion of non-traditional mothers across grades within schools (Card and Giuliano, 2013).

To assess whether the observed within-school variation in the proportion of non-traditional mothers resembles the variation that would result if the composition of each cohort were randomly generated, we follow Lavy and Schlosser (2011) and perform Monte Carlo simulations. More specifically, for each school, we randomly generate maternal gender social norms (that is, a dummy that takes value 1 if a student's mother is non-traditional and zero otherwise) for students in each cohort. To do so, we used a binomial distribution function with *p* equal to the average proportion of non-traditional mothers in the school across all cohorts (71.5 percent). We repeated this process 1,000 times and, for each random draw, we computed a simulated within-school standard deviations of the proportion of non-traditional mothers. In addition, we computed within-school standard deviations using the residuals from a regression of the proportion of non-traditional mothers on school fixed effects, grade fixed effects and school-grade trends.

In line with our assumption that the observed within-school variation in the proportion of non-traditional mothers is as good as random, the average value of our simulated within school standard deviation (0.064) is very close to the actual value of the average within school standard deviation (0.065) . However, we cannot reject the null hypothesis that the mean of our within-school simulated standard deviation (0.064) is equal to its actual value (0.065) (p-value of the test is 0.79). The same conclusion is reached when using standard deviations obtained after removing cohort fixed effects, school fixed effects and school-time trends (p-value of the test is 0.43).

Along the same lines, we computed an empirical 95 percent interval for the standard deviation in the proportion of non-traditional mothers in each school using our simulated data. We find that 95.8 percent of the schools in our sample have a simulated standard deviation that falls within their 95 percent confident interval based on randomly generated data on maternal beliefs. This percentage increases to 97.2 percent if simulated standard deviations are computed after removing cohort fixed effects, school fixed effects and school-grade trends, instead. This modest increase suggests that we should either make sure that our results are robust to the inclusion of both grade and school fixed effect and school-grade trends, or include school-grade trends on top of grade and school fixed effects in all our estimations. We choose to do the latter.

Results

To be completed (see Tables and Figures)

Sensitivity Analysis and Falsification Tests

To be completed

4. Social Gender Norms Across Countries of Ancestries and Second-Generation Immigrants' Engagement in Risky Behaviors

To be completed

5. Conclusion

To be completed

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Table 1: Descriptive statistics for main outcomes				
	Male	Female	Male-female	Male-female
	mean/sd	mean/sd		Control for state FE
Regular smoker W1	0.173	0.170	0.003	0.002
	(0.378)	(0.376)	(0.005)	(0.009)
Get drunk at least once during last 12 months W1	0.300	0.279	0.021***	0.020
	(0.458)	(0.449)	(0.007)	(0.013)
Ever tried marijuana W1	0.301	0.260	0.041***	0.040***
	(0.459)	(0.439)	(0.007)	(0.011)
Ever tried cocaine or inhalants or other illegal drugs. W1	0.126	0.122	0.004	0.004
	(0.332)	(0.328)	(0.005)	(0.007)
Expelled from school W1	0.065	0.025	0.040***	0.041***
	(0.247)	(0.157)	(0.003)	(0.004)
Observations in wave I	9288	9634		
Regular smoker W3	0.328	0.291	0.037***	0.038***
	(0.470)	(0.454)	(0.008)	(0.012)
Get drunk at least once during last 12 months W3	0.571	0.472	0.098***	0.101***
	(0.495)	(0.499)	(0.008)	(0.011)
Ever tried marijuana W3	0.613	0.528	0.085***	0.088***
	(0.487)	(0.499)	(0.008)	(0.014)
Ever tried cocaine or inhalants or other illegal drugs. W3	0.320	0.258	0.062***	0.062***
	(0.466)	(0.438)	(0.008)	(0.012)
Expelled from school W3	0.141	0.059	0.082***	0.083***
	(0.348)	(0.235)	(0.005)	(0.008)
Had the fist sex before 16	0.286	0.312	-0.026***	-0.026*
	(0.452)	(0.463)	(0.008)	(0.013)
Observations in wave III	6767	7555		
Regular smoker W4	0.347	0.277	0.070***	0.068***
	(0.476)	(0.448)	(0.008)	(0.013)
Get drunk at least once during last 12 months W4	0.576	0.430	0.146***	0.149***
	(0.494)	(0.495)	(0.008)	(0.010)
Ever tried marijuana W4	0.694	0.603	0.091***	0.093***
	(0.461)	(0.489)	(0.008)	(0.013)
Ever tried cocaine or inhalants or other illegal drugs. W4	0.421	0.318	0.103***	0.103***
	(0.494)	(0.466)	(0.008)	(0.010)
Ever worked for pay full time. W4	0.950	0.927	0.023***	0.022**
	(0.218)	(0.260)	(0.004)	(0.008)
Annual personal income (1000 US dollars). W4	40.150	27.894	12.255***	12.335***
	(40.525)	(33.832)	(0.631)	(0.909)
Individual or hh members on welfare. W4	0.197	0.298	-0.101***	-0.101***
	(0.398)	(0.457)	(0.007)	(0.013)
Number of children. W4	0.781	1.107	-0.326***	-0.333***
	(1.095)	(1.200)	(0.019)	(0.030)
Ever divorced. W4	0.094	0.128	-0.034***	-0.036***
	(0.292)	(0.335)	(0.005)	(0.007)
Observations in wave IV	6932	7866		

*Note: For columns (1-2) standard deviations are in parentheses and for columns (3-4) standard errors are in parentheses. Column (4) reports OLS estimates assosiated with the regression of outcome on male dummy and state fixed effects and standard errors clustered at state level. Observations are weighted with W1, W3 or W4 cross-sectional weights. *** p<0.01, ** p<0.05, * p<0.1*

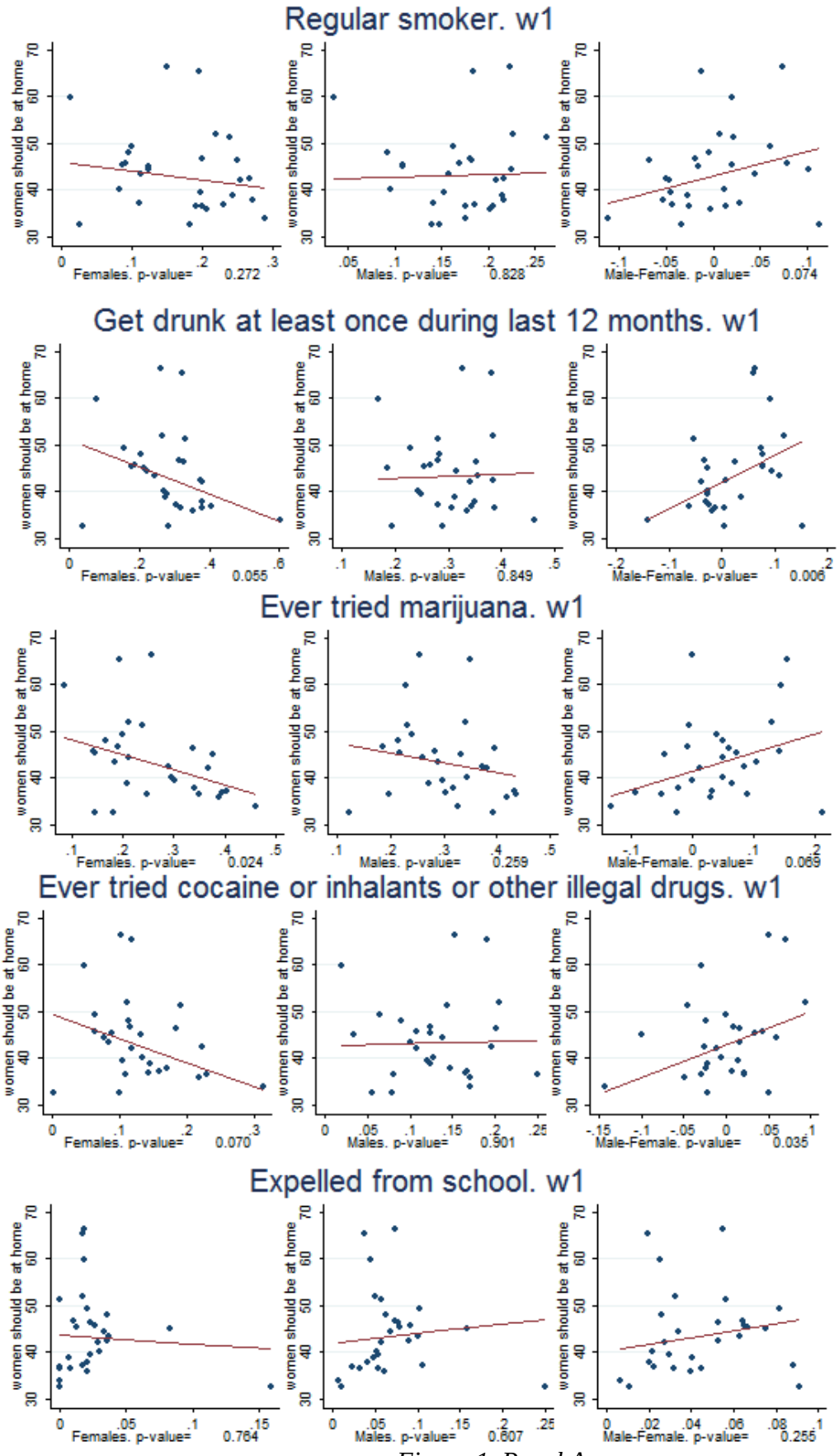

Figure 1. Panel A

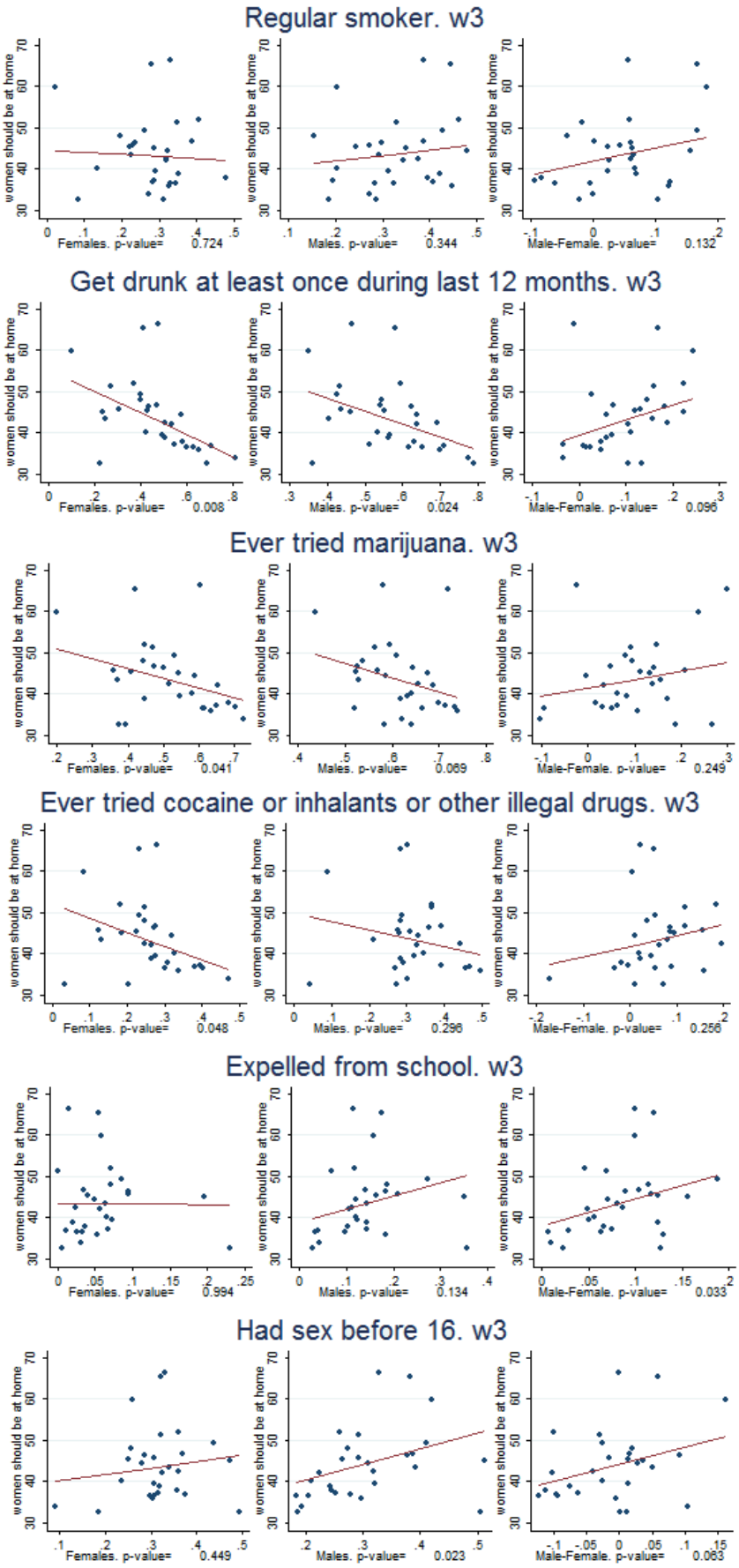

Figure 1. Panel B

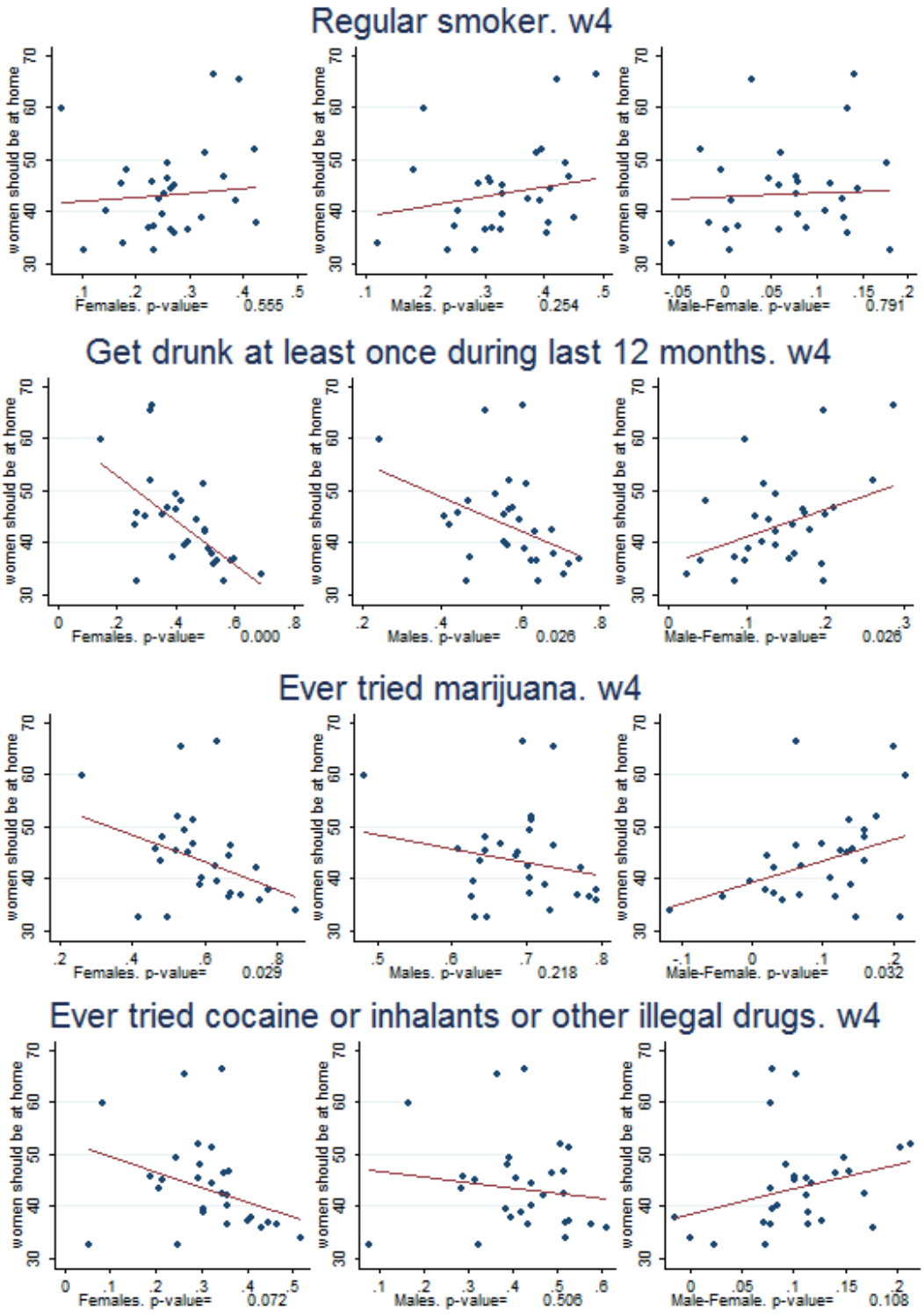

Figure 1. Panel C

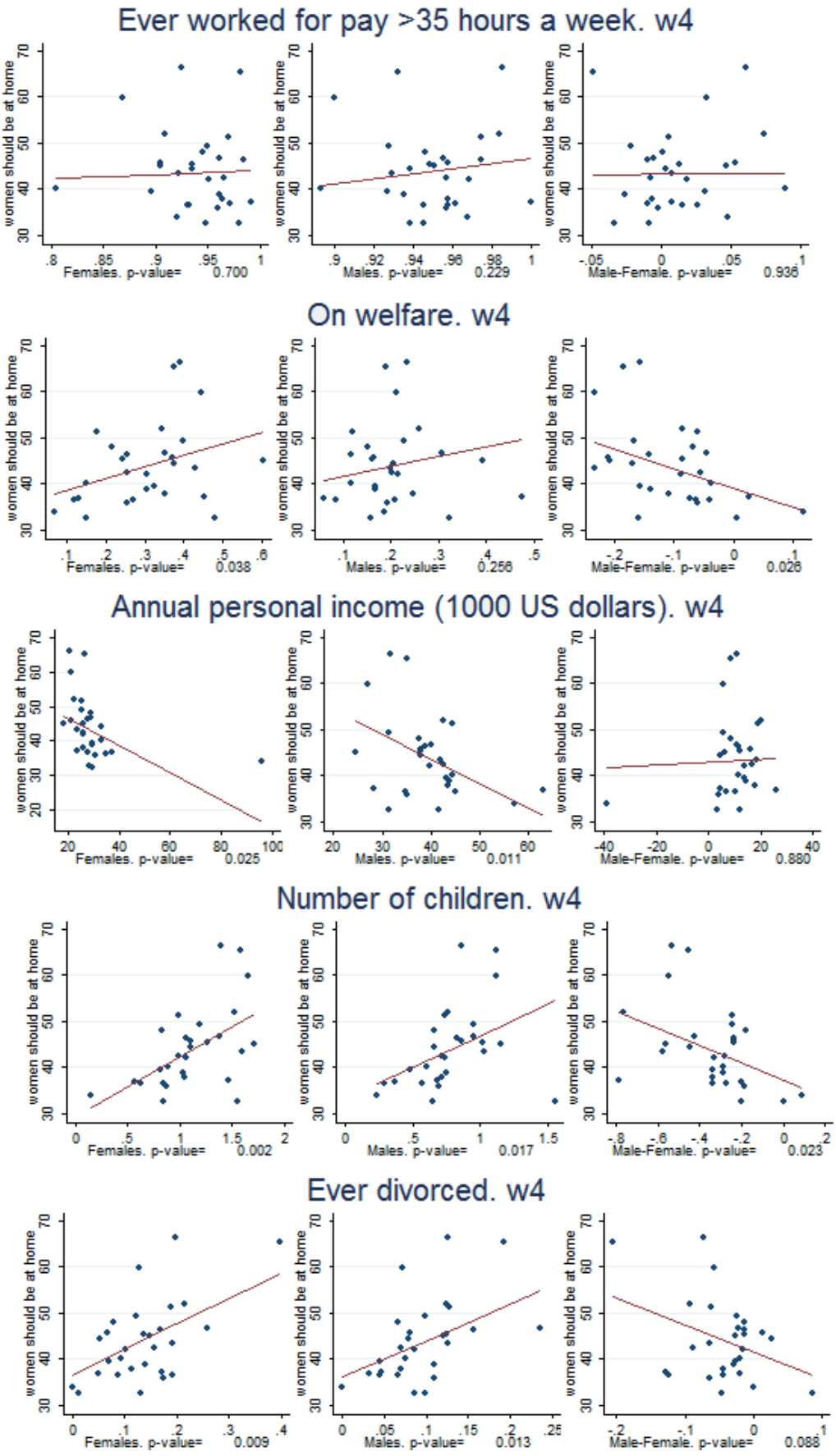

Figure 1. Panel D

Table 2. Longitudinal Sample Description				
	Male	Female	Male-Female	Male-Female
	mean/sd	mean/sd		controls for state FE
Baseline controls				
Share of gender unbiased moms	0.718	0.712	0.006**	0.008
	(0.120)	(0.123)	(0.003)	(0.006)
Grade 9	0.254	0.245	0.009	0.008
	(0.435)	(0.430)	(0.010)	(0.015)
Grade 10	0.242	0.266	-0.024**	-0.022*
	(0.428)	(0.442)	(0.010)	(0.011)
Grade 11	0.239	0.231	0.008	0.009
	(0.427)	(0.422)	(0.009)	(0.011)
Grade 12	0.265	0.258	0.007	0.006
	(0.441)	(0.437)	(0.010)	(0.011)
Additional controls				
Age	17.040	16.857	0.183***	0.184***
	-1.230	-1.207	(0.027)	(0.044)
white	0.736	0.727	0.009	0.004
	(0.441)	(0.446)	(0.010)	(0.011)
black	0.155	0.170	-0.015*	-0.009
	(0.362)	(0.375)	(0.008)	(0.011)
PVT	103.283	102.089	1.194***	1.244***
	(13.186)	(13.724)	(0.298)	(0.284)
Missing PVT	0.060	0.049	0.011**	0.011
	(0.238)	(0.216)	(0.005)	(0.007)
High quality residential building	0.559	0.579	-0.020*	-0.015
	(0.492)	(0.491)	(0.011)	(0.016)
Missing residential building quality	0.018	0.010	0.008***	0.008*
	(0.133)	(0.099)	(0.003)	(0.004)
Mother is a college graduate	0.293	0.265	0.028***	0.029*
	(0.429)	(0.420)	(0.009)	(0.014)
Father is a college graduate	0.322	0.321	0.001	0.005
	(0.390)	(0.384)	(0.009)	(0.012)
missing mothers education	0.112	0.087	0.024***	0.026**
	(0.315)	(0.283)	(0.007)	(0.010)
missing fathers education	0.300	0.318	-0.018*	-0.015
	(0.458)	(0.466)	(0.010)	(0.016)
Both parents live in hh	0.645	0.625	0.020*	0.016
	(0.479)	(0.484)	(0.011)	(0.018)
Parental age	42.704	42.529	0.175	0.196
	-5.858	-5.787	(0.129)	(0.144)

Table 2. cont. Longitudinal Sample Description				
	Male	Female	Male-Female	Male-Female
	mean/sd	mean/sd		controls for state FE
Grade characteristics				
Average age	16.965	16.958	0.007	0.004
	-1.047	-1.037	(0.023)	(0.033)
Share of blacks	0.189	0.196	-0.007	-0.000
	(0.247)	(0.261)	(0.006)	(0.004)
Share of females	0.503	0.502	0.001	0.006
	(0.106)	(0.069)	(0.002)	(0.009)
Average PVT	101.716	101.653	0.064	0.146
	-6.016	-5.976	(0.133)	(0.259)
Grade size	37.891	39.529	-1.638	-1.715
	-52.538	-56.198	-1.203	-1.044
Share of non-immigrants	0.930	0.933	-0.003	0.000
	(0.107)	(0.103)	(0.002)	(0.001)
Share with college graduate parents	0.353	0.343	0.009**	0.015
	(0.196)	(0.189)	(0.004)	(0.011)
Mom is gender unbiased	0.720	0.712	0.008	0.010
	(0.394)	(0.409)	(0.009)	(0.014)
Mom is gender unbiased missing	0.219	0.176	0.042***	0.048**
	(0.413)	(0.381)	(0.009)	(0.018)
Observations	3772	4397		

*Note: For columns (1-2) standard deviations are in parentheses and for columns (3-4) standard errors are in parentheses. Column (4) reports OLS estimates assosiated with the regression of outcome on male dummy and state fixed effects and standard errors clustered at state level. Observations are weighted with longitudinal weights. *** p<0.01, ** p<0.05, * p<0.1*

Table 3: Summary Statistics for Main Outcomes. Longitudinal Sample				
	Male	Female	Male-Female	Male-Female
	mean/sd	mean/sd		controls for state FE
Regular smoker W1	0.218	0.217	0.001	-0.000
	(0.413)	(0.412)	(0.009)	(0.017)
Get drunk at least once during last 12 months W1	0.398	0.361	0.037***	0.038*
	(0.490)	(0.480)	(0.011)	(0.019)
Ever tried marijuana W1	0.373	0.329	0.044***	0.044**
	(0.484)	(0.470)	(0.011)	(0.017)
Ever tried cocaine or inhalants or other illegal drugs. W1	0.147	0.139	0.008	0.007
	(0.354)	(0.346)	(0.008)	(0.014)
Expelled from school W1	0.068	0.024	0.044***	0.045***
	(0.252)	(0.153)	(0.005)	(0.008)
Regular smoker W3	0.324	0.289	0.034***	0.034**
	(0.468)	(0.454)	(0.010)	(0.016)
Get drunk at least once during last 12 months W3	0.601	0.488	0.113***	0.116***
	(0.490)	(0.500)	(0.011)	(0.017)
Ever tried marijuana W3	0.635	0.552	0.084***	0.088***
	(0.481)	(0.497)	(0.011)	(0.016)
Ever tried cocaine or inhalants or other illegal drugs. W3	0.336	0.260	0.076***	0.076***
	(0.473)	(0.439)	(0.010)	(0.018)
Expelled from school W3	0.133	0.046	0.087***	0.088***
	(0.340)	(0.210)	(0.006)	(0.011)
Had the fist sex before 16	0.277	0.305	-0.028***	-0.033*
	(0.448)	(0.461)	(0.010)	(0.016)
Ever worked for pay full time. W4	0.967	0.953	0.014***	0.014**
	(0.178)	(0.212)	(0.004)	(0.007)
Annual personal income (1000 US dollars). W4	43.562	30.767	12.794***	13.165***
	-41.448	-37.134	(0.891)	-1.378
Individual or hh members on welfare. W4	0.165	0.260	-0.095***	-0.094***
	(0.371)	(0.438)	(0.009)	(0.015)
Number of children. W4	0.822	1.155	-0.334***	-0.344***
	-1.115	-1.185	(0.025)	(0.049)
Ever divorced. W4	0.104	0.133	-0.029***	-0.033***
	(0.305)	(0.339)	(0.007)	(0.010)
Regular smoker W4	0.315	0.256	0.059***	0.061***
	(0.465)	(0.436)	(0.010)	(0.014)
Get drunk at least once during last 12 months W4	0.569	0.412	0.157***	0.162***
	(0.495)	(0.492)	(0.011)	(0.016)
Ever tried marijuana W4	0.718	0.617	0.100***	0.105***
	(0.450)	(0.486)	(0.010)	(0.014)
Ever tried cocaine or inhalants or other illegal drugs. W4	0.438	0.317	0.121***	0.121***
	(0.496)	(0.465)	(0.011)	(0.015)
Observations	3772	4397		

*Note: For columns (1-2) standard deviations are in parentheses and for columns (3-4) standard errors are in parentheses. Column (4) reports OLS estimates assosiated with the regression of outcome on male dummy and state fixed effects and standard errors clustered at state level. Observations are weighted with longitudinal weights. *** p<0.01, ** p<0.05, * p<0.1*

Table 4: Variation in Cohort Composition Measures After Removing School Fixed Effect and Trends				
	Raw cohort variables			
	Mean	SD	Min	Max
Fraction of gender unbiased moms	0.715	0.122	0.333	1.000
	Residuals after removing cohort and school fixed effects			
	Mean	SD	Min	Max
Fraction of gender unbiased moms	0.000	0.073	-0.294	0.271
	Residuals after removing cohort fixed effects, school fixed effects and school trends			
	Mean	SD	Min	Max
Fraction of gender unbiased moms	-0.000	0.062	-0.242	0.263
Observations	8169			
Note: Longitudinal weights used				

Table 5. Panel A. The Effect of Mothers' of Grademates beliefs on the Gender Gap in Risky Behaviors. Short-run outcomes

Dependent variable		0	1	2	3	4	5	6
Regular smoker W1	female	0.00263	-0.157**	-0.152**	-0.0213	-0.337	-0.344	-0.394
		(0.0131)	(0.0610)	(0.0588)	(2.024)	(2.041)	(2.036)	(2.032)
	Fraction of gender unbiased moms in grade		-0.0567	-0.114	-0.124	-0.119	-0.120	-0.0892
			(0.0901)	(0.0822)	(0.0803)	(0.0816)	(0.0809)	(0.0812)
	Fraction of gender unbiased moms in		**0.224****	**0.213****	**0.203****	**0.204****	**0.203****	0.173*
			(0.0869)	(0.0837)	(0.0833)	(0.0850)	(0.0850)	(0.0885)
Get drunk at least once during last 12 months W1	female	-0.0329**	-0.222***	-0.223***	1.743	1.594	1.551	1.515
		(0.0153)	(0.0831)	(0.0843)	(2.491)	(2.474)	(2.473)	(2.473)
	Fraction of gender unbiased moms in grade		-0.124	-0.211**	-0.211**	-0.198**	-0.185*	-0.161
			(0.109)	(0.101)	(0.0996)	(0.100)	(0.0990)	(0.0997)
	Fraction of gender unbiased moms in		**0.265****	**0.265****	**0.258****	**0.249****	**0.245****	0.218*
			(0.117)	(0.118)	(0.116)	(0.117)	(0.117)	(0.119)
Ever tried marijuana W1	female	-0.0331**	-0.256***	-0.258***	-1.177	-1.675	-1.788	-1.847
		(0.0147)	(0.0821)	(0.0802)	(2.595)	(2.573)	(2.578)	(2.569)
	Fraction of gender unbiased moms in grade		-0.0720	-0.182*	-0.184*	-0.170	-0.159	-0.117
			(0.114)	(0.109)	(0.107)	(0.105)	(0.101)	(0.102)
	Fraction of gender unbiased moms in		**0.313*****	**0.312*****	**0.312*****	**0.306*****	**0.306*****	**0.271****
			(0.116)	(0.114)	(0.111)	(0.113)	(0.112)	(0.114)
Ever tried cocaine or inhalants or other illegal drugs. W1	female	0.000294	-0.0535	-0.0712	-0.982	-1.295	-1.328	-1.339
		(0.0107)	(0.0595)	(0.0591)	(1.970)	(1.946)	(1.943)	(1.946)
	Fraction of gender unbiased moms in grade		-0.0204	-0.0969	-0.0939	-0.0874	-0.0890	-0.0815
			(0.0827)	(0.0764)	(0.0749)	(0.0756)	(0.0769)	(0.0768)
	Fraction of gender unbiased moms in		0.0755	0.0990	0.103	0.0933	0.0903	0.0908
			(0.0831)	(0.0822)	(0.0804)	(0.0821)	(0.0817)	(0.0834)
Expelled from school W1	female	-0.0442***	-0.157***	-0.154***	-0.540	-0.380	-0.340	-0.357
		(0.00668)	(0.0381)	(0.0381)	(1.202)	(1.198)	(1.201)	(1.202)
	Fraction of gender unbiased moms in grade		-0.0494	-0.108*	-0.121**	-0.116**	-0.110*	-0.101*
			(0.0560)	(0.0579)	(0.0577)	(0.0575)	(0.0573)	(0.0570)
	Fraction of gender unbiased moms in		**0.158*****	**0.154*****	**0.150*****	**0.146*****	**0.145*****	**0.129****
			(0.0513)	(0.0511)	(0.0505)	(0.0510)	(0.0511)	(0.0518)
Grade and school FE		YES	YES	YES	YES	YES	YES	YES
School specific trend				YES	YES	YES	YES	YES
Individual characteristics					YES	YES	YES	YES
Parental characteristics						YES	YES	YES
Grade characteristics							YES	YES
Own mother is gender unbiased*Female								YES

*Note: OLS coefficient estimates and their associated standard errors clustered by school/grade in parentheses. Demographic controls include age, age squares and age and age squares interacted with gender, race and PVT. Parental controls include residential building quality, indicator that mother and father are college graduates, parental age and indicator that both parents inhabit in the household. Grade characteristics include average age, share of black, share of females, average PVT, share of immigrants, share of college educated parents constructed at school-grade level and grade size. All missing observations in control variables are replaced by it means and dummies indicating missing variable are included. All regressions include school and grade fixed effect. Columns (3) - (6) include school specific time trend. *** p<0.01, ** p<0.05, * p<0.1,* ***in bold*** *if Romano-Wolf p<0,1*

Table 5. Panel B. The Effect of Mothers' of Grademates beliefs on the Gender Gap in Risky Behaviors. Middle-run outcomes

Dependent variable		0	1	2	3	4	5	6
Regular smoker W3	female	-0.0302**	-0.133*	-0.144*	-3.056	-3.266	-3.204	-3.229
		(0.0143)	(0.0781)	(0.0789)	(2.297)	(2.320)	(2.316)	(2.308)
	Fraction of gender unbiased moms in grade		-0.116	-0.232**	-0.239**	-0.235**	-0.273***	-0.258***
			(0.0978)	(0.0947)	(0.0939)	(0.0948)	(0.0935)	(0.0943)
	Fraction of gender unbiased moms in grade*female		0.144	0.158	0.161	0.158	0.156	0.137
			(0.113)	(0.114)	(0.114)	(0.117)	(0.116)	(0.118)
Get drunk at least once during last 12 months W3	female	-0.107***	-0.201**	-0.222***	-0.543	-0.480	-0.503	-0.532
		(0.0155)	(0.0777)	(0.0790)	(2.428)	(2.456)	(2.450)	(2.461)
	Fraction of gender unbiased moms in grade		-0.0844	-0.176*	-0.140	-0.140	-0.113	-0.0885
			(0.0985)	(0.103)	(0.101)	(0.102)	(0.101)	(0.100)
	Fraction of gender unbiased moms in grade*female		0.132	0.162	0.173	0.172	0.170	0.147
			(0.111)	(0.113)	(0.110)	(0.109)	(0.109)	(0.110)
Ever tried marijuana W3	female	-0.0817***	-0.274***	-0.277***	-1.679	-1.923	-1.978	-2.046
		(0.0149)	(0.0854)	(0.0842)	(2.412)	(2.403)	(2.408)	(2.404)
	Fraction of gender unbiased moms in grade		-0.239**	-0.310***	-0.296***	-0.283***	-0.280***	-0.226**
			(0.114)	(0.107)	(0.107)	(0.106)	(0.105)	(0.104)
	Fraction of gender unbiased moms in grade*female		0.269**	0.273**	**0.284****	**0.276****	**0.277****	0.230*
			(0.118)	(0.117)	(0.117)	(0.118)	(0.119)	(0.121)
Ever tried cocaine or inhalants or other illegal drugs. W3	female	-0.0686***	-0.0600	-0.0709	1.492	1.092	1.049	1.035
		(0.0144)	(0.0864)	(0.0862)	(2.306)	(2.309)	(2.316)	(2.314)
	Fraction of gender unbiased moms in grade		0.0163	-0.134	-0.118	-0.114	-0.142	-0.132
			(0.104)	(0.0923)	(0.0908)	(0.0908)	(0.0910)	(0.0902)
	Fraction of gender unbiased moms in grade*female		-0.0119	0.00394	0.0116	0.00749	0.00341	0.000710
			(0.122)	(0.122)	(0.120)	(0.120)	(0.120)	(0.122)
Expelled from school W3	female	-0.0861***	-0.257***	-0.252***	1.012	1.183	1.198	1.186
		(0.00955)	(0.0565)	(0.0558)	(1.828)	(1.849)	(1.849)	(1.844)
	Fraction of gender unbiased moms in grade		-0.0912	-0.162**	-0.183**	-0.178**	-0.173**	-0.164**
			(0.0781)	(0.0786)	(0.0777)	(0.0777)	(0.0806)	(0.0799)
	Fraction of gender unbiased moms in grade*female		**0.240*****	**0.233*****	**0.217*****	**0.214*****	**0.209*****	**0.206*****
			(0.0756)	(0.0745)	(0.0710)	(0.0710)	(0.0711)	(0.0708)
First Sex before 16 W3	female	0.0345**	-0.0925	-0.0903	-4.291*	-4.648*	-4.647*	-4.668*
		(0.0137)	(0.0786)	(0.0777)	(2.507)	(2.508)	(2.513)	(2.499)
	Fraction of gender unbiased moms in grade		-0.0634	-0.191**	-0.213**	-0.208**	-0.232**	-0.220**
			(0.0958)	(0.0961)	(0.0958)	(0.0959)	(0.100)	(0.101)
	Fraction of gender unbiased moms in grade*female		0.178*	0.174	0.195*	0.191*	0.190*	0.175
			(0.107)	(0.106)	(0.108)	(0.109)	(0.109)	(0.110)
Grade and school FE		YES	YES	YES	YES	YES	YES	YES
School specific trend				YES	YES	YES	YES	YES
Individual characteristics					YES	YES	YES	YES
Parental characteristics						YES	YES	YES
Grade characteristics							YES	YES
Own mother is gender unbiased*Female								YES

*Note: OLS coefficient estimates and their associated standard errors clustered by school/grade in parentheses. Demographic controls include age, age squares and age and age squares interacted with gender, race and PVT. Parental controls include residential building quality, indicator that mother and father are college graduates, parental age and indicator that both parents inhabit in the household. Grade characteristics include average age, share of black, share of females, average PVT, share of immigrants, share of college educated parents constructed at school-grade level and grade size. All missing observations in control variables are replaced by it means and dummies indicating missing variable are included. All regressions include school and grade fixed effect. Columns (3) - (6) include school specific time trend. *** p<0.01, ** p<0.05, * p<0.1,* ***in bold*** *if Romano-Wolf p<0,1*

Table 5. Panel C. The Effect of Mothers' of Grademates beliefs on the Gender Gap in Risky Behaviors. Long-run outcomes								
Dependent variable		0	1	2	3	4	5	6
Regular smoker W4	female	-0.0602***	-0.222***	-0.219***	-1.995	-2.007	-1.966	-2.012
		(0.0139)	(0.0776)	(0.0775)	(2.310)	(2.338)	(2.332)	(2.323)
	Fraction of gender unbiased moms in grade		-0.239**	-0.239**	-0.250**	-0.239**	-0.245**	-0.216**
			(0.115)	(0.102)	(0.101)	(0.101)	(0.103)	(0.100)
	Fraction of gender unbiased moms in grade*female		0.226**	0.221**	0.218**	0.213*	0.216**	0.192*
			(0.110)	(0.110)	(0.110)	(0.109)	(0.109)	(0.110)
Get drunk at least once during last 12 months W4	female	-0.151***	-0.220**	-0.230**	-1.477	-1.563	-1.562	-1.621
		(0.0158)	(0.0916)	(0.0920)	(2.620)	(2.634)	(2.632)	(2.631)
	Fraction of gender unbiased moms in grade		-0.0310	-0.0764	-0.0415	-0.0411	-0.0427	-0.00145
			(0.110)	(0.118)	(0.113)	(0.115)	(0.107)	(0.106)
	Fraction of gender unbiased moms in grade*female		0.0965	0.114	0.132	0.134	0.133	0.0960
			(0.127)	(0.128)	(0.123)	(0.123)	(0.123)	(0.124)
Ever tried marijuana W4	female	-0.101***	-0.258***	-0.262***	-3.074	-3.219	-3.228	-3.303
		(0.0145)	(0.0828)	(0.0835)	(2.537)	(2.548)	(2.551)	(2.542)
	Fraction of gender unbiased moms in grade		-0.180*	-0.205**	-0.195**	-0.184*	-0.174*	-0.126
			(0.105)	(0.0975)	(0.0984)	(0.0978)	(0.0987)	(0.0988)
	Fraction of gender unbiased moms in grade*female		0.220*	0.224*	0.241**	0.238**	0.239**	0.184
			(0.114)	(0.115)	(0.114)	(0.116)	(0.116)	(0.117)
Ever tried cocaine or inhalants or other illegal drugs. W4	female	-0.114***	-0.0568	-0.0704	1.648	1.028	0.976	0.948
		(0.0139)	(0.0806)	(0.0802)	(2.504)	(2.476)	(2.487)	(2.488)
	Fraction of gender unbiased moms in grade		0.0883	0.00131	0.0203	0.0255	0.00673	0.0256
			(0.108)	(0.0940)	(0.0914)	(0.0895)	(0.0895)	(0.0891)
	Fraction of gender unbiased moms in grade*female		-0.0805	-0.0619	-0.0649	-0.0681	-0.0711	-0.0867
			(0.115)	(0.114)	(0.112)	(0.113)	(0.113)	(0.115)
Grade and school FE		YES	YES	YES	YES	YES	YES	YES
School specific trend				YES	YES	YES	YES	YES
Individual characteristics					YES	YES	YES	YES
Parental characteristics						YES	YES	YES
Grade characteristics							YES	YES
Own mother is gender unbiased*Female								YES

*Note: OLS coefficient estimates and their associated standard errors clustered by school/grade in parentheses. Demographic controls include age, age squares and age and age squares interacted with gender, race and PVT. Parental controls include residential building quality, indicator that mother and father are college graduates, parental age and indicator that both parents inhabit in the household. Grade characteristics include average age, share of black, share of females, average PVT, share of immigrants, share of college educated parents constructed at school-grade level and grade size. All missing observations in control variables are replaced by it means and dummies indicating missing variable are included. All regressions include school and grade fixed effect. Columns (3) - (6) include school specific time trend. *** p<0.01, ** p<0.05, * p<0.1,* ***in bold*** *if Romano-Wolf p<0,1*

Table 5. Panel D. The Effect of Mothers' of Grademates beliefs on the Gender Gap in Labor Market and Family Outcomes								
Dependent variable		0	1	2	3	4	5	6
Ever worked for pay >35 hours a week. W4	female	-0.0135**	-0.0343	-0.0309	0.407	0.543	0.542	0.550
		(0.00587)	(0.0354)	(0.0359)	(0.942)	(0.937)	(0.936)	(0.936)
	Fraction of gender unbiased moms in grade		-0.000898	0.00430	0.0155	0.0159	0.00513	-3.83e-05
			(0.0403)	(0.0353)	(0.0347)	(0.0348)	(0.0364)	(0.0363)
	Fraction of gender unbiased moms in grade*female		0.0291	0.0237	0.0231	0.0294	0.0264	0.0304
			(0.0477)	(0.0484)	(0.0487)	(0.0491)	(0.0491)	(0.0494)
Individual or hh members on welfare. W4	female	0.0913***	0.258***	0.250***	-0.0404	0.111	0.0903	0.103
		(0.0124)	(0.0684)	(0.0697)	(2.064)	(2.082)	(2.079)	(2.089)
	Fraction of gender unbiased moms in grade		0.158**	0.137*	0.113	0.124	0.106	0.104
			(0.0754)	(0.0821)	(0.0857)	(0.0869)	(0.0892)	(0.0890)
	Fraction of gender unbiased moms in grade*female		**-0.233****	**-0.225****	**-0.227****	**-0.235****	**-0.235****	**-0.213****
			(0.0939)	(0.0953)	(0.0950)	(0.0944)	(0.0947)	(0.0967)
Log of personal income. W4	female	-1.054***	-2.214***	-2.153***	3.047	2.930	2.634	2.590
		(0.0859)	(0.520)	(0.528)	(12.99)	(12.95)	(12.98)	(13.01)
	Fraction of gender unbiased moms in grade		-0.420	-0.428	-0.372	-0.359	-0.509	-0.490
			(0.558)	(0.565)	(0.568)	(0.567)	(0.563)	(0.558)
	Fraction of gender unbiased moms in grade*female		**1.623****	**1.558****	**1.717****	**1.746****	**1.727****	**1.759****
			(0.704)	(0.715)	(0.721)	(0.724)	(0.727)	(0.729)
Number of children. W4	female	0.325***	0.332*	0.349*	4.618	5.446	5.327	5.350
		(0.0349)	(0.183)	(0.185)	(6.558)	(6.537)	(6.544)	(6.544)
	Fraction of gender unbiased moms in grade		-0.0694	0.0162	-0.0637	-0.0584	0.0153	0.00646
			(0.237)	(0.263)	(0.266)	(0.260)	(0.275)	(0.272)
	Fraction of gender unbiased moms in grade*female		-0.00944	-0.0302	-0.0640	-0.0454	-0.0540	-0.0203
			(0.250)	(0.251)	(0.252)	(0.254)	(0.254)	(0.256)
Ever divorced. W4	female	0.0267***	0.0212	0.0263	-1.970	-2.014	-2.033	-2.011
		(0.0101)	(0.0550)	(0.0556)	(1.736)	(1.728)	(1.727)	(1.729)
	Fraction of gender unbiased moms in grade		0.0859	0.0942	0.0922	0.0922	0.0802	0.0686
			(0.0663)	(0.0634)	(0.0629)	(0.0599)	(0.0638)	(0.0628)
	Fraction of gender unbiased moms in grade*female		0.00822	0.00341	-0.00402	-0.00340	-0.00270	0.0113
			(0.0777)	(0.0785)	(0.0780)	(0.0763)	(0.0766)	(0.0779)
Grade and school FE		YES	YES	YES	YES	YES	YES	YES
School specific trend				YES	YES	YES	YES	YES
Individual characteristics					YES	YES	YES	YES
Parental characteristics						YES	YES	YES
Grade characteristics							YES	YES
Own mother is gender unbiased*Female								YES

*Note: OLS coefficient estimates and their associated standard errors clustered by school/grade in parentheses. Demographic controls include age, age squares and age and age squares interacted with gender, race and PVT. Parental controls include residential building quality, indicator that mother and father are college graduates, parental age and indicator that both parents inhabit in the household. Grade characteristics include average age, share of black, share of females, average PVT, share of immigrants, share of college educated parents constructed at school-grade level and grade size. All missing observations in control variables are replaced by it means and dummies indicating missing variable are included. All regressions include school and grade fixed effect. Columns (3) - (6) include school specific time trend. *** p<0.01, ** p<0.05, * p<0.1,* ***in bold*** *if Romano-Wolf p<0,1*

Table A1: State Gender Norms and Gender Gaps in Risky Behaviors

State	Women should stay at home, %	Math for boys, %	N	Male-female gap at wave I				
				Regular smoker	Ever get drunk	Ever tried marijuana	Ever tried illicit drugs	Expelled
Minnesota	32,43	12,51	381	-0,03	0,00	-0,03	-0,02	0,01
Maryland	32,61	14,12	236	0,11	0,15	0,21	0,05	0,09
Connecticut	33,96	13,10	162	-0,11	-0,14	-0,13	-0,14	0,01
Colorado	35,92	12,68	416	0,00	-0,02	0,03	-0,05	0,04
New Jersey	36,47	12,97	592	-0,03	-0,01	-0,05	-0,03	0,03
Oregon	36,63	10,93	251	0,01	0,01	0,09	0,02	0,04
Massachusetts	36,88	9,96	303	-0,04	-0,06	-0,09	0,02	0,02
Arizona	37,12	14,74	195	0,03	-0,02	0,03	0,01	0,09
Michigan	37,87	13,29	613	-0,05	-0,03	-0,02	-0,02	0,02
Illinois	38,81	12,45	733	-0,03	0,04	0,06	-0,02	0,04
New York	39,52	13,53	1186	-0,04	-0,03	0,00	0,01	0,03
California	40,11	13,29	3254	0,01	-0,03	0,05	-0,01	0,02
Ohio	42,17	14,72	1731	-0,05	-0,04	0,01	-0,01	0,03
Indiana	42,39	12,79	322	-0,05	0,01	0,08	-0,03	0,05
Louisiana	43,20	17,83	718	0,04	0,11	0,11	0,02	0,06
Pennsylvania	44,33	13,95	420	0,10	0,09	0,05	0,06	0,03
Missouri	44,92	14,21	313	-0,02	-0,03	-0,05	-0,10	0,07
Texas	45,22	15,61	1331	0,02	0,08	0,07	0,03	0,07
South Carolina	45,72	19,11	724	0,08	0,08	0,14	0,04	0,07
Georgia	46,22	16,59	173	-0,07	0,03	0,06	0,02	0,05
Mississippi	46,74	17,48	426	-0,02	-0,03	-0,01	0,01	0,06
Florida	48,12	14,81	1095	0,00	0,08	0,05	-0,02	0,03
North Carolina	49,12	16,33	581	0,06	0,07	0,04	0,00	0,08
Tennessee	51,38	17,78	110	0,02	-0,05	-0,01	-0,05	0,06
Kentucky	51,96	16,88	636	0,01	0,12	0,13	0,09	0,03
Alabama	59,69	16,82	315	0,02	0,09	0,14	-0,03	0,02
Arkansas	65,29	15,49	221	-0,01	0,06	0,16	0,07	0,02
West Virginia	66,22	16,10	396	0,07	0,06	0,00	0,05	0,05

Note: wave 1 cross-sectional weights used

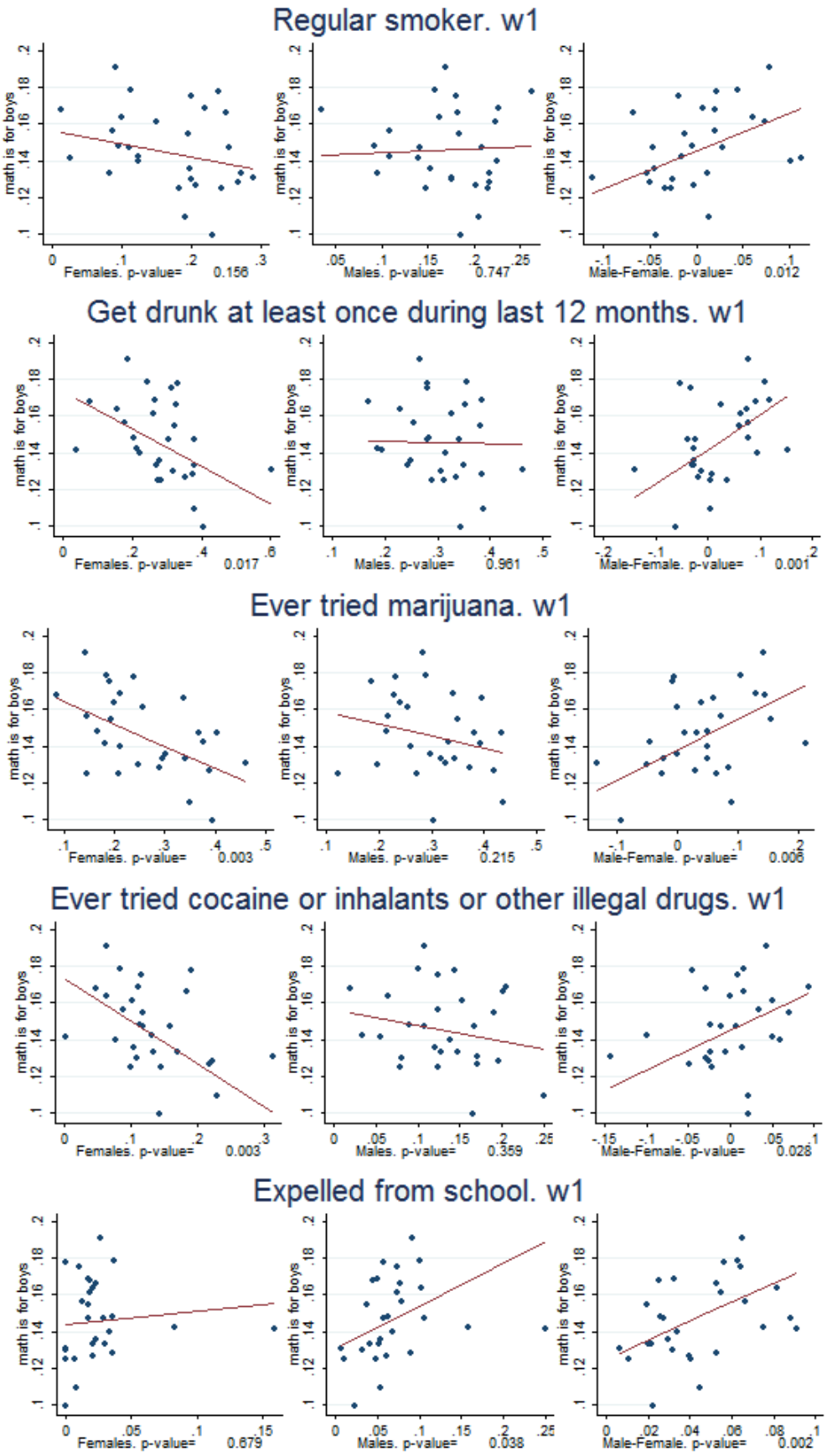

Figure A.1. Panel A

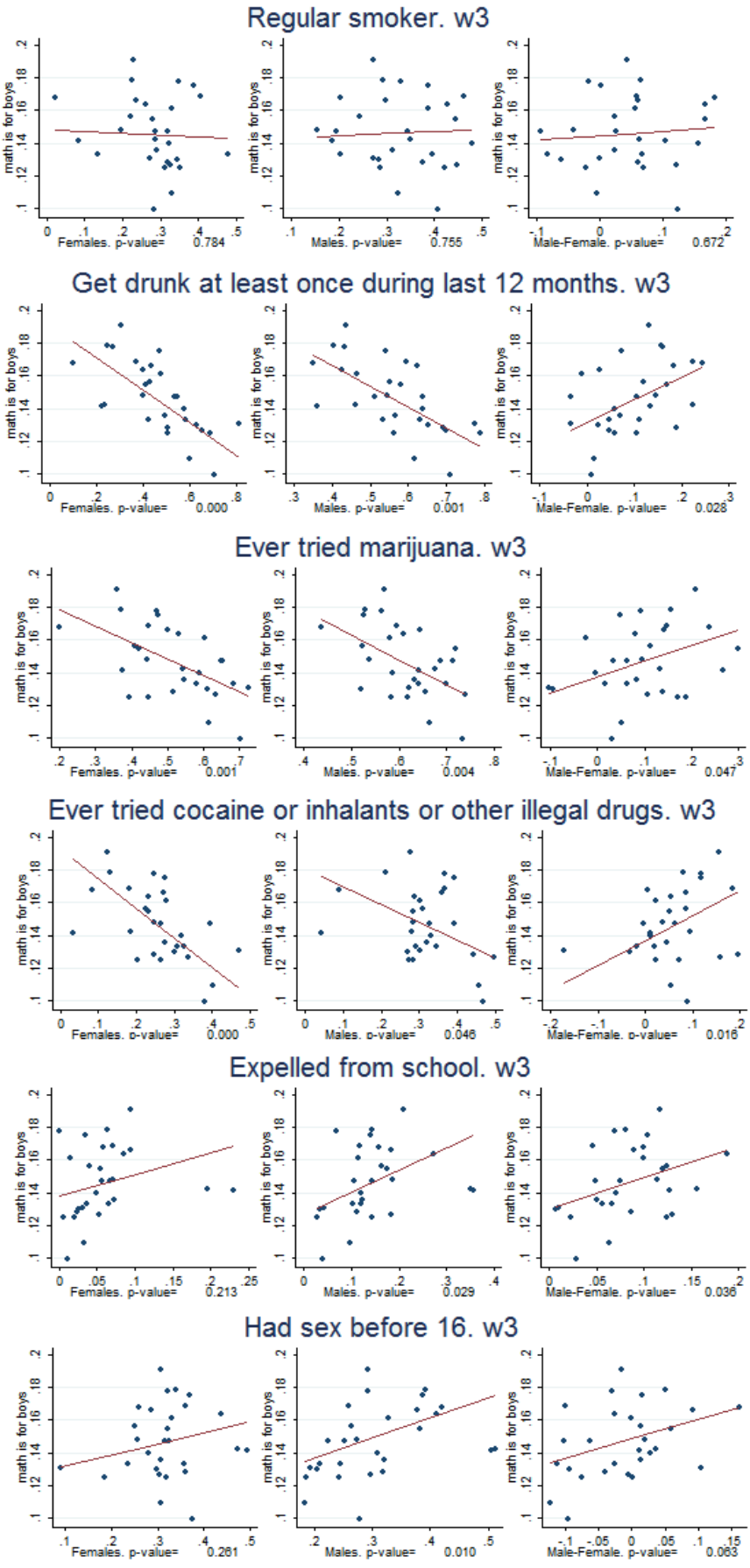

Figure A.1 Panel B

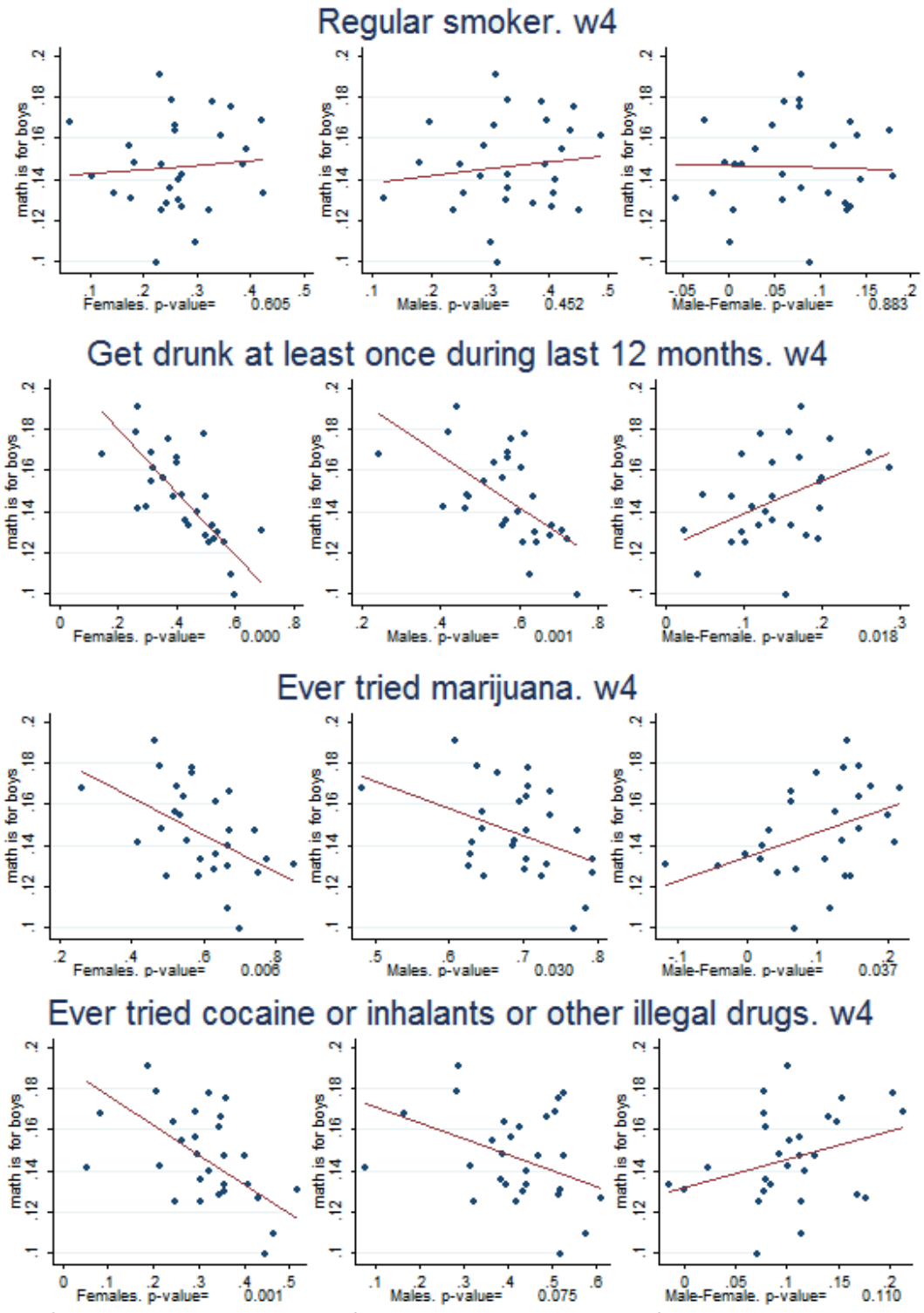

Figure A.1 Panel C

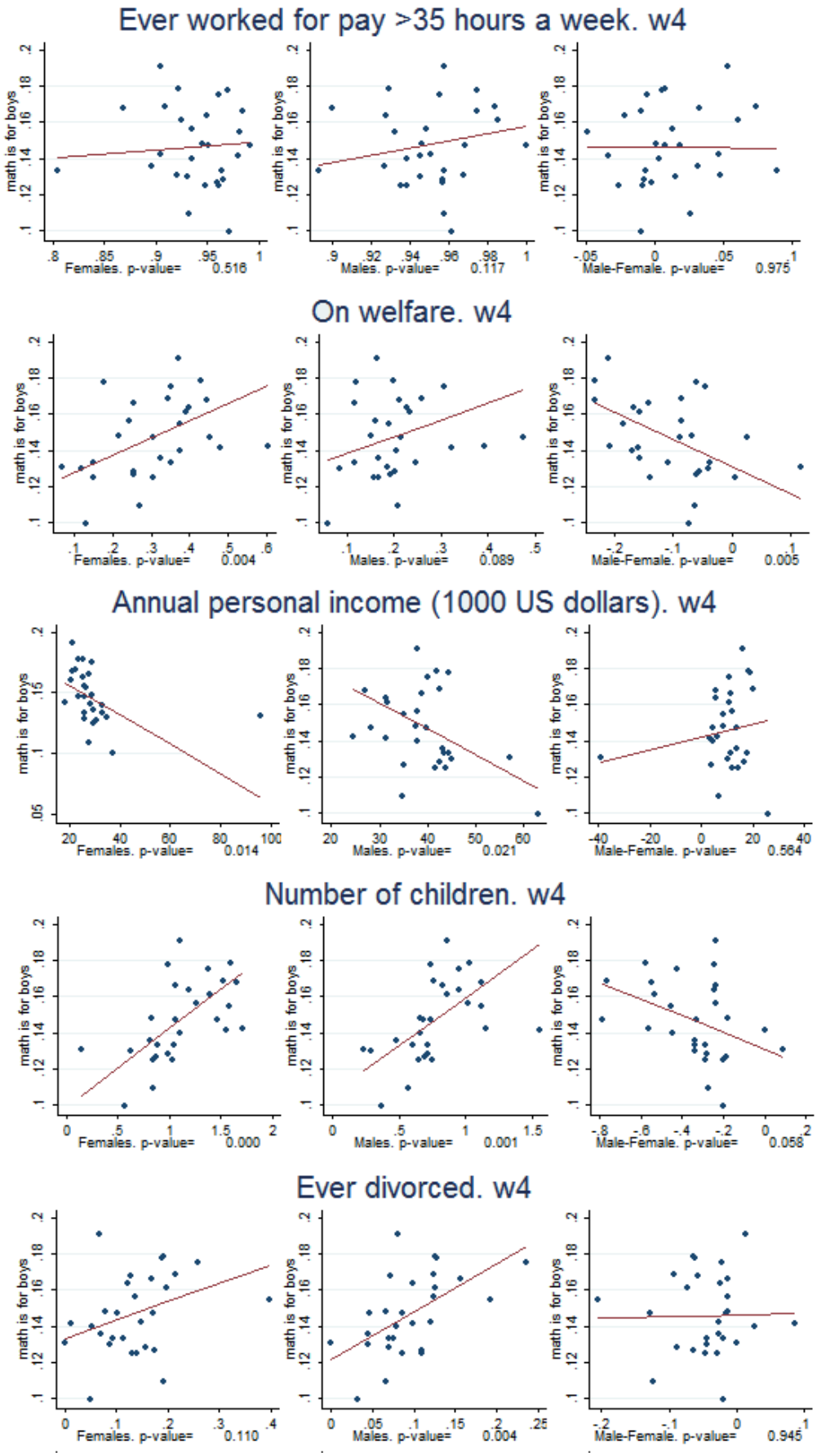

Figure A. 1 Panel D

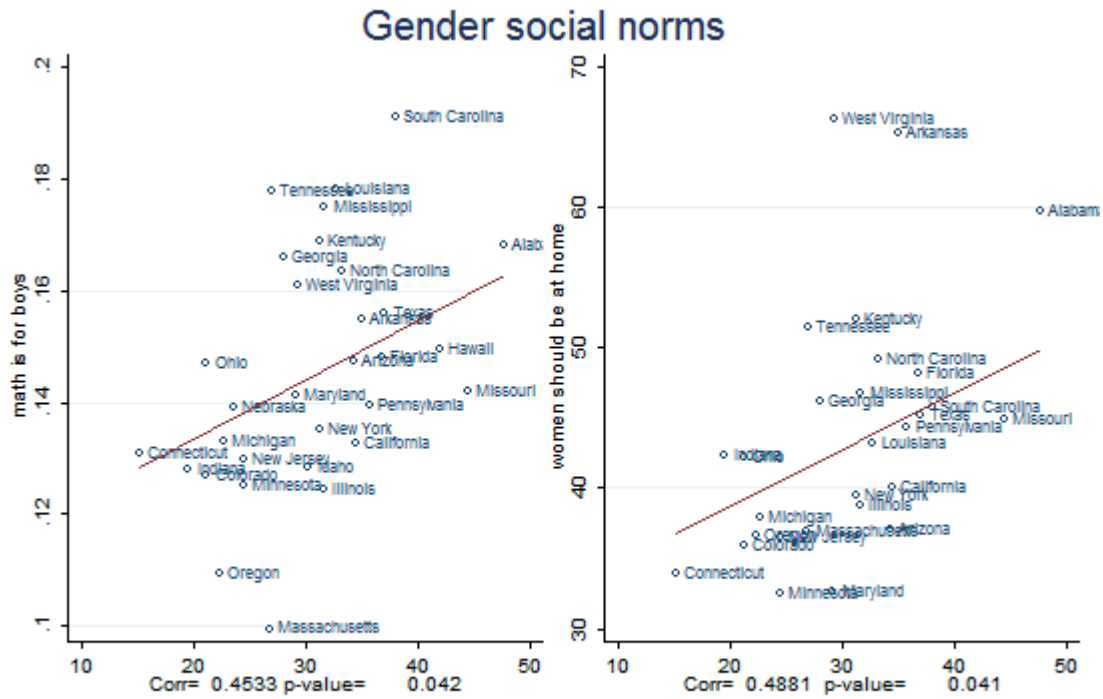

Figure A.2: Correlation between the proportion of traditional mothers constructed using wave I of AddHealth and gender norm variables constructed from GSS.