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ABSTRACT

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This paper uses an extension of compulsory schooling in Turkey to estimate the causal effects of education onwomen's legal awareness of laws thatwere designed to reduce gender inequality and prevent domestic violence. By implementing a regressiondiscontinuity design, we find that the reform-induced increase in female education improved legal awareness. Women exposed to the reform were more likely to have heard about the new laws and services through newspapers, journals, or books. However, despite these improvements in women's legal awareness, we find no evidence of a significant change in the risk of experiencing domestic violence or ability to quit abusive relationships.

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1 Introduction

Intimate partner violence is a worldwide problem with major social, economic, and health consequences. Nearly one out of every three women suffer from physical or sexual intimate partner violence in their lifetimes. In developing countries, where women generally have weak bargaining power within the household, such intimate partner violence is even more prevalent.[1] To reduce violence against women, many governments in developing countries have implemented comprehensive legal reforms with the goal of legally empowering women.[2] Some of these reforms have entailed not only the introduction of new laws to provide protection, accommodation, and financial support for abused women but also the establishment of new institutions designed to provide legal services to the victims of violence.[3] Such legal reforms also have the potential to change how women interact with the legal system when they experience domestic violence.[4]

Although legislative reform has accelerated in recent decades, multiple barriers still undermine women's access to the justice system.[5] One major barrier that is often cited is women's limited knowledge about their rights and of the ways in which laws enforce those rights. A common presumption among development practitioners is that the acquisition of information about new legal reforms is a precondition for improving women's access to the justice system and increasing their bargaining power within the household.

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[1]Abused women are more likely to report physical, mental, and reproductive health problems (Campbell 2002), and their children are more likely to suffer from socio-emotional and cognitive problems (Carlson 2000).

[2]See United Nations (2010) for an overview of different types of legislation designed and implemented to prevent violence against women across different countries.

[3]Over the past decade, several countries, including Brazil, Ecuador, El Salvador, Mexico, Peru, and Turkey, have launched networks of violence prevention centers, or women's justice centers, which are institutions designed to provide legal, medical, and financial support to victims of domestic violence (Kavanaugh et al. 2017).

[4]The interaction of domestic violence victims with the legal system has been receiving growing attention in the literature. Recent studies show that having more female policy officers significantly improves the quality of policing provisions and improves the reporting of crime against women (Amaral et al. 2018; Amaral 2019).

[5]Friedemann-Sánchez (2012), using evidence from Colombia, highlights that the main barrier to the assertion of legal rights in developing countries is often a lack of legal awareness and understanding of a person's rights.

Indeed, building inclusive justice systems was recently included among the "Sustainable Development Goals" of the United Nations to ensure gender equality (United Nations 2017).[6] However, to date, there is no causal evidence in the existing literature to support this hypothesis.

In this paper, we examine whether increasing women's educational attainment improves legal awareness of laws designed to prevent domestic violence. Ultimately, however, knowledge is a means to an end. Therefore, we also assess whether such knowledge acquisition has consequences for related outcomes, including the ability to quit an abusive relationship and the risk of experiencing domestic violence. Improved female education may enhance the ability to access and process new information on recently introduced laws and services. In turn, an improvement in legal awareness may increase women's bargaining power within the household and reduce their exposure to intimate partner violence. To the best of our knowledge, our study provides the first causal evidence on the impact of education on legal knowledge and its consequences for domestic violence.[7]

Since the early 2000s, Turkey has made substantial changes in laws pertaining to gender equality and the prevention of domestic violence. These changes were partly motivated by the process of Turkey's negotiations on accession to the European Union (EU) (Aldikacti-Marshall 2008). For example, in 2004, the penal code recognized sexual violence against women as a criminal act against an individual and extended the definition of rape to include rape within marriage. In 2012, the Turkish parliament introduced the Law to Protect Family and Prevent Violence against Women, which improved the protection of victims against renewed violence from perpetrators by improving the capabilities of police to take effective action. In addition, it regulated the establishment of Violence Prevention

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[6]The need to provide legal literacy programs was also recognized in the Beijing Platform for Action organized by the United Nations in 1995.

[7]The scope of legal knowledge (e.g., whether individuals know their legal rights and obligations) differs from political knowledge (e.g., whether individuals follow politics in the media or participate in political parties) and civic knowledge (e.g., whether individuals are aware of their civil rights and duties). Dee (2004) examines the effects of education on civic awareness and engagement, and Milligan et al. (2004) examines the effects of education on political awareness and interest, as we explain in greater detail below.

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and Supervision Centers (VPSCs) to provide legal and financial support and new shelters to accommodate women and children experiencing domestic violence.[8]

We refer to these recent changes in the gender-equality legislation as "new" laws and services to distinguish them from the pre-existing laws and services that date back to the 1920s.[9] We exploit the rollout of the 1997 Basic Education Program in Turkey, which increased compulsory school attendance from five to eight years, to study the impact of increased exposure to education on women's awareness of these legal reforms and domestic violence outcomes. We employ the 2014 National Survey on Domestic Violence against Women in Turkey (NSDVW 2014), which includes information on women's legal knowledge as well as different forms of intimate partner violence. Our dataset is novel in its coverage of both indicators of women's legal knowledge on specific topics and the particular outcomes that legal reforms were intended to regulate.

Since unobservable characteristics such as ability, socioeconomic status, and upbringing may affect both education and legal knowledge, simple correlations that do not account for reverse causality or omitted variable bias may be misleading. To isolate the causal impact of education on legal knowledge in the Turkish context, we employ a regression-discontinuity (RD) design that allows us to estimate a meaningful treatment effect by comparing legal awareness indicators for younger women exposed to the reform and older women who were not exposed to it. As the required age for beginning junior high school in Turkey is 12, the extension of compulsory schooling in 1997 implied that individuals born after January 1987 were required to complete eight years of education while older cohorts born before January 1987 could drop out after five years (Cesur and Mocan 2014; Dincer et al. 2014). Our identifying assumption is that these two cohorts, born one

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[8]Appendix B provides further details of the legislation on gender equality and domestic violence in Turkey.

[9]This classification is useful in distinguishing post-2000 laws that were passed during the EU negotiations to fulfill the accession criteria on gender equality from the pre-2000 laws that have largely been in place since the 1920s. The post-2000 laws have provided a much stronger legal framework to prevent intimate partner abuse and protect women's rights in marriage, work, and other social relations, as we explain in detail in Appendix B.

month apart, exhibit no systematic differences other than whether they were exposed to the education reform.

We find that the reform induced an average increase of roughly one year of additional schooling for women. Our main finding suggests that the reform-induced increase in female schooling improved women's legal awareness of new laws and services designed to reduce gender inequalities and prevent domestic violence. Moreover, we find no evidence of a significant impact of the education reform on women's knowledge of pre-existing laws, dating back to 1920s, related to gender equality and domestic violence. These findings imply that having additional years of schooling provides women with an advantage in acquiring new information about recently introduced laws and services, while pre-existing laws almost a century old are more likely to be common knowledge by 2014. We also find that the reform had a significant impact on the source from which women acquired information about new laws and services. In particular, we find that the reform had a positive impact on having heard about the new laws and services through newspapers, journals, or books. In contrast, we find no significant effect of the reform on other sources of information, including TV, family and friends, and formal institutions.

Despite the substantial improvement in women's legal awareness of laws and services concerning gender equality and domestic violence, we find no evidence indicating that the reform had a significant impact on domestic violence measures or divorce-related outcomes. In particular, we find no evidence of a significant effect on physical violence, sexual violence, psychological violence, or financial control behavior exercised by intimate partners. We also find no evidence that the reform had a significant impact on ever leaving home after experiencing domestic violence, ever getting divorced, or having a second marriage.

One possible threat to our identification strategy might arise from the use of self-reported data on domestic violence outcomes and legal awareness. If more-educated women are more or less likely to report violent episodes or their knowledge of laws and

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services, the results might suffer from reporting bias.[10] Although we cannot rule out this possibility, any such bias is likely to be limited in this context for two reasons. First, we find no evidence that female education had a significant impact on women's gender attitudes, as shown in Table A4. In particular, we find no evidence that additional years of schooling had a significant impact on women's likelihood of reporting that they approve of intimate partner violence in certain situations. Second, unlike domestic violence or other more sensitive topics, the subject of legal awareness is not a socially stigmatized issue. As such, any social desirability bias attributable to reporting legal awareness is likely to be minimal.

Our study is related to several strands of the existing literature. First, our work contributes to the prior research that has explored the relationships between education and political knowledge, civic understanding, and engagement. Dee (2004) finds that education has a significant effect on both voting behavior and civic awareness in the United States. Similarly, Milligan et al. (2004) show that higher education predicts higher political awareness and interest by exploiting compulsory schooling laws in the United States and the United Kingdom. In a developing country context, Friedman et al. (2016) find that an increase in female schooling in Kenya led to an increase in political knowledge and reduced acceptance of political authority among young women.

Our work is also closely related to the earlier studies suggesting a causal relationship between education and individuals' acquisition of new information as well as their ability to actively exploit this new information to their own benefit. The most notable line of this body of work investigates the relationship between education and health outcomes. Lleras-Muney and Lichtenberg (2002) propose that more-educated people have better health outcomes as a result of being more willing and able to use newer health technologies.

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[10]It is important to note that it would be ideal to use administrative data from hospital or police reports on domestic violence given that they are objective measures of violence. However, this type of information is likely to be misleading, especially in a developing country setting where only a selected group of women has access to hospitals or police stations after experiencing a violent episode. For example, in our dataset, only 6.5% of all women who faced physical violence visited a hospital after the assault, and only 9.8% of them filed a police report. It is also not possible to capture the degree of psychological or financial violence using administrative reports.

Similarly, Glied and Lleras-Muney (2008) show that more-educated people have better chances of survival in cases of disease with more technological progress in treatment. However, Cutler and Lleras-Muney (2006) underscore an important fact: better ability to reach or process knowledge does not always translate into action. Thus, education does not always guarantee necessary changes in actual health behavior. Our findings are in line with those of the education-health literature: while education plays an important role in improving legal knowledge, which is a first step toward raising awareness of women's rights, it may not be enough to change the overall well-being of women if knowledge cannot guarantee access to legal institutions.

Our paper is also related to the extended literature on the causal effects of compulsory schooling laws on returns to education in the labor market (Angrist and Krueger 1991), health outcomes (Lleras-Muney 2005; Clark and Royer 2013), fertility behavior (Black et al. 2008; McCrary and Royer 2011) and other outcomes. Previous studies have examined the effects of the same 1997 compulsory schooling reform on other outcomes of interest in Turkey. These studies include, but are not limited to, Cesur and Mocan (2014) and Gulesci and Meyersson (2012), who find a negative effect of the reform on women's religiosity; Dincer et al. (2014) and Gunes (2016), who find a negative effect on fertility and child mortality; Aydemir and Kirdar (2017) and Kırdar et al. (2018), who find an increase in women's earnings and a decline in teenage marriage; Erten and Keskin (2018), who find an increase in the psychological violence; and Erten and Keskin (2020), who find a decline in the intergenerational transmission of violence against children.[11] Although our findings complement these studies, our paper differs significantly through its focus on legal knowledge and its relationship to domestic violence outcomes.

More specifically, this study is closely related to our earlier work on education and the prevalence of domestic violence in Turkey. However, by investigating an alternative and

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[11]A more recent compulsory schooling law was implemented in 2012. Erten and Keskin (2019) examined the heterogeneous treatment effects of this reform on education and labor market outcomes by poverty and religiosity in Turkey.

potentially important channel—women's awareness of laws intended to empower them—this paper contributes to our understanding of the effectiveness of compulsory schooling in a context of significant limitations on women's rights. First, using an earlier version of the same data source—the 2008 TNSDVW—Erten and Keskin (2018) demonstrate that increased female education led to an improvement in the labor market outcomes of women (i.e., those younger than 21 years old in 2008) and the increase in women's personal income generated incentives for male partners to use violence as an instrument for extracting rents from women. However, in subsequent work (Erten and Keskin 2020), using the current dataset (2014 NSDVW), we find no evidence of a significant impact of female education on the labor market outcomes of women (i.e., those younger than 27 years old in 2014), given the completed fertility outcomes and increase in childcare responsibilities for this age group. As a result, the underlying mechanism for the greater exposure to psychological violence and financial control behavior is no longer present. Hence, we find no change in these indicators of intimate partner violence for this age group (Erten and Keskin 2020).

Altogether, the findings from our previous work on the effects of the reform on labor market outcomes and the prevalence of domestic violence imply that since the reform did not significantly change the employment of women in their late 20s, it did not result in an increase in violent behavior towards these women. In the absence of labor-market-induced effects of increased schooling on domestic violence, we would expect that if legal awareness improves women's bargaining power, we would observe a significant reduction in the degree of violence they face from their partners. The fact that we found no such effect suggests that improvements in legal awareness do not always translate into the empowerment of women within the household.

This paper is organized as follows. Section 2 provides a brief description of the 1997 compulsory schooling law in Turkey. Section 3 presents the data used for the analysis as well as the identification strategy and preliminary checks for the RD analysis. Section 4 presents the findings, and Section 5 concludes the paper.

2 The Context

2.1 Compulsory Schooling Reform in Turkey

We study the consequences of the compulsory schooling reform that took place in Turkey in 1997. Prior to the reform, the Turkish education system consisted of five years of primary school, three years of junior high school, and three years of high school. Only the first five years of primary school education were compulsory, and the two higher levels were voluntary. In 1997, the Turkish parliament introduced Law No. 4306, which extended compulsory schooling to eight years, merging primary and junior high school into primary education. The law effectively eliminated the option to attend religious junior high schools and replaced the primary school diploma awarded at the end of fifth grade with a primary education diploma received upon successful completion of the eighth grade. The law was passed on August 16, 1997. It was referred to as the Basic Education Program, and it applied to all students who did not already have a primary school diploma at the beginning of the 1997-1998 school year.

According to the Turkish law on school starting age, a child begins compulsory schooling in September of the year when he or she turns six years old. The 1997 Basic Education Program, which made eight years of primary education compulsory, was effectively implemented in the 1997-1998 school year. This implied that students who had completed the fifth grade in 1997 could drop out while those who had completed fourth grade in 1997 were required to continue school through eighth grade. The combination of the school starting age law and the 1997 Basic Education Program implied that children born before January 1987 could drop out after five years whereas those born after January 1987 had to complete eight years of education. Although there may have been cases that do not strictly fit this rule, due to either imperfect compliance with the age of starting school or grade repetition, the official requirements were such that students born after January

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1987 were more likely to comply with the new compulsory schooling law than were older cohorts.[12] The introduction of the 1997 Basic Education Program allows us to isolate the effect of compulsory schooling from other policy changes that may have occurred during this period as one has no reason to expect other policy changes to differentially affect individuals born before or after January 1987.

The Basic Education Program required massive investments in schooling infrastructure, which increased the share of education in the public investment budget from 15 percent in 1997 to 37 percent in 1998. Referred to as a "big bang" approach to education reform, the program entailed the restoration of old schools and the construction of new schools, the hiring of 103,000 additional teachers (a 41 percent increase) and the construction of 80,000 new classrooms (a 36 percent increase) between 1996 and 2003. The Turkish government also sought to improve computer literacy by distributing more than 56,000 computers to rural primary schools. A standardized bus system was implemented in 2000 to transport students from rural areas to nearby schools, and a program was established to distribute free books and meals to low-income students. Overall, the Basic Education Program successfully increased enrollment in primary education. The net schooling ratio rose from 84.74 percent in 1997 to 93.54 percent in 2000. The enrollment of girls increased substantially, and the ratio of girls to boys in primary and secondary education rose from 90 percent in 1995 to 97 percent in 2005.

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[12]See Cesur and Mocan (2014) for details of the laws, which stipulated that Turkish students who were 72 months old by the end of a calendar year could start school in September of that year (Resmi Gazete, Number 21308). As a result, children born before January 1987 could begin primary school education in 1992 and unintentionally avoid the 8-year requirement that was adopted on August 18, 1997, and effectively implemented in the 1997-1998 school year.

3 Data and Empirical Methodology

3.1 Data

We use data from Turkey's National Survey on Domestic Violence against Women (NS-DVW) of 2014. This survey is a nationally representative household survey containing information on the respondents' experiences of domestic violence, their educational background and demographics, and their knowledge of the laws and services designed for the victims of domestic violence as well as their sources of information about these laws and services.One of the main objectives of the survey was "to identify problematic areas regarding the legal regulations for combating violence (especially problems regarding the implementation of Law No. 6284 on the Protection of the Family and the Prevention of Violence against Women)" (Yuksel-Kaptanoglu and Tarim 2015). Hence, to assess the effectiveness of the laws designed to prevent domestic violence, the survey contained specific questions about women's legal awareness and the sources of information through which they gained such awareness.

The survey was conducted among 15,072 households between April and July 2014. The survey covered women between 15 and 59 years of age, and one woman per household was randomly selected for the interview. Special effort was made to avoid having anyone else in the room while the interviews were conducted. The respondents were informed that their answers would be kept strictly confidential. The survey also includes the birth month and year of each respondent, which allows us to use an RD approach. In Appendix C, we present Table A1 to provide detailed information about summary statistics on the major indicators of women from the 2014 NSDVW survey. We construct measures of women's exposure to intimate partner violence within the last 12 months in order to examine whether women's awareness about the recent laws, particularly the 2012 Law to Prevent Domestic Violence, had any significant impact on their experience of domestic

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violence. Appendix C provides detailed information on the construction of indices used in the analysis.

3.2 Identification

The combination of the 1997 compulsory schooling law and the law on school starting age implies that individuals born after January 1987 were required to complete eight years of schooling whereas those born earlier could drop out after five years, as explained in greater detail earlier in Section 2.1. We exploit this discontinuity in an RD design to estimate the causal effect of education on awareness of new laws and services pertaining to gender equality and the prevention of domestic violence. Our identifying assumption is that these two cohorts born one month apart do not exhibit any systematic differences other than being exposed to the compulsory schooling law or not. As long as this assumption holds, this approach represents a treatment assignment that is as good as random. In our RD design, we assign treatment based on an individual's month and year of birth, implying that those born after January 1987 are assigned to treated status.

We employ an RD design by exploiting discontinuity in the birth date and using this discontinuity as an instrument for years of schooling following the previous research (Clark and Royer 2013; Erten and Keskin 2018). We report both reduced-form (RF) estimates (i.e., sharp RD) and two-stage least-squares estimates (i.e., fuzzy RD) for all of the outcome variables of interest. Our specification follows a basic RD form:

$$y_i = \alpha + \beta t_i + f(x_i) + \epsilon_i \tag{1}$$

$$\forall x_i \in (c - h, c + h)$$

where y_i is the dependent variable, t_i is the treatment status, x_i is the forcing variable, and h is the bandwidth around the cutoff point c. We allow the slope to vary on each side of the cutoff. The control function, $f(x_i)$, is a continuous n-order polynomial function of the

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forcing variable on each side of the cutoff point. We use local linear regressions in our RD estimations (Imbens and Lemiuex 2008) and conduct optimal bandwidth selection using the Imbens and Kalyanaraman (2009) procedure.[13] This approach implies the selection of an optimal bandwidth for each outcome variable examined.[14] Following Lee and Card (2008), we cluster standard errors at the month-year-of-birth level to accommodate specification error in the forcing variable.

In all of our specifications, we include the following control variables: a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, childhood-region fixed effects, and interactions of childhood-region fixed effects with an indicator for rural childhood regions.[15]

3.3   Preliminary Checks

We test the validity of our RD design by using two standard checks (Imbens and Lemiuex 2008). First, we examine whether the density of the forcing variable, the month-year of birth, is continuous at the discontinuity. We perform a McCrary density test on the density of the forcing variable. This test yields an insignificant estimate, as shown in Figure A1.

Second, we investigate whether the predetermined covariates are balanced around the discontinuity. In Figure 1, each graph illustrates local averages of the outcome in one-month bins plotted against the forcing variable, with overlaid linear regression lines using raw data on each side of the threshold. The gray lines represent 95 percent con-

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[13]The optimal bandwidth approach relies on the central intuition that there is a tradeoff between bias and variance. This implies that as one approaches the threshold point and narrows down the bandwidth, the bias will be reduced because the treatment and control groups become more similar while, at the same time, the variance of estimates will increase given the smaller sample size (Lee and Lemieux 2010). Taking this into account, the optimal bandwidth procedures have the objective of selecting a bandwidth that minimizes bias while maximizing precision.

[14]In addition, we use specifications that adopt the optimal bandwidth from the first-stage results for junior high school completion, which is estimated as 118 months around the discontinuity; these are included in the appendix tables. This static bandwidth approach complements the former results for which we use the optimal bandwidth.

[15]We use fixed effects for 12 regions where the respondents lived until the age of 12 when they were subjected to the education reform.

fidence intervals. The predetermined characteristics include regional dummy variables capturing whether the respondent's childhood region is western, southern, central, north-ern, or eastern Turkey and whether the respondent's interview language is not Turkish. The graphs do not indicate any significant jumps at the cutoff point. We also report regression-based tests of whether the control variables exhibit any significant jumps at the discontinuity. In Appendix D, Table A2 shows that the control variables do not exhibit any evidence of a statistically significant jump at the discontinuity, with the exception of one childhood region. A SUR test of the coefficients' joint significance results in a p-value of 0.21. Overall, we conclude that the predetermined covariates appear to be balanced around the discontinuity.

Because all of the domestic violence-related questions are relevant only to women who have been in a relationship, our RD analysis for these outcomes is based on the sample of women who have had a relationship. One concern is the extent to which the treatment had an effect on relationship status and, therefore, on selection into the sample of analysis. To address this concern, we examine whether the reform had a significant effect on ever having a relationship or on ever being married. Figure A2 plots the local averages of these outcomes in monthly bins against the forcing variable. We find some evidence of a trend break driven by an increasing decline in the propensity of women ever having a relationship in the younger sample. However, since there is no evidence of a discontinuous jump around the cutoff, we conclude that the reform had no significant impact on the probability of ever having a relationship or being married. In Appendix D, Table A2 indicates no evidence of a significant effect of the reform on relationship status. The estimated coefficients are also null. Hence, there is no reason to expect that the reform affected the probability of selection into the sample of women who have had a relationship or were ever married.[16]

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[16]The balanced covariates checks for the sample of women who ever had a relationship provide similar results. Appendix Figure A3 provides no evidence of significant jumps around the discontinuity for predetermined covariates, and Appendix Table A3 presents RD estimates and shows that a SUR test of joint significance also fails to reject the null hypothesis that the coefficients of predetermined covariates are

4 Effects of the Compulsory Schooling Law

4.1 Schooling Outcomes

We proceed by testing the effect of the compulsory schooling law on schooling outcomes. Figure 2 provides a graphical illustration of the RD design by comparing the treatment and placebo effects using the 2014 and 2008 NSDVW surveys. The left-hand graph plots the female junior high school completion rates in monthly bins against the month and year of birth, with a threshold of January 1987, using the 2014 NSDVW survey. As explained in detail in Section 2.1, the education reform required those born after this date to complete junior high school, while those in the older cohorts had the option of dropping out after completing primary school. The left-hand graph shows a clear jump at the discontinuity, with an approximately 15-20 ppt increase in the probability of completing junior high school. Using data from the 2008 NSDVW, we conduct a placebo test to examine the validity of the RD design. The right-hand graph of Figure 2 shows the same relationship using the 2008 HLFS survey with the same age cutoff, comparing 27- and 28-year-old women. The age cutoff corresponds to being born before or after January 1981. The right-hand graph shows no evidence of a break in completing junior high school for women of the same age in the 2008 NSDVW data. Thus, the jump that we observe around the discontinuity of the reform implementation in the 2014 survey is not likely to be driven by some underlying relationship between age and school completion but is rather an outcome of the reform.

While the RD graphs reveal a positive treatment effect of being exposed to the compulsory schooling reform on educational attainment, the results could be further refined with regression analysis. Table 1 presents the RD treatment effects on years of schooling and the completion of different levels of education for all of the women surveyed

jointly equal to zero.

in the 2014 NSDVW. The last column in each row reports the outcome means for the relevant sample. Column 4 shows the optimal bandwidth estimated by the Imbens and Kalyanaraman (2009) algorithm in months on each side of the discontinuity. In all specifications, we include as controls a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, childhood-region fixed effects, and interactions of childhood-region fixed effects with an indicator for rural childhood regions.

The first row of Table 1 reports estimates of the RD treatment effects on women's years of schooling. The optimal bandwidth, calculated using the Imbens and Kalyanaraman (2009) algorithm, is 89 months around the discontinuity. Using a local linear specification, column 1 reports an RD estimate of 0.70 years for the treatment effect on years of schooling, which is statistically significant at the five percent level. In terms of magnitude, an increase of 0.70 years in the years of schooling corresponds to an 8.3 percent increase relative to the mean. To check for robustness, we add alternative specifications by allowing the bandwidth to vary and report the linear RD estimates with 0.75 and 1.5 times the optimal bandwidth in columns 2 and 3, respectively. The estimated effects remain significant within an approximate range of 0.7 to one year.

The remaining rows of Table 1 report the RD treatment effects on different levels of school completion. The second row displays the estimated RD treatment effects for an indicator variable capturing whether the respondent completed junior high school or higher. The linear specification with the optimal bandwidth in column 1 reports an RD estimate of 19 ppt corresponding to 32 percent relative to the mean. In alternative specifications, the estimates remain significant. The third row indicates that the linear RD estimate of the treatment effect on completing high school is 13 ppt, and it remains significant in alternative specifications. This finding implies that the reform had long-term effects in enabling some women to continue beyond junior high school. As expected, all RD estimates for whether the respondent completed primary school are insignificant.

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These results for primary school completion provide a robustness check, showing that the reform did not influence the likelihood of completing primary school, which was already mandatory prior to 1997.[17]

4.2   Education and Legal Awareness

One of the major benefits of education is that additional years of schooling reduce the costs of obtaining new information and using it. Schultz (1975) shows that additional years of schooling improve information acquisition and learning. More-educated individuals gain not only the ability to acquire new information by having access to multiple sources of information but also the ability to process that information to make better decisions. Without adequate levels of education, it is generally difficult for individuals to process and act upon new information, even if it is accessible. Studies in the education-health literature have demonstrated that more-educated individuals more quickly employ new medical technologies (Glied and Lleras-Muney 2008) and utilize new public information for making better health decisions (Aizer and Stroud 2010). In a similar vein, education may enhance the ability to acquire information about changes in laws and services related to gender equality and improve the ability to process this new legal knowledge to make better decisions. One of the implications is that the more educated may gather information about new laws and services more quickly compared to the less educated while there may not be differential effects on the awareness of pre-existing legislation by education level.

We test whether the compulsory schooling reform had a significant impact on legal awareness of gender equality and the prevention of domestic violence. Figure 3 plots the local averages of the two summary indices of women's legal awareness of laws in

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[17]One obvious question is whether the 1997 reform had an effect on male schooling outcomes. Figure A4 plots the average junior high school completion for women and men using the 2014 Household Labor Force Survey (HLFS). The graph on the left shows evidence of a clear jump for the junior high school completion of women whereas the right-side graph shows no evidence of a significant jump for the same outcome for men. This result implies that the reform had a much smaller effect on men, possibly because the junior high school completion rate for males was already close to 90 percent prior to the reform. Unfortunately, we cannot replicate the same exercise for men using the NSDVW 2014 since the month of birth for husbands is not reported in the dataset.

month-of-birth bins around the discontinuity, January 1987. The graph on the left shows no evidence of a significant break in the awareness of pre-existing laws index whereas the right-hand graph shows evidence of a clear jump in the awareness of new laws index. This finding about the pre-existing laws is not surprising as these laws are almost a century old and probably *common knowledge*; thus, there is no reason why more educated women should be able to know about them more. While these graphs illustrate a positive RD treatment effect on legal awareness of new laws with no evidence of a significant effect for legal awareness of pre-existing laws, the results can be elaborated with regression analysis.

Table 2 reports the RD estimates of the effect of the compulsory schooling reform on women's knowledge of laws and services. In Panel A, the OLS estimates in column 1 indicate the presence of a positive correlation between years of schooling and indicators of awareness of pre-existing laws. The magnitudes of the correlations suggest that one additional year of schooling corresponds to a 0.7 ppt higher probability of having heard about the law stating that men and women must be at least 17 years old to get married, a 0.3 ppt higher probability of being aware that it is illegal for parents and other relatives to allow their children below the age of 15 to be married and that doing so is punishable by imprisonment, a 0.3 ppt higher probability of being aware that it is illegal to have a religious marriage before an official one, and a 0.8 ppt higher likelihood of knowing that polygamy is illegal. Similarly, the correlations show that one additional year of schooling corresponds to a 0.8 ppt higher probability of having heard about the law stating that the perpetrator of violence is kept away from the common residence to protect the victims of violence, a 1.8 ppt higher likelihood of being aware that the perpetrator is prevented from approaching or contacting the victims of violence, and a 1.1 ppt higher likelihood of knowing that if the victim's life is in danger, the victim is provided temporary protection services.

The RD estimates in Panel A of Table 2 in columns 2 and 3 show no evidence of a

significant effect of the reform on awareness of any of the pre-existing laws. We also find no evidence that the reform had a significant impact on the awareness of pre-existing laws index, a summary measure that aggregates information from individual components of pre-existing laws.

In Panel B of Table 2, the OLS estimates in column 1 indicate that one additional year of schooling is positively associated with a 0.5 ppt higher probability of being aware that marital rape is illegal, a 1.6 ppt higher likelihood of knowing that a woman is not required to have her husband's permission to work outside the home, a 0.8 ppt higher likelihood of being aware that spouses share the property that they obtained during marriage after they get divorced, and a 1.1 ppt higher probability of knowing that shelters are provided for victims of domestic violence and their children.

The RD estimates in columns 2 and 3 of Panel B in Table 2 indicate that the reform had a positive impact on the awareness of new laws. The RF RD estimate in column 2 of the last row shows that the reform had a positive and significant impact of 11 ppt on the awareness of new laws index. The IV estimate in column 3 is consistent with the RF estimate, and both the RF and IV estimates are precisely estimated, being significant at the one percent level.[18] In terms of magnitudes, the RD treatment effect on awareness of new laws index corresponds to 0.21 standard deviations.

Moreover, the RD estimates for several specific articles listed in Panel B of Table 2 are also significant and positive. The first-row RF estimates in column 2 indicate that the reform had a positive impact of 6 ppt on the likelihood of being aware of the amendment to the 2005 Penal Code that marital rape is illegal, which corresponds to a 8.3 percent increase relative to the sample mean. The IV estimate in column 3 is also precisely estimated and confirms this effect. In the second row, the RD estimates indicate that the reform had a significant and positive effect of 9.2 ppt on legal awareness of the amendment to the 2001 Civil Code stating that a woman is not required to have her husband's permission to

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[18]For the IV estimates, the first-stage F-statistic is 16.46, indicating again a strong first-stage relationship between the reform and schooling outcomes.

work outside the home. In terms of magnitude, this corresponds to a 20 percent increase relative to the sample mean.

Regarding awareness related to laws on domestic violence, the RD estimates show that the reform had a significant impact of 3.9 ppt on being aware of an article introduced in the 2012 Law to Prevent Domestic Violence, which states that shelters are provided for people who experience domestic violence and their children. This corresponds to a five percent increase relative to the sample mean. Similarly, the RD estimates in the fifth row indicate that the reform had a positive effect of 9.5 ppt on increasing awareness of other articles of the same law asserting that if the perpetrator is addicted to alcohol or drugs, he is provided with diagnosis and treatment opportunities. This corresponds to a 16 percent increase relative to the sample mean. In the sixth row, the RD estimates show that the reform had a positive impact of 6.2 ppt on having heard about the provision that the victim of violence is provided with childcare services, corresponding to a 16 percent increase relative to the mean. Finally, the RD estimates in the seventh row show that the reform had a large and significant impact on one of the most distinguishing features of the 2012 Law to Prevent Domestic Violence. The RF estimates in column 2 indicate that the reform had a positive impact of 5.5 ppt on being aware that services are provided to the victims of violence by the VPSCs corresponding to a 46 percent increase relative to the sample mean. Overall, the large magnitudes of these RD treatment effects imply that the reform was particularly successful in raising women's awareness of several new laws and services introduced in the post-2000 period to reduce gender inequalities and prevent domestic violence in Turkey.

Another question of interest that we explore is whether the reform had a significant effect on sources of information through which women gained an awareness of the new laws and services. Figure 4 provides a graphical illustration of the RD treatment effects on having heard about new laws from different sources. At the discontinuity in the upper-left graph, we see no evidence of a significant jump in having heard about the new laws

from TV index. However, in the upper-right graph of Figure 4, we see clear evidence of a significant upward shift in having heard about the new laws from newspapers, journals, or books index. In contrast, the bottom graphs of Figure 4 show no evidence of a significant jump at the discontinuity for having heard about the new laws from family and friends index or the having heard about the new laws from formal institutions index.

To examine the effects of the reform on sources of information about new laws in a more refined analysis, we provide the results of RD regressions in Table 3. The OLS estimates in column 1 indicate the presence of a positive correlation between years of schooling and the indices of having heard about the new laws from newspapers, journals, or books and from formal institutions and a negative correlation between years of schooling and having heard about the new laws from family and friends (social networks) index. The magnitudes of the correlations imply that one additional year of schooling corresponds to a 7.9 ppt higher likelihood of having heard about the new laws from newspapers, journals, or books, a 3.9 ppt higher likelihood of having heard about them from formal institutions, and a 1.8 ppt lower likelihood of having heard about them from family and friends. In contrast, we find no evidence of a significant correlation between education and receiving information about new laws from TV, which is unsurprising because TV usage is very widespread across all educational groups and socioeconomic backgrounds in Turkey.

The RD results in the first row of Table 3 show no evidence of a significant effect of the reform on having heard about the new laws from TV. In the second row, the RF estimate indicates that the reform had a significant and positive impact of 13.6 ppt on having heard about the new laws from newspapers, journals, or books, corresponding to 0.15 standard deviations of the outcome. The IV estimate is also consistent with this finding and is marginally significant. The RD estimates in the subsequent rows indicate no evidence of a significant effect of the reform on having heard about the new laws from friends and family or from formal institutions.

As a robustness check, Table A5 in Appendix D reports the RD estimates using a static

bandwidth of 118 months around the cutoff, which is the optimal bandwidth estimated for junior high school completion. The findings in the table show that the RD estimates for awareness of the new laws index and having heard about the new laws from newspapers, journals, or books index are robust to this specification. The RD results for the awareness of pre-existing laws index and indices of having heard about the new laws from TV, friends and family and formal institutions also remain insignificant in this specification.

Altogether, our results provide evidence that additional years of schooling allowed women to acquire information about new laws and services pertaining to gender equality and domestic violence through reading newspapers, journals, or books. We also find no evidence of a significant impact of education on awareness of pre-existing laws and services dating back to the 1920s. In the next section, we explore whether the reform-induced improvement in legal knowledge led to changes in domestic violence and the ability to quit abusive relationships.

4.3 Education and Domestic Violence

If having additional years of schooling improves women's legal awareness of new laws designed to enhance gender equality and reduce domestic violence, it may lead to a change in domestic violence outcomes. For example, if women are more aware that they are strictly protected from the abusing partner, they might be more likely to ask for protection from the police. Similarly, if women have heard about laws that provide temporary financial assistance and childcare services, they might have a stronger fallback position and, thus, a more credible threat of leaving the abusive relationship. The favorable shift in women's bargaining position might then result in a decline in domestic violence as well as an increase in probability of leaving home or filing for divorce after experiencing domestic violence (Farmer and Tiefenthaler 1996; Aizer 2011).

We examine this possibility by testing whether the reform had a significant impact on domestic violence and divorce outcomes. Table 4 presents the results. The OLS estimates

in column 1 indicate that there is a negative correlation between years of schooling and all measures of domestic violence as well as the probability of having a second marriage. The magnitudes of the correlations suggest that one additional year of schooling is associated with 2.7 ppt less physical violence, 2.2 ppt less sexual violence, 2.0 ppt less psychological violence, 1.5 ppt less financial control exercised by the intimate partner, and a 0.4 ppt lower probability of having a second marriage.

The RD estimates in columns 2 and 3 of Table 4 indicate no evidence of a significant impact of the reform on domestic violence or divorce outcomes. More specifically, we find no evidence that the reform had a significant impact on physical violence, sexual violence, psychological violence, or financial control indices. The RD estimates for the overall domestic violence index, which aggregates information across of these indicators of abuse, also shows no evidence of a significant impact of the reform on overall risk of experiencing domestic violence. As related evidence, we find very similar results when we use indicator variables of exposure to domestic violence as opposed to z-score indices. Appendix Table A8 shows no evidence of a significant effect of the reform on the probability of experiencing physical violence, sexual violence, psychological violence, or financial control measured by dummy variables, or underlying individual components of these indicators. Moreover, we also find no evidence of a significant effect of the reform on ever leaving home, ever getting divorced, or having a second marriage.

We conducted several robustness checks. First, Table A5 in Appendix D presents the RD results using a static bandwidth of 118 months around the cutoff, which is the optimal bandwidth estimated for junior high school completion. The findings in the table show that the RD estimates for the physical violence index and divorce-related outcomes are robust to this specification. Second, to accommodate a more flexible specification, we report the RD estimates using a quadratic control function in Table A6. The estimated RD treatment effects are similar to those reported in our main tables. Third, Figure A5 presents the RD estimates using a quadratic control function and a bandwidth of 89 months around

the discontinuity, which is the optimal bandwidth estimated for years of schooling. We observe qualitatively similar RD treatment effects to those in the main results presented in the paper. Finally, Appendix Table A7 also shows that the effect of reform on schooling is slightly larger for women raised in rural regions, which is roughly 1.1 years of additional schooling. This table also illustrates that our main results hold for women raised in rural regions.[19]

Moreover, we also examine whether legal awareness plays a mediating role in the relationship between education and domestic violence related outcomes. Appendix Table A9 presents results from an IV regression where we instrument legal awareness about new laws with the reform exposure in order to examine the second-stage effects on domestic violence and divorce related outcomes. The results from this exercise show no evidence of a significant impact of reform-induced legal awareness on domestic violence or ability to quit abusive relationships. This is not surprising given that the reduced-form estimates presented in Table 4 shows no evidence of a significant impact of the reform on domestic violence related outcomes. We conclude that legal awareness did not play a significant mediating role in the relationship between education and domestic violence outcomes in this context.

Furthermore, we examine whether the reform had any heterogeneous effects on legal awareness and domestic violence by mother's exposure to domestic violence. One potential mechanism could be that women whose mothers faced domestic violence could be more sensitive to the topic, which might increase their awareness of legal reforms. In Appendix Table A10, we observe no evidence that the reform had a differential impact on awareness about new laws or physical violence experienced by women whose mothers were subject to violence at home.

Finally, it is possible that increases in women's education can alter their fertility or

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[19]The only exception is the reform's effect on the ways in which the women learned about the new laws. Education does not have a significant effect on rural women's likelihood of learning about the reforms from newspapers, journals or books. This can be explained by the limited supply of these news outlets in rural Turkey.

other marriage market outcomes. In Table A11, we test whether the reform has any significant effects on a number of these outcomes including number of children, having ever used contraceptive, having ever given birth, whether the partner disapproves of contraception, pregnancy age, marriage age, husband's age, and husband's religiosity. We find no evidence that the reform had a significant impact on these outcomes in our context. Lastly, as shown in Erten and Keskin (2020) and discussed in the introduction, Table A12 indicates that the reform had no significant effects on the labor market outcomes of the women within our sample in this study.

5 Conclusion

In this paper, we provide evidence of the impact of an extension of compulsory schooling that exogenously raised the average educational attainment on the acquisition of legal information in Turkey. Employing an RD design allows us to estimate the causal effects of the education reform on women's legal awareness of laws on gender equality and domestic violence as well as actual domestic violence and divorce outcomes. To the best of our knowledge, this is the first quantitative analysis that examines the impact of education on an unexamined dimension of information acquisition, specifically, legal awareness, and the source of such information acquisition. Given that knowledge of legal rights and availability of services has been widely accepted as a necessary condition for women to gain access to the legal system, we also assess whether the education reform had a significant impact on women's risk of experiencing domestic violence or ability to quit abusive relationships.

Our findings reveal that the reform had a positive impact on women's legal knowledge of new laws and services introduced to reduce gender inequalities and prevent domestic violence; however, this improvement in legal awareness did not translate into significant changes in domestic violence or divorce outcomes. Interestingly, we find no evidence of

a significant impact of the education reform on women's knowledge of pre-existing laws dating back to the early twentieth century. We also show that the reform significantly increased the likelihood of acquiring information about new laws and services through newspapers, journals, or books. Although our findings suggest a complementarity between education and legal information provision, we find no evidence indicating that the reform had a significant impact on domestic violence measures or divorce-related outcomes. In particular, we find no evidence of a change in the prevalence of physical, sexual or psychological violence or financial control behavior exercised by intimate partners. We also find no evidence of a reform-induced change in ever leaving home after experiencing domestic violence, ever getting divorced, or having a second marriage.

Our results indicate that although education has a significant and large impact on the acquisition of legal information, this improvement in legal awareness does not necessarily translate into the differences in outcomes that these laws were intended to have. These findings parallel those documented in the education-health literature, indicating that education generally affects the acquisition of health-related information; however, the improvements in health-specific knowledge account for only small differences in behavior and health outcomes. Similar to the findings in the health literature relating to new technologies and new advances in medical knowledge, we detect significant effects of education only on knowledge related to newly introduced changes in gender-equality legislation, as opposed to pre-existing legislation that has long been in place. Our findings also suggest that while improving legal knowledge could be an important step toward raising awareness of women's rights, it may not be sufficient to strengthen women's bargaining power within the household to reduce the prevalence of domestic violence.

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FIGURE 1: BALANCED COVARIATES
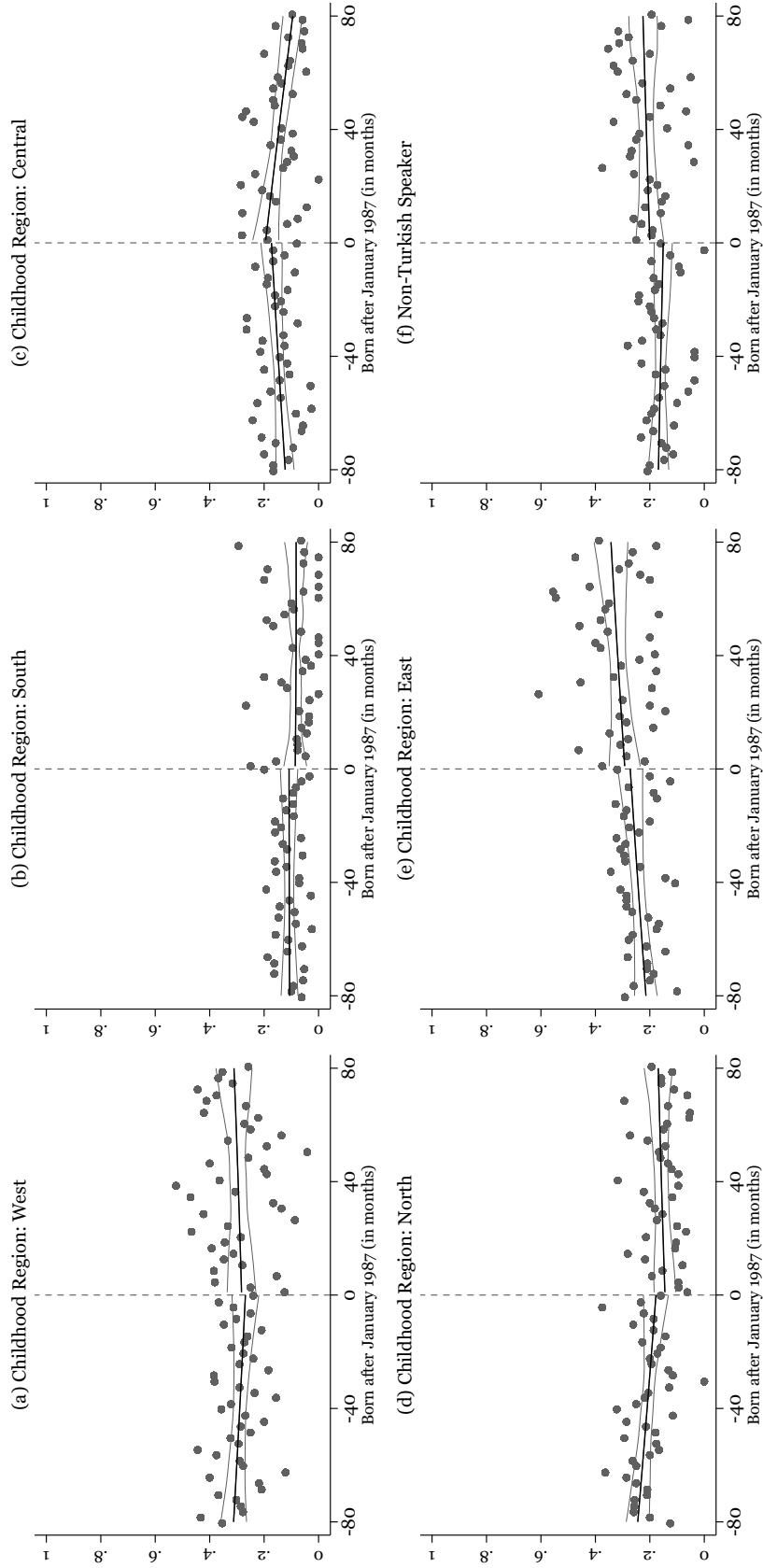
(a) Childhood Region: West

(b) Childhood Region: South

(c) Childhood Region: Central

(d) Childhood Region: North

(e) Childhood Region: East

(f) Non-Turkish Speaker

Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The figures plot predetermined covariates in monthly bins against the month-year of birth of being born in January 1987. The vertical line in each graph represents the cutoff point, January 1987. Gray lines show 95 percent confidence intervals around the mean level. Variable definitions are listed in *Appendix A.*

FIGURE 2: RD TREATMENT EFFECTS ON JUNIOR HIGH SCHOOL COMPLETION: TREATMENT AND PLACEBO

Note: Data are from the 2014 and 2008 National Surveys on Domestic Violence against Women in Turkey, respectively. The figures plot a dummy variable equal to one of the respondent completed junior high school in monthly bins. Gray lines show 95 percent confidence intervals around the mean level.

FIGURE 3: RD TREATMENT EFFECTS ON INFORMATION ABOUT LAWS
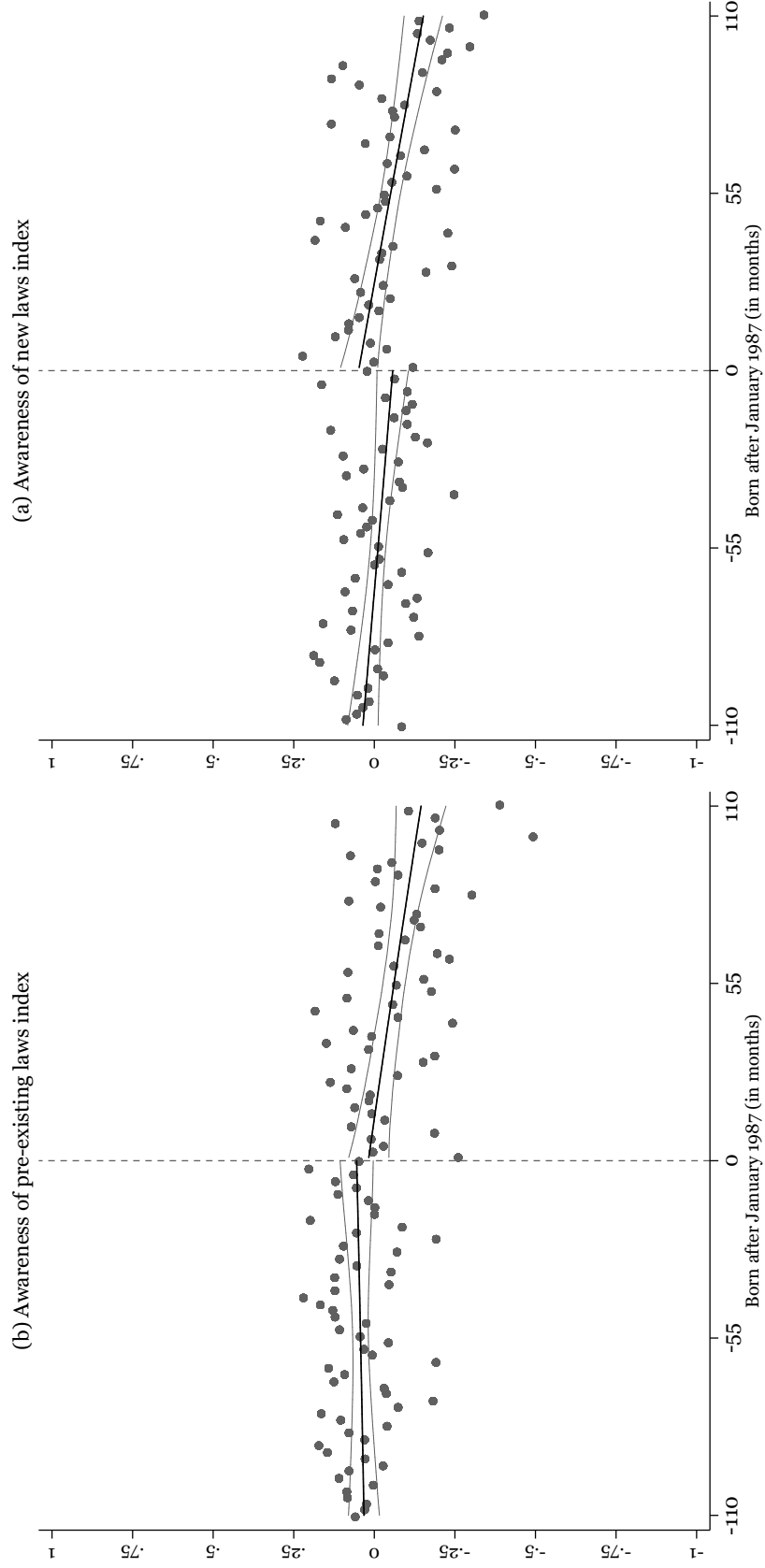
(a) Awareness of new laws index

(b) Awareness of pre-existing laws index

Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The figures plot awareness of pre-existing laws index and awareness of new laws index in monthly bins. Gray lines show 95 percent confidence intervals around the mean level.

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(a) Heard about new laws from TV index

(b) Heard about new laws from newspapers/books index

(c) Heard about new laws from friends and family index

(d) Heard about new laws from formal institutions index
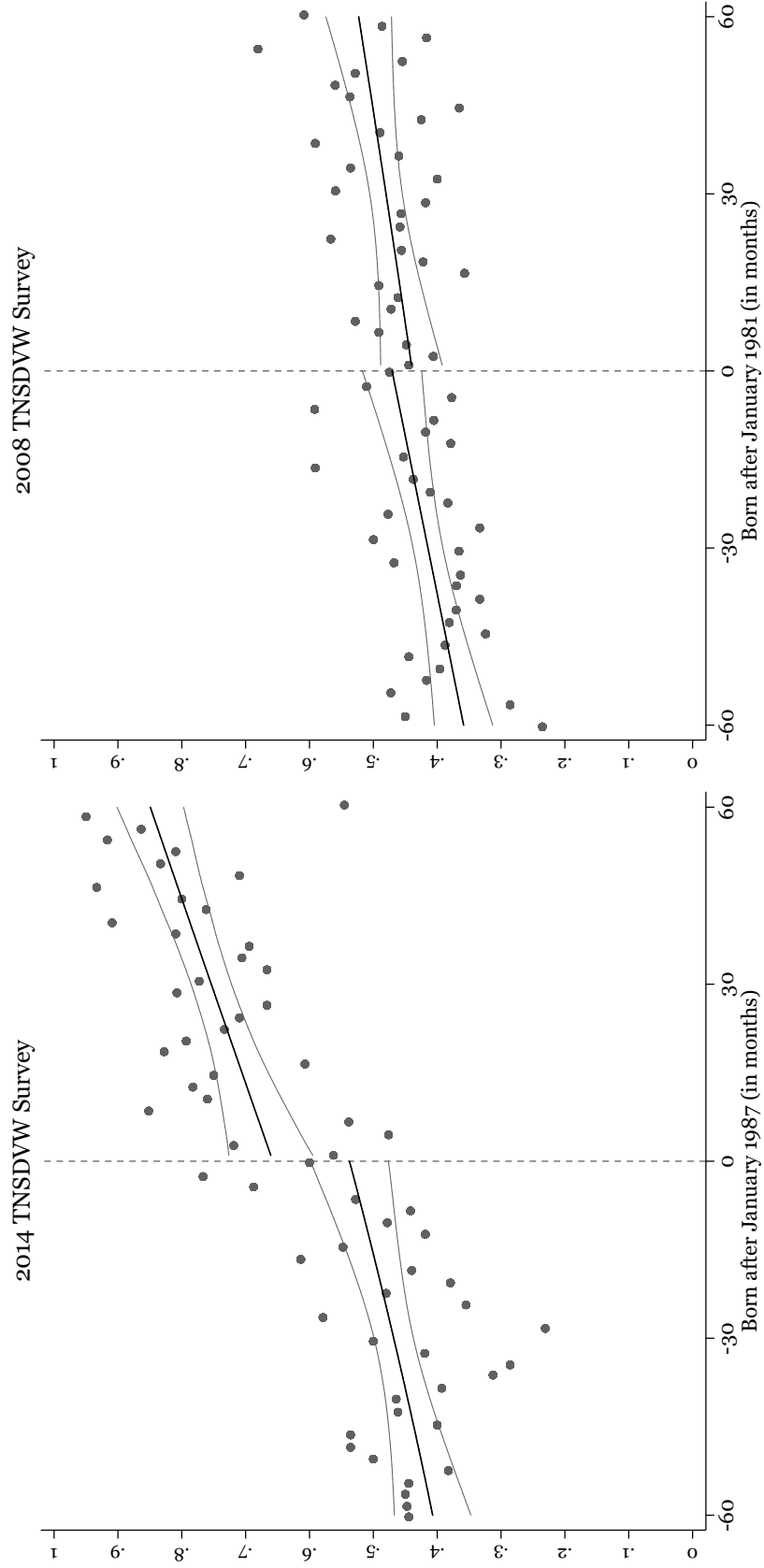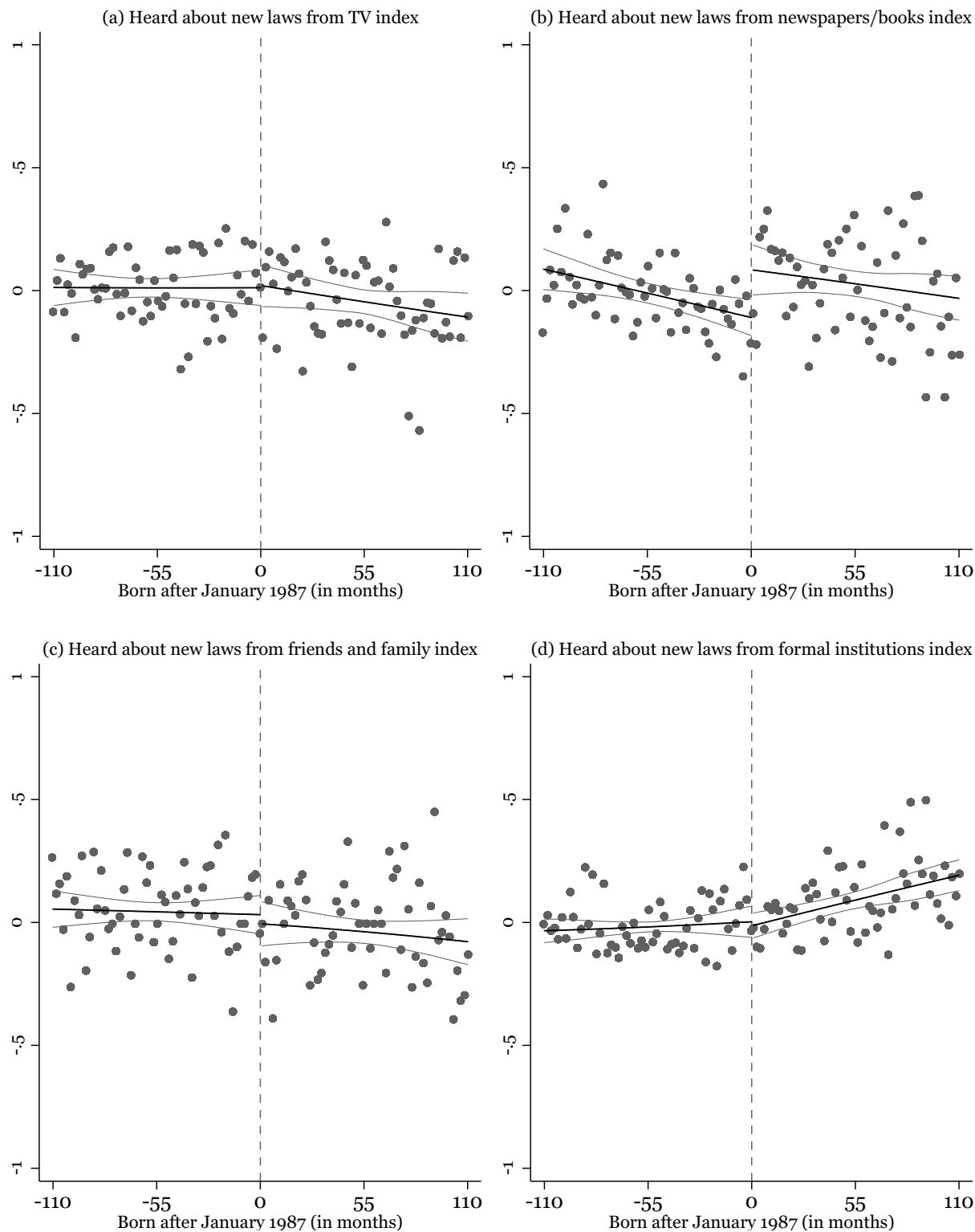
Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The figures plot z-score indices of having heard about the new laws from TV, newspapers/journals/books, friends and family, and formal institutions in monthly bins. Gray lines show 95 percent confidence intervals around the mean level.

TABLE 1: RD TREATMENT EFFECTS OF THE REFORM ON SCHOOLING OUTCOMES

	(1) Linear RD $\hat{h}$ bandwidth	(2) Linear RD 0.75$\hat{h}$ bandwidth	(3) Linear RD 1.5$\hat{h}$ bandwidth	(4) Bandwidth	(5) N	(6) Mean
Years of schooling	0.704**	0.769**	1.031***	89	2,492	8.48
	(0.327)	(0.365)	(0.267)			
Completed education:						
Junior high school	0.192***	0.186***	0.186***	118	3,308	0.60
	(0.031)	(0.037)	(0.027)			
High school	0.125***	0.081*	0.078**	65	1,837	0.40
	(0.044)	(0.048)	(0.038)			
Primary school	-0.020	-0.031	-0.020	93	2,630	0.91
	(0.024)	(0.028)	(0.020)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. Columns 1 – 3 report local linear regressions using the optimal bandwidth $\hat{h}$, 0.75 $\hat{h}$ and 1.5 $\hat{h}$, respectively. The optimal bandwidth, reported in column 4, is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 5 reports the number of observations used in estimations with the optimal bandwidth $\hat{h}$, and column 6 reports the outcome mean within the optimal bandwidth $\hat{h}$. All results are reported for the full sample of women. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE 2: Effects of Education on Information about Laws and Services

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Panel A: Pre-existing Laws						
Men and women must be at least 17 years old to get married.	0.007*** (0.002)	-0.034 (0.025)	-0.043 (0.038)	99	2,761	0.88
It is illegal for parents and other relatives to allow their children below the age of 15 to be married, and doing so is punishable by imprisonment.	0.003** (0.001)	0.003 (0.019)	0.003 (0.019)	131	3,606	0.92
It is illegal to have a religious marriage before official marriage.	0.003* (0.002)	0.001 (0.026)	0.001 (0.024)	138	3,765	0.83
It is illegal for a man to marry more than one woman.	0.008*** (0.002)	0.001 (0.023)	0.001 (0.024)	129	3,580	0.86
The perpetrator is kept away from the common residence to protect the victims of violence.	0.008*** (0.002)	0.001 (0.024)	0.001 (0.029)	108	3,003	0.88
The perpetrator is prevented from approaching or contacting the protected victims of violence.	0.018*** (0.002)	-0.032 (0.027)	-0.026 (0.024)	157	4,162	0.80
If the victim's life is in danger, the victim is provided temporary protection services.	0.011*** (0.002)	-0.016 (0.022)	-0.018 (0.025)	122	3,399	0.87
Awareness of pre-existing laws index	0.023*** (0.003)	-0.026 (0.035)	-0.026 (0.037)	131	3,630	0.02
Panel B: New Laws						
(a) 2001 Civil Code and 2005 Penal Code						
It is illegal for a man to have sex with his wife without her consent.	0.005** (0.002)	0.060* (0.034)	0.061* (0.036)	126	3,503	0.72
A woman is not required to have her husband's permission to work outside the home.	0.016*** (0.003)	0.092** (0.040)	0.132* (0.078)	94	2,630	0.45
After spouses get divorced, they share the property that they obtained during their marriage.	0.008*** (0.001)	-0.008 (0.021)	-0.009 (0.022)	126	3,503	0.92
(b) 2012 Law to Prevent Domestic Violence						
Shelters are provided for people who experienced domestic violence and their children.	0.011*** (0.002)	0.039* (0.023)	0.048* (0.028)	111	3,100	0.86
If the perpetrator is addicted to alcohol or drugs, he is provided with diagnosis and treatment opportunities.	0.003 (0.003)	0.095*** (0.031)	0.085*** (0.033)	142	3,880	0.59
The victim of violence is provided with childcare services.	-0.004 (0.003)	0.062* (0.036)	0.074 (0.049)	116	3,246	0.38
Services are provided to victims of violence by the Violence Prevention and Supervision Centers (VPSC).	0.003 (0.002)	0.055*** (0.020)	0.049** (0.021)	166	4,280	0.12
The victims of violence are provided temporary financial support.	-0.004 (0.003)	0.055 (0.039)	0.051 (0.039)	138	3,785	0.48
The perpetrator is prevented from selling the shared home.	0.003 (0.003)	0.062 (0.040)	0.076 (0.052)	111	3,096	0.43
Awareness of new laws index	0.012*** (0.003)	0.110*** (0.036)	0.102*** (0.038)	137	3,765	-0.01

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE 3: EFFECTS OF EDUCATION ON SOURCES OF INFORMATION ABOUT NEW LAWS AND SERVICES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Heard about the new laws and services from the following sources:						
TV	-0.000	-0.035	-0.046	114	3,165	-0.01
	(0.005)	(0.058)	(0.079)			
Newspapers, journals, or books	0.079***	0.136**	0.162*	116	3,250	0.05
	(0.005)	(0.069)	(0.089)			
Friends and family (social networks)	-0.018***	-0.031	-0.031	134	3,709	0.01
	(0.005)	(0.062)	(0.060)			
Formal institutions	0.039***	-0.022	-0.025	120	3,331	0.02
	(0.004)	(0.037)	(0.045)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. See Table 2 for table notes.

TABLE 4: EFFECTS OF EDUCATION ON DOMESTIC VIOLENCE AND DIVORCE OUTCOMES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Physical violence index	-0.020*** (0.006)	-0.096 (0.077)	-0.125 (0.106)	105	2,647	0.05
Sexual violence index	-0.024*** (0.005)	-0.123 (0.076)	-0.163 (0.112)	107	2,718	0.03
Psychological violence index	-0.023*** (0.005)	-0.052 (0.067)	-0.058 (0.071)	141	3,350	0.03
Financial control behavior	-0.019*** (0.004)	-0.026 (0.066)	-0.035 (0.089)	119	2,884	0.00
Overall domestic violence index	-0.022*** (0.003)	-0.072 (0.045)	-0.087 (0.057)	121	2,995	-0.00
Ever left home	0.002 (0.007)	0.090 (0.072)	0.245 (0.390)	88	648	0.37
Ever divorced	-0.002 (0.001)	-0.011 (0.017)	-0.016 (0.026)	94	2,646	0.05
Second marriage	-0.004*** (0.001)	-0.005 (0.010)	-0.004 (0.009)	157	4,172	0.03

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. See Table 2 for table notes.

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Appendix A   List of Variables

Outcome Variables:

- Years of schooling: Number of years of school that the respondent completed.

- Completed Junior High School: A dummy variable equal to one if the respondent completed junior high school or above (i.e., completed at least 8 years of schooling).

- Completed high school: A dummy variable equal to one if the respondent completed high school or above (i.e., completed at least 11 years of schooling).

- Completed primary school: A dummy variable equal to one if the respondent completed primary school or above (i.e., completed at least 5 years of schooling).

- Information about pre-existing laws and services: A set of seven dummy variables, each equal to one if the respondent reported that she has heard about a particular pre-existing law or service. These include the following: (i) men and women must be at least 17 years old to get married, (ii) it is illegal for parents and other relatives to allow their children below the age of 15 to be married, and doing so is punishable by imprisonment; (iii) it is illegal to have a religious marriage before official marriage; (iv) it is illegal for a man to marry more than one woman; (v) the perpetrator is kept away from the common residence to protect the victims of violence; (vi) the perpetrator is prevented from approaching or contacting the protected victims of violence; and (vii) if the victim's life is in danger, the victim is provided temporary protection services.

- Awareness of pre-existing laws index: A z-score constructed by averaging the z-scores from each of the 7 information indicators based on dummy variables that equal one if the respondent reports that she has heard about the following pre-existing laws and services: (i) men and women must be at least 17 years old to get married, (ii) it is illegal for parents and other relatives to allow their children below the age of 15 to be married, and doing so is punishable by imprisonment; (iii) it is illegal to have a religious marriage before official marriage; (iv) it is illegal for a man to marry more than one woman; (v) the perpetrator is kept away from the common residence to protect the victims of violence; (vi) the perpetrator is prevented from approaching or contacting the protected victims of violence; and (vii) if the victim's life is in danger, the victim is provided temporary protection services.

- Information about new laws and services: A set of nine dummy variables, each equal to one if the respondent reported that she has heard about a particular new law or

service. These include the following: (i) it is illegal for a man to have sex with his wife without her consent; (ii) a woman is not required to have her husband's permission to work outside the home; (iii) after spouses get divorced, they share the property that they obtained during their marriage; (iv) shelters are provided for people who experienced domestic violence and their children; (v) if the perpetrator is addicted to alcohol or drugs, he is provided with diagnosis and treatment opportunities; (vi) the victim of violence is provided with childcare services; (vii) services are provided to victims of violence by the Violence Prevention and Supervision Centers (VPSC); (viii) the victims of violence are provided temporary financial support; and (ix) the perpetrator is prevented from selling the shared home.

- Awareness of new laws index: A z-score constructed by averaging the z-scores from each of the 9 information indicators based on dummy variables equal to one if the respondent reports that she has heard about the following new laws and services: (i) it is illegal for a man to have sex with his wife without her consent; (ii) a woman is not required to have her husband's permission to work outside the home; (iii) after spouses get divorced, they share the property that they obtained during their marriage; (iv) shelters are provided for people who experienced domestic violence and their children; (v) if the perpetrator is addicted to alcohol or drugs, he is provided with diagnosis and treatment opportunities; (vi) the victim of violence is provided with childcare services; (vii) services are provided to victims of violence by the Violence Prevention and Supervision Centers (VPSC); (viii) the victims of violence are provided temporary financial support; and (ix) the perpetrator is prevented from selling the shared home.

- Heard about new laws from TV index: A z-score constructed by averaging the z-scores from two information indicators including a dummy variable equal to one if the respondent reports that she has heard about the new laws from TV and a dummy variable equal to one if the respondent reports that she has heard about the new services from TV.

- Heard about new laws from newspapers, journals, or books index: A z-score constructed by averaging the z-scores from two information indicators including a dummy variable equal to one if the respondent reports that she has heard about the new laws from newspapers, journals, or books and a dummy variable equal to one if the respondent reports that she has heard about the new services from newspapers, journals, or books.

- Heard about new laws from friends and family (social networks) index: A z-score constructed by averaging the z-scores from two information indicators including a dummy variable equal to one if the respondent reports that she has heard about the new laws from friends and family and a dummy variable equal to one if the

respondent reports that she has heard about the new services from friends and family.

- Heard about new laws from formal institutions index: A z-score constructed by averaging the z-scores from six information indicators based on dummy variables equal to one if the respondent reports that she has heard about the new laws from public institutions, schools, or non-governmental institutions, and dummy variables equal to one if the respondent reports that she has heard about the new services from public institutions, schools, or non-governmental institutions.

- Physical violence index: A z-score constructed by averaging the z-scores from each of the 6 physical violence indicators based on dummy variables that equal one if the respondent reports that she experienced within the last 12 months intimate partner violence acts of (i) slapping or throwing an object that would hurt; (ii) pushing, shoving, or hair pulling; (iii) hitting with his fist or in a way that hurts; (iv) kicking, pushing on the ground, or beating; and (v) choking or burning.

- Sexual violence index: A z-score constructed by averaging the z-scores from each of the 3 sexual violence indicators based on dummy variables that equal one if the respondent reports that she experienced within the last 12 months intimate partner violence in the form of (i) forced sexual acts, (ii) forced sexual relations because of a fear of what the partner would do otherwise, and (iii) humiliating sexual acts.

- Psychological violence index: A z-score constructed by averaging the z-scores from each of the following indicators based on dummy variables that equal one if the respondent reports that she experienced within the last 12 months intimate partner violence acts of (i) insulting, (ii) humiliating, and (iii) scaring or threatening.

- Financial control index: A z-score constructed by averaging the z-scores from two of the financial control behaviors including dummy variables that equal one if the respondent reports that she experienced within the last 12 months the following behaviors from her intimate partner: (i) taking income from her despite her disapproval and (ii) refusing to give her money for household spending.

- Overall domestic violence index: A z-score constructed by averaging the z-scores from the indicator variables that equal one if the respondent reports that she experienced within the last 12 months the following acts from her partner: (i) slapping or throwing an object that would hurt; (ii) pushing, shoving, or hair pulling; (iii) hitting with his fist or in a way that hurts; (iv) kicking, pushing on the ground, or beating; (v) choking or burning; (vi) forced sexual acts, (vii) forced sexual relations because of a fear of what the partner would do otherwise, (viii) humiliating sexual acts, (ix) insulting, (x) humiliating, (xi) scaring or threatening, (xii) taking income

from her despite her disapproval, and (xiii) refusing to give her money for household spending.

- Ever had a relationship: A dummy variable equal to one if the respondent has ever had a relationship (e.g., had a boyfriend, engaged, married).

- Ever married: A dummy variable equal to one if the respondent has ever been married.

- Ever left home: A dummy variable equal to one if the respondent has ever left home. The variable is only available for women who have ever experienced physical violence from their partners.

- Ever divorced: A dummy variable equal to one if the respondent has ever been divorced.

- Second marriage: A dummy variable equal to one if the respondent has had a second marriage.

- Gender role and domestic violence attitudes: A set of seven dummy variables, each equal to one if the respondent reported that she agrees with a statement on gender roles or domestic violence. The statements are as follows: (i) a woman should not argue with partner if she disagrees with him, (ii) a woman should be able to spend her money as she wishes, (iii) men can beat their partners in certain situations, (iv) it may be necessary to beat children for discipline, (v) men should also do housework such as cooking and cleaning, (vi) men in the family are responsible for a woman's behavior, and (vii) it is a woman's duty to have sexual intercourse with her husband.

- Gender attitudes index: A z-score constructed by averaging the z-scores of seven attitude dummy variables, which are calculated by using the mean and standard deviation of the variable. These dummy variables take the value of one if the respondent disagrees with the following statements–a woman should not argue with her partner if she disagrees with him, men can beat their partners in certain situations, it may be necessary to beat children for discipline, men in the family are responsible for a woman's behavior, and it is a woman's duty to have sexual intercourse with her husband–and if the respondent agrees with the following statements–a woman should be able to spend her money as she wishes, and men should also do housework including cooking and cleaning.

- Employed: A dummy variable equal to one if the respondent was employed last week.

- Employed in services: A dummy variable equal to one if the respondent was employed in services last week.

- Social security: A dummy variable equal to one if the respondent had social security benefits from her job last week.

- Personal income index: A z-score constructed by averaging the z-scores of the income dummy variables, which are calculated by using the mean and standard deviation of the variable. These dummy variables take the value of one if the respondent earns a personal income from the following six sources: rent from owning land, rent from owning a house, income from owning a company or workplace, income from owning a vehicle, having money in the bank, and income from other asset ownership.

- Asset ownership index: A z-score constructed by averaging the z-scores of the asset ownership dummy variables, which are calculated by using the mean and standard deviation of the variable. These dummy variables take the value of one if the respondent's household owns the asset. The following assets are included: refrigerator, deep freezer, gas/electric oven, microwave oven, dishwasher, garbage dispenser, washing machine, drying machine, iron, vacuum cleaner, plasma TV (LCD), home theater, television, satellite TV, paid TV service, DVD/VCD player, cellphone, non-mobile telephone, laptop/tablet computer, desktop computer, internet, air conditioner, car, taxi/mini-bus/bus or other commercial vehicles, and tractor.

- Number of children: The number of children that the respondent has.

- Ever used contraceptive: a dummy variable equal to one if the respondent has ever used contraceptive methods.

- Ever given birth: a dummy variable equal to one if the respondent has ever given birth

- Partner disapproves contraception: a dummy variable equal to one if the partner disapproves of the use of contraception.

- Pregnancy age: The age of the respondent during her first pregnancy.

- Marriage age: The age of the respondent at the time of her first marriage.

- Husband's age: The age of the husband.

- Husband's religiosity index: A z-score calculated as an average of z-scores of partner's characteristics including a dummy variable that takes the value of one if the partner never drinks alcoholic beverages, a dummy variable that takes the value of one if the partner never gambles, a dummy variable that takes the value of one if the partner never uses narcotic drugs, and a dummy variable that takes the value of one if the partner never had an affair.

Covariates:

- Non-Turkish Speaker: A dummy variable equal to one if the respondent speaks a non-Turkish language as her primary language.

- Childhood region, rural: A dummy variable equal to one if the respondent lived in a rural village or district until she was 12 years old.

- Region dummies: Dummy variables for each of the 12 regions where the respondents lived until they were 12 years old.

Appendix B Overview of the Laws on Gender Equality and Domestic Violence in Turkey

B.1 The Laws on Gender Equality and Domestic Violence prior to the 2000s

Turkey was founded shortly after World War I (in 1923), and it adopted the Swiss civil code in 1926. The civil code replaced Islamic law, which had been in place during the Ottoman Empire. A wide range of gender inequalities tolerated under Islamic law were abolished. It became illegal for a man to marry more than one woman. Marriage was defined in secular terms, and it became illegal to have a religious marriage before having an official government-authorized marriage. The unequal share of inheritance for women and unilateral divorce for men were eliminated. The rights of women regarding custody of children were expanded (Arat 2010; Ulusan 2002). The legal age of marriage was raised to 17. However, parents and other relatives who had custody of children could give permission for their children to get married after the age of 15. Any marriages before the age of 15 were declared illegal and punishable by imprisonment. While several proposals were made to amend the civil code in the 1970s and early 1980s, particularly the articles that recognized the husband as the head of the household and the wife largely as a dependent, these proposals failed to become law under the governments in power during this period (Arat 2010).

The political movement for achieving gender equality in Turkey began to gain momentum in the 1980s and demanded that the government take action against violence against women. In 1986, Turkey signed the United Nations' Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW). This led to the establishment of the Consultative Board of Policies for Women within the State Planning Organization in 1987 and the Directorate General of Status and Problems of Women in 1990 as key institutions for designing policies to address gender inequality and domestic violence in Turkey (Yuksel-Kaptanoglu and Tarim 2015).

The first major law introduced to combat violence against women in Turkey was Law No. 4320, the Law to Protect the Family, which was enacted in 1998. The law consisted of two main articles. The first stated that a perpetrator of violence is forbidden to approach or contact the victims of that violence. This included the point that the perpetrator was required to leave the residence shared with the spouse or children if such a residence exists or he shall not approach the residence occupied by the spouse and children or their work place. The second article asserted that the victim is provided temporary protection service by the police, particularly if there is evidence that the victim's life might be in danger. The law further stated that the

protection order is entrusted to the Public Prosecutor by the court.[20] One limitation of the law highlighted by critics is that it applied only to married women because its ultimate aim was to protect family relations. Divorced victims of violence, or victims of violence prior to marriage, could not take advantage of the law.

B.2 The Laws on Gender Equality and Domestic Violence after the 2000s

Since the early 2000s, Turkey has made substantial changes in laws pertaining to gender equality. Part of the motivation to introduce these changes originated from Turkey's negotiations on accession to the EU (Aldikacti-Marshall 2008). The European Commission has included gender equality as a human right within the broader category of political criteria that must be fulfilled as a conditionality by candidate states to be considered for EU membership. The Turkish government sought to accelerate the membership process by making several amendments to Turkey's civil code, penal code, and labor law as well as its constitution. Women's NGOs were also actively involved in voicing their concerns through signed petitions, press releases, and visits to members of parliament during the amendment process.

The Turkish parliament introduced major changes to the civil code on November 22, 2001. The legal age for marriage was raised to 18 for both sexes. The provision stating that the husband was the head of the family was eliminated, which implies that the wife has gained the legal right to participate in intrahousehold decisions including schooling decisions for children, residential choice decisions, and decisions to acquire assets. One of the major amendments to the civil code was that after divorce women are now entitled to receive half of the assets obtained by the couple during marriage (Aldikacti-Marshall 2008). Previously, each spouse received the assets to which he or she had ownership rights. Given that most assets were owned by men, as fewer than one-third of women earn income in Turkey, previously divorced women had no rights to assets obtained during marriage. This amendment ensured that spouses equally share the assets acquired during marriage. Another major amendment to the civil code was the elimination of the provision that requires married women to have their husband's permission to work outside the home (Ulusan 2002). Furthermore, the parliament also amended the labor law in 2003 to comply with EU directives on providing gender equality at work. Pregnant women were provided with the right to take 16 weeks of paid maternity leave and an additional six months of unpaid leave after delivery.

The reforms to the civil code and labor law were followed by significant amendments to the penal code, which were adopted on September 26, 2004, and took effect

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[20]Resmi Gazete; Saturday, January 17, 1998.

on June 1, 2005. The sexual violence against women was included within the category of "crimes against an individual" instead of "crimes against society". Article 102 of the penal code extended the definition of rape to include rape within marriage and punished the latter with seven to 12 years in prison. The code also prevents any way of avoiding legal ramifications of rape by way of marriage. Previously, a male rapist would receive little or no punishment if he agreed to marry the victim. The revised code eliminated this option. Women were also given the right to abort a pregnancy up to 20 weeks if it had occurred due to rape. Article 105 of the penal code stipulates penalties for sexual harassment in the workplace against co-workers. Finally, Article 82 addressed the issue of honor killings by ruling that any murder case justified by traditions and customs would be penalized by life imprisonment (Aldikacti-Marshall 2008).

The constitution was also amended to state the principle of equality between men and women in several articles. Article 10, which asserts that everyone is equal under the law regardless of their language, race, color, sex, political opinion, philosophical stance, or religion, was revised in 2005 to include the following: "Women and men have equal rights and the state has the responsibility to ensure the implementation of these rights." Article 41, stating that "the family is the basis of Turkish society," was amended in 2001 to include that "family is based on equality among partners."

The enforcement of Law No. 4320, the Law to Protect the Family, had been rather limited until the establishment of family courts in 2003 and the publication of a public mandate by the Department of Justice to effectively enforce the law in 2006 (Yuksel-Kaptanoglu and Tarim 2015). These latter changes were again part of the reforms introduced to follow EU directives on gender equality in the 2000s. A major impetus in the struggle against domestic violence was provided by the Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence, also known as the Istanbul Convention, which was held in 2011 and became binding in 2012. The Istanbul Convention redefined domestic violence to include not only physical violence but also the sexual, psychological, and financial dimensions of violence and controlling behavior. It also formed a Group of Experts on Action against Violence against Women and Domestic Violence (GREVIO), which has published reports about states regarding whether they are fulfilling their commitments under the Istanbul Convention and acts as a mechanism of supervision under international law.

The Turkish parliament passed Law No. 6284, the Law to Protect Family and Prevent Violence against Women, on March 8, 2012. The law was designed to comply with the provisions of Istanbul Convention and improve the implementation of Law No. 4320. Unlike the previous law, Law No. 6284 covers all women, regardless of their marital status. One of the distinguishing features of the law is its focus on

the protection of victims against renewed violence by the perpetrators. The law authorizes police officers to issue a protection order as soon as the victim needs protection. Previously, the police could not take protective measures in the absence of reports from a family court or the public prosecutor. The law also brought increased penalties by stating that the perpetrators who violate a protection order will be immediately subject to three days of imprisonment.[21]

Another important article of Law No. 6284, Article 14, proposes the establishment of VPSCs. These institutions, established as a pilot in 14 cities, are intended to centrally direct resources to combat violence against women by working in tandem with the Department of Family and Social Policies. The new law also stipulates that the state provide shelters as accommodations for those who experience domestic violence and their children. In addition, Municipality Law No. 6360, which was passed in 2012, asserts that every metropolitan municipality and municipalities with populations greater than 100,000 are required to establish shelters for women and children (Yuksel-Kaptanoglu and Tarim 2015). The VPSCs have been working in close cooperation with the newly established shelters. Moreover, Law No. 6284 states that a victim of violence must be provided with childcare services, covering four months of day care or a maximum two months for those who have a job, to support the woman's integration into work life. The new law also provides temporary financial support to the victims of violence amounting to half of the net minimum wage.[22] Furthermore, the new law prevents the perpetrator from selling any shared home.[23] Finally, the new law provides diagnosis and treatment services to the perpetrator of violence if he is addicted to alcohol or drugs.

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[21]Resmi Gazete; Tuesday, March 20, 2012.

[22]Resmi Gazete; Tuesday, March 20, 2012.

[23]Even if the shared home is owned by the abuser, the family court can notify the land registration office that the house is shared by the family, in which case the abuser can no longer sell the house as long as the victim is opposed to the sale.

Appendix C   Summary Statistics

TABLE A1: SUMMARY STATISTICS FOR 17- TO 37-YEAR-OLD WOMEN

	Mean	S.D.	Min.	Max.	Obs.
Panel A: Education					
Years of schooling	8.30	4.04	0.00	21.00	3328
Completed junior high school	0.58	0.49	0.00	1.00	3329
Completed high school	0.36	0.48	0.00	1.00	3329
Completed primary school	0.92	0.27	0.00	1.00	3329
Panel B: Information about Pre-existing Laws and Services					
Men and women must be at least 17 years old to get married.	0.87	0.34	0.00	1.00	3329
It is illegal for parents and other relatives to allow their children below the age of 15 to be married, and doing so is punishable by imprisonment.	0.93	0.26	0.00	1.00	3329
It is illegal to have a religious marriage before official marriage.	0.83	0.38	0.00	1.00	3329
It is illegal for a man to marry more than one woman.	0.84	0.37	0.00	1.00	3329
The perpetrator is kept away from the common residence to protect the victims of violence.	0.88	0.33	0.00	1.00	3327
The perpetrator is prevented from approaching or contacting the protected victims of violence.	0.78	0.42	0.00	1.00	3325
If the victim's life is in danger, the victim is provided temporary protection services.	0.86	0.35	0.00	1.00	3326
Awareness of pre-existing laws index	0.00	0.58	-2.50	0.41	3329
Panel C: Information about New Laws and Services					
It is illegal for a man to have sex with his wife without her consent.	0.70	0.46	0.00	1.00	3329
A woman is not required to have her husband's permission to work outside the home.	0.42	0.49	0.00	1.00	3329
After spouses get divorced, they share the property that they obtained during their marriage.	0.91	0.29	0.00	1.00	3329
Shelters are provided for people who experienced domestic violence and their children.	0.86	0.35	0.00	1.00	3327
If the perpetrator is addicted to alcohol or drugs, he is provided with diagnosis and treatment opportunities.	0.59	0.49	0.00	1.00	3321
The victim of violence is provided with childcare services.	0.38	0.49	0.00	1.00	3325
Services are provided to victims of violence by the Violence Prevention and Supervision Centers (VPSC).	0.12	0.33	0.00	1.00	3329
The victims of violence are provided temporary financial support.	0.48	0.50	0.00	1.00	3326
The perpetrator is prevented from selling the shared home.	0.41	0.49	0.00	1.00	3323
Awareness of new laws index	-0.02	0.54	-1.35	1.04	3329
Panel D: Sources of Information about New Laws and Services					
Heard about new laws from TV index	-0.01	0.85	-2.66	0.39	3329
Heard about new laws from newspapers, journals, or books index	0.01	0.90	-0.43	2.34	3329
Heard about new laws from friends and family (social networks) index	0.01	0.85	-1.06	1.00	3329
Heard about new laws from formal institutions index	0.03	0.58	-0.23	5.80	3329
Panel E: Domestic Violence and Divorce Outcomes					
Physical violence index †	0.05	0.91	-0.23	5.45	2976
Sexual violence index †	0.02	0.85	-0.17	6.79	2977
Psychological violence index †	0.03	0.84	-0.42	2.62	2976
Financial control behavior †	0.00	0.86	-0.23	6.89	2890
Overall domestic violence index †	0.03	0.68	-0.24	5.13	2977
Ever left home ††	0.34	0.47	0.00	1.00	841
Ever divorced	0.05	0.22	0.00	1.00	3329
Second marriage	0.02	0.15	0.00	1.00	3329

Notes: The table presents the means, standard deviations, minimum values, maximum values, and number of observations from the 2014 National Survey on Domestic Violence against Women in Turkey. The sample includes women who were born within 118 months before or after January 1987. The variables with a † sign are available only for women who have had a relationship, and the variable with a †† sign is available for women who have faced physical violence from their partners. The variables are described in Appendix A.

Table A1 reports summary statistics on the major indicators of women from the 2014 NSDVW survey. We provide summary statistics for women between the ages of 17 and 37 because the estimated bandwidths in our local regression analyses fall into this range. Panel A indicates that the average years of schooling for this age group was 8.3. Approximately 58 percent of the women had completed junior high school, 36 percent had completed high school, and 92 percent had completed primary school. These figures are consistent with the overall pattern in Turkey where female educational attainment remains rather low.[24]

The laws and services concerning gender equality and the prevention of domestic violence can be categorized into two groups: (a) the pre-existing laws and services that date back to the foundation of Turkey and (b) the new laws and services that were introduced after the 2000s during Turkey's negotiations for EU membership. Section 2 provides detailed information on the several amendments introduced in these laws and the socio-political context during their introduction. Panel B of Table 1 presents descriptive statistics for women's knowledge of pre-existing laws and services. In particular, the respondents were asked whether they had heard about these laws and services. A large majority of the women reported that they had heard about the legal rules about marriage that have been in place for over eight decades. Moreover, 87 percent of the women had heard the legal rule that men and women must be at least 17 years old to get married. Similarly, 93 percent of the women had heard that it is illegal for parents and other relatives to allow their children below the age of 15 to be married and those parents or relatives would be penalized by prison time if such marriage were arranged. Moreover, 83 percent of the women had heard that it is illegal to have a religious marriage before an official one, and 84 percent were aware that the practice of polygamy is illegal. A large proportion of the women also reported that they had heard about the provisions of the earlier law designed to reduce domestic violence. In particular, 88 percent were aware of the legal rule that the perpetrator of violence is kept away from the common residence to protect the victims, and 78 percent had heard about the provision that the perpetrator is prevented from approaching or contacting the protected victims of violence in a broader sense. Similarly, 86 percent of the women were aware that the victim is provided temporary protection services, particularly when her life is in danger.

Panel C of Table A1 provides summary statistics of the women's knowledge of new laws and services related to gender equality and the prevention of domestic violence. Approximately 70 percent of the women reported that they were aware of the legal rule introduced in the 2005 Penal Code making it illegal for a man to have sex with his wife without her consent. A much lower proportion of the women – 42 percent

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[24]In our entire survey dataset, the female junior high school completion rate is 44 percent, the female high school completion rate is 27 percent, and the female primary school completion rate is 88 percent.

– reported that they had heard about the amendment in the 2001 Civil Code stating that a woman is not required to have her husband's permission to work outside the home. However, a large share of the women – 91 percent – were aware of another amendment of the same civil code, which asserts that spouses share the property that they obtained during their marriage if they get divorced. The overall awareness of legal rules introduced in the 2012 Law to Protect the Family and Prevent Domestic Violence tends to be lower, on average; however, it varies largely by indicator. For example, while 86 percent of the women reported that they had heard about the legal rule that shelters are provided for people who have experienced domestic violence and for their children, only 38 percent were aware of the provision that the victim of violence is provided with childcare services. Similarly, 48 percent were aware that victims of violence are provided with temporary financial support, and 41 percent had heard that the perpetrator is prevented from selling the shared home. Moreover, 59 percent were aware that if the perpetrator has alcohol addiction or a drug abuse problem, he is provided with diagnosis and treatment opportunities. Furthermore, a mere 12 percent had heard about one of the most distinguishing features of the 2012 Law, which stated that services are provided to the victims of violence by the VPSCs.[25]

Following Duflo et al. (2007), we aggregate information from different indicators of legal knowledge to create two indices of awareness related to pre-existing and new laws and services. This aggregation provides greater statistical power to identify effects in the same direction for a group of indicators that captures similar forms of information. We construct these indices by averaging the z-scores of the underlying measures of information.[26] Higher index values indicate higher levels of legal awareness.

Panel D of Table A1 reports summary statistics on the sources of information about new laws and services. The respondents were asked from which source of information they had heard about the new laws and services. Using the indicators on sources of information, we construct four summary indices capturing whether the respondent had heard about the new laws and services from (i) TV; (ii) newspapers, journals, or books; (iii) friends and family (social networks); and (iv) formal institutions (including both public and non-governmental institutions). Higher values of the indices indicate higher levels of awareness obtained from a particular source of information.

Finally, Panel E of Table A1 provides descriptive statistics on domestic violence and divorce-related outcomes. Using different sets of domestic violence measures, we create five summary indices from the averages of z-scores of indicators of exposure to

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[25]Section 2 provides detailed information about these new laws and services introduced in the post-2000 period.

[26]Please refer to Appendix A for the description of all indices used in the analysis.

domestic violence within the last 12 months in each dimension: a physical violence index, a sexual violence index, a psychological violence index, a financial control index, and an overall domestic violence index. While the first four measures capture a specific dimension of domestic violence, the last one is a composite one, reflecting the exposure to any dimension of domestic violence. Appendix A provides the formal definitions of these indices. Higher index values indicate higher levels of domestic violence. Panel E also indicates that 34 percent of the women who experienced physical violence from their partners have left home at least once. However, only five percent of the women have ever been divorced, and two percent of them have had a second marriage.

Appendix D Additional Figures and Tables

FIGURE A1: MCCRARY DENSITY TEST
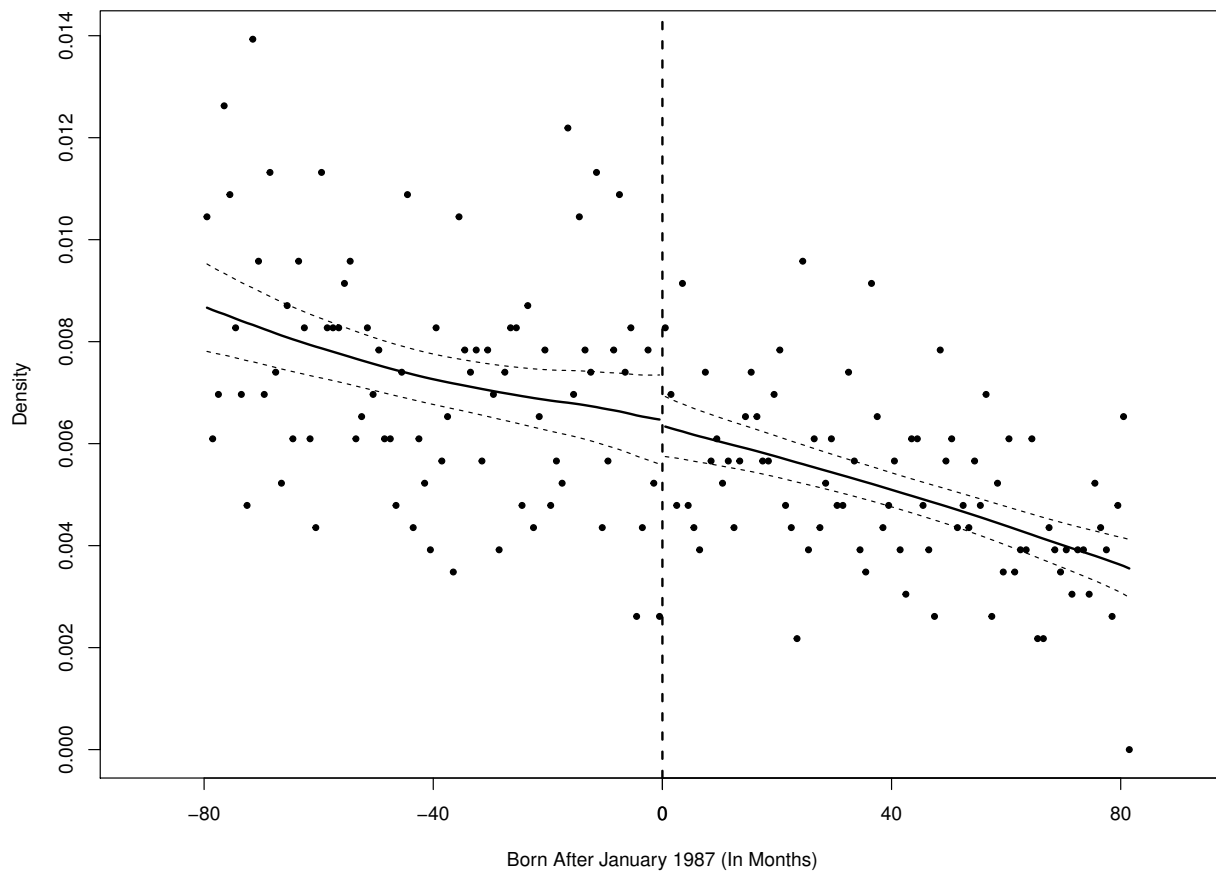
Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The graph shows the results of the McCrary test of whether there is a discontinuity in the density of the forcing variable, the month of birth.

FIGURE A2: RD TREATMENT EFFECTS ON RELATIONSHIP STATUS
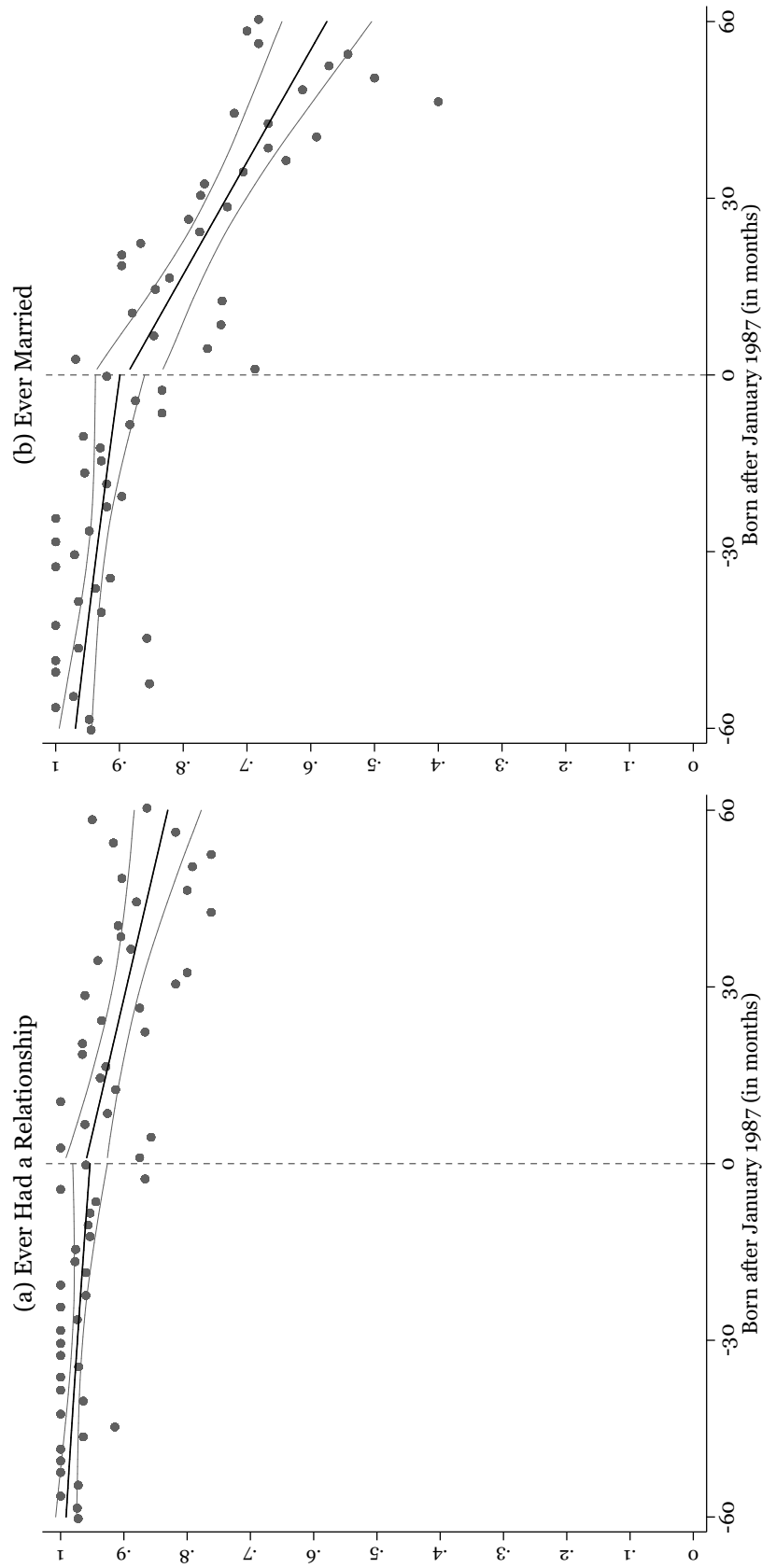
(a) Ever Had a Relationship

(b) Ever Married

Note: Data are from the 20214 National Survey on Domestic Violence against Women in Turkey. The sample includes all women born before and after 60 months around the cutoff point, January 1987. The figures plot a dummy variable equal to one of the respondent has ever had a relationship and a dummy variable equal to one if the respondent has ever been married in monthly bins. The vertical line in each graph represents the cutoff point, January 1987. Gray lines show 95 percent confidence intervals around the mean level.

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FIGURE A3: BALANCED COVARIATES FOR WOMEN WHO EVER HAD A RELATIONSHIP

(a) Childhood Region: West

(b) Childhood Region: South

(c) Childhood Region: Central

(d) Childhood Region: North

(e) Childhood Region: East

(f) Non-Turkish Speaker
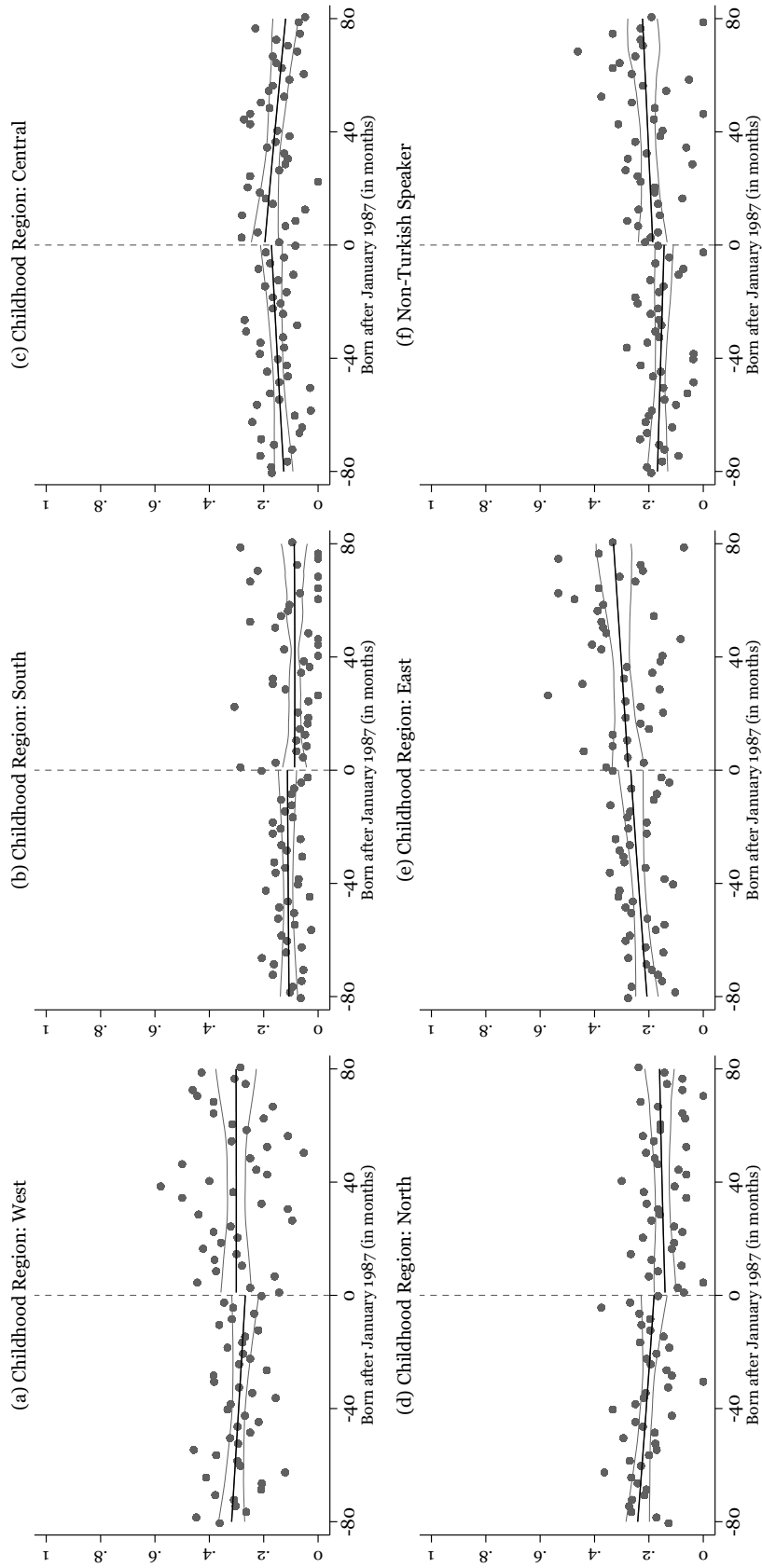
Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey for the sample of women who ever had a relationship. The figures plot predetermined covariates in monthly bins against the month-year of birth of being born in January 1987. The vertical line in each graph represents the cutoff point, January 1987. Gray lines show 95 percent confidence intervals around the mean level. Variable definitions are listed in Appendix A.

FIGURE A4: RD TREATMENT EFFECTS ON JUNIOR HIGH SCHOOL COMPLETION
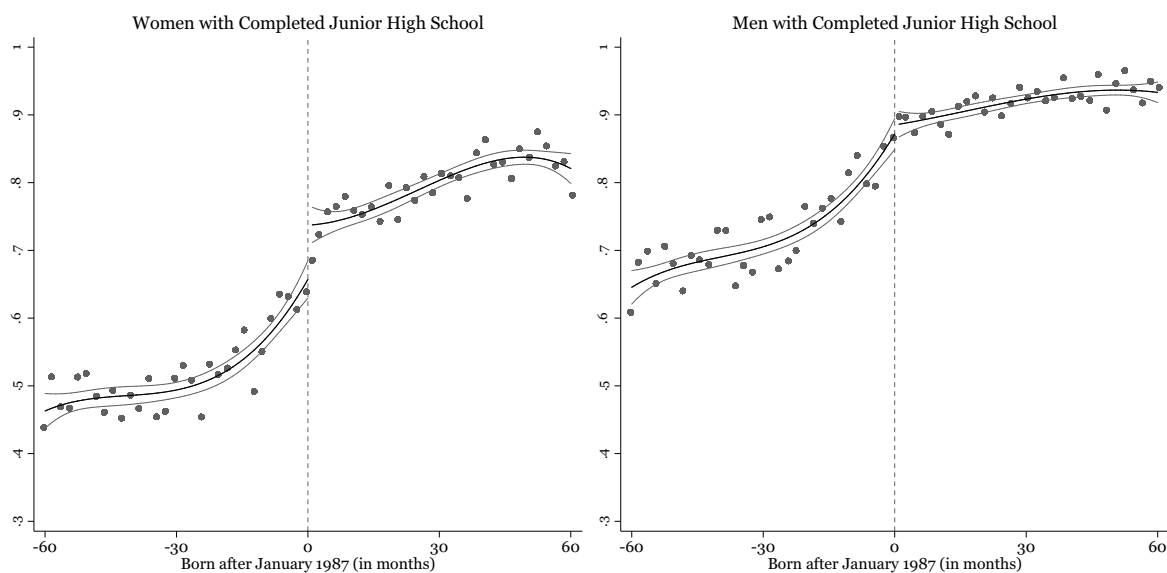
Note: Data are from the 2014 Household Labor Force Survey. Figures plot junior high school completion rates in monthly bins for women on the left and men on the right. Gray lines show 95 percent confidence intervals around the mean level.

FIGURE A5: RD TREATMENT EFFECTS ON JUNIOR HIGH SCHOOL COMPLETION, INFORMATION ABOUT LAWS, AND THEIR SOURCES
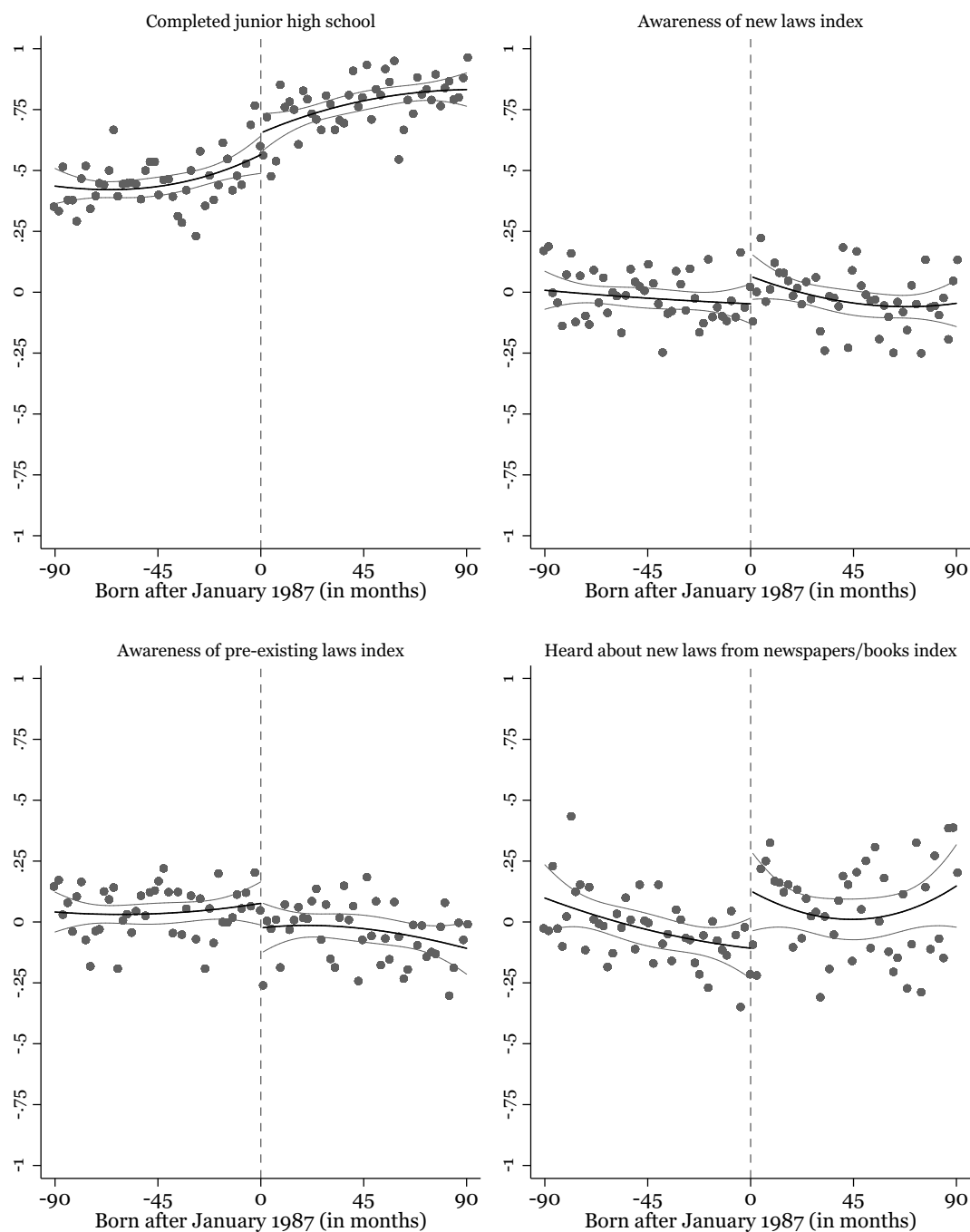
Note: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. Figures plot junior high school completion, awareness of new laws index, awareness of pre-existing laws index, and having heard about the new laws from newspapers/books index in monthly bins using a quadratic control function and a bandwidth of 89 months around the discontinuity. Gray lines show 95 percent confidence intervals around the mean level.

Outcome / statistic	(1) Linear RD	(2) Bandwidth	(3) N
Childhood region:			
West	0.032	113	3,206
	(0.044)		
South	-0.028	140	3,900
	(0.027)		
Central	0.020	123	3,482
	(0.026)		
North	-0.044*	157	4,223
	(0.023)		
East	0.031	106	2,992
	(0.034)		
Rural	-0.061	98	2,769
	(0.044)		
Non-Turkish speaker	0.036	113	3,189
	(0.028)		
Joint p-value	0.21		
Ever had a relationship	-0.003	68	1,909
	(0.021)		
Ever married	0.002	88	2,508
	(0.031)		

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. Column 1 reports reduced-form RD treatment effects of being born after January 1987 using an optimal bandwidth ĥ estimated by the Imbens and Kalyanaraman (2009) algorithm, with a linear control function in the month-year of birth on each side of the discontinuity. Column 2 reports the bandwidth, and column 3 reports the number of observations. The first seven variables are predetermined covariates, and the last two are relationship status. In particular, in the first seven rows of dependent variables are dummy variables equal to 1 if the respondent lived in western, southern, central, northern, eastern, or rural Turkey until the age of 12, respectively, and a dummy variable equal to one if the respondent's interview language was not Turkish. The relationship status variables include a dummy variable equal to one of the respondent had ever had a relationship and a dummy variable equal to one if the respondent had ever been married. The row entitled "joint p-value" provides the p-value from a SUR test of joint significance of the covariates in columns 1 to 7. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)
Outcome / statistic	Linear RD	Bandwidth	N
Childhood region:			
West	0.021	129	3182
	(0.042)		
South	-0.030	89	2356
	(0.036)		
Central	0.027	97	2527
	(0.030)		
North	-0.054*	116	2952
	(0.028)		
East	0.048	114	2883
	(0.034)		
Rural	-0.078*	92	2381
	(0.046)		
Non-Turkish speaker	0.037	116	2927
	(0.028)		
Joint p-value	0.18		

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The sample includes women who ever had a relationship. Column 1 reports reduced-form RD treatment effects of being born after January 1987 using an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman (2009) algorithm, with a linear control function in the month-year of birth on each side of the discontinuity. Column 2 reports the bandwidth, and column 3 reports the number of observations. The first seven variables are predetermined covariates, and the last two are relationship status. In particular, in the first seven rows of dependent variables are dummy variables equal to 1 if the respondent lived in western, southern, central, northern, eastern, or rural Turkey until the age of 12, respectively, and a dummy variable equal to one if the respondent's interview language was not Turkish. The relationship status variables include a dummy variable equal to one of the respondent had ever had a relationship and a dummy variable equal to one if the respondent had ever been married. The row entitled "joint p-value" provides the p-value from a SUR test of joint significance of the covariates in columns 1 to 7. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE A4: EFFECTS OF EDUCATION ON GENDER ATTITUDES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
A woman should not argue with partner if she disagrees with him.	-0.035*** (0.003)	-0.012 (0.042)	-0.014 (0.050)	119	3,276	0.35
A woman should be able to spend her money as she wills.	0.015*** (0.002)	-0.018 (0.034)	-0.016 (0.032)	137	3,726	0.7
Men can beat their partners in certain situations.	-0.025*** (0.003)	0.016 (0.041)	0.016 (0.041)	107	2,847	0.35
It may be necessary to beat children for discipline.	-0.019*** (0.002)	-0.012 (0.031)	-0.014 (0.037)	117	3,227	0.24
Men should also do housework, e.g., cooking and cleaning.	0.025*** (0.002)	-0.029 (0.035)	-0.034 (0.046)	105	2,937	0.74
Men in the family are responsible for a woman's behavior	-0.031*** (0.002)	0.012 (0.036)	0.014 (0.044)	122	3,337	0.36
It is a woman's duty to have sexual intercourse with her husband.	-0.003*** (0.001)	-0.012 (0.010)	-0.014 (0.012)	119	3,306	0.02
Gender attitudes index	0.048*** (0.002)	-0.007 (0.038)	-0.009 (0.046)	120	3,331	0.06

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Years of schooling		0.835*** (0.286)		118	3,276	8.49
Awareness of pre-existing laws index	0.023*** (0.003)	-0.026 (0.036)	-0.031 (0.046)	118	3,276	0.03
Awareness of new laws index	0.013*** (0.003)	0.114*** (0.039)	0.137** (0.058)	118	3,276	0.00
Heard about the new laws from TV index	0.000 (0.005)	-0.057 (0.057)	-0.068 (0.074)	118	3,276	-0.01
Heard about the new laws from newspapers, journals, or books index	0.079*** (0.005)	0.121* (0.069)	0.145* (0.087)	118	3,276	0.05
Heard about the new laws from friends and family index	-0.019*** (0.005)	-0.035 (0.067)	-0.041 (0.080)	118	3,276	0.01
Heard about the new laws from formal institutions index	0.039*** (0.004)	-0.014 (0.036)	-0.016 (0.045)	118	3,276	0.02
Physical violence index	-0.018*** (0.006)	-0.064 (0.073)	-0.082 (0.095)	118	2,926	0.05
Ever left home	-0.001 (0.006)	0.077 (0.065)	0.239 (0.405)	118	833	0.36
Ever divorced	-0.003** (0.001)	-0.001 (0.016)	-0.001 (0.019)	118	3,276	0.06
Second marriage	-0.004*** (0.001)	0.000 (0.012)	0.000 (0.014)	118	3,276	0.03

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The bandwidth is 118 months in all regressions, which is the optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman (2009) algorithm when completion of junior high school is the independent variable. Column 1 reports OLS results using years of schooling as the independent variable. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE A6: EFFECTS OF EDUCATION ON INFORMATION ABOUT LAWS AND THEIR SOURCES USING A QUADRATIC CONTROL FUNCTION

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Schooling		0.694**		89	2,492	8.48
		(0.331)				
Awareness about pre-existing laws index	0.023***	-0.024	-0.024	131	3,630	0.02
	(0.003)	(0.035)	(0.036)			
Awareness about new laws index	0.012***	0.112***	0.102***	137	3,765	-0.01
	(0.003)	(0.036)	(0.038)			
Heard about the new laws from TV index	-0.000	-0.035	-0.046	114	3,165	-0.01
	(0.005)	(0.058)	(0.079)			
Heard about the new laws from newspaper, journals, or books index	0.079***	0.135*	0.161*	116	3,250	0.05
	(0.005)	(0.069)	(0.089)			
Heard about the new laws from friends and family index	-0.018***	-0.029	-0.028	134	3,709	0.01
	(0.005)	(0.063)	(0.060)			
Heard about the new laws from formal institutions index	0.039***	-0.028	-0.033	120	3,331	0.02
	(0.004)	(0.037)	(0.047)			
Physical violence index	-0.020***	-0.092	-0.121	105	2,647	0.05
	(0.006)	(0.078)	(0.107)			
Ever left home	0.002	0.093	0.240	88	648	0.37
	(0.007)	(0.073)	(0.365)			
Ever divorced	-0.002	-0.012	-0.017	94	2,646	0.05
	(0.001)	(0.017)	(0.027)			
Second marriage	-0.004***	-0.005	-0.004	157	4,172	0.03
	(0.001)	(0.010)	(0.008)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Schooling		1.134**		85	1,396	7.42
		(0.451)				
Awareness about pre-existing laws index	0.023***	-0.045	-0.035	121	1,951	-0.01
	(0.004)	(0.056)	(0.045)			
Awareness about new laws index	0.012***	0.090*	0.062*	154	2,353	-0.04
	(0.004)	(0.052)	(0.037)			
Heard about the new laws from TV index	0.001	0.049	0.036	140	2,187	-0.02
	(0.007)	(0.081)	(0.060)			
Heard about the new laws from newspaper, journals, or books index	0.076***	0.049	0.033	153	2,339	-0.05
	(0.006)	(0.072)	(0.048)			
Heard about the new laws from friends and family index	-0.013**	-0.052	-0.036	155	2,353	0.01
	(0.006)	(0.084)	(0.058)			
Heard about the new laws from formal institutions index	0.035***	-0.118**	-0.118	93	1,528	-0.02
	(0.005)	(0.048)	(0.073)			
Physical violence index	-0.021***	-0.146	-0.131	99	1,475	0.07
	(0.007)	(0.100)	(0.100)			
Ever left home	-0.004	0.061	0.324	72	321	0.37
	(0.009)	(0.097)	(1.386)			
Ever divorced	-0.004***	-0.008	-0.007	114	1,850	0.05
	(0.001)	(0.019)	(0.018)			
Second marriage	-0.004***	-0.017	-0.012	142	2,207	0.03
	(0.001)	(0.016)	(0.013)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The sample is restricted to women raised in rural regions. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE A8: EFFECTS OF EDUCATION ON DOMESTIC VIOLENCE INDICATOR VARIABLES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Panel A: Physical violence indicators						
Slap or throw an object that would hurt	-0.008*** (0.002)	-0.020 (0.023)	-0.029 (0.032)	116	2866	0.08
Push, shove, or pull hair	-0.004** (0.002)	-0.008 (0.023)	-0.011 (0.031)	97	2496	0.07
Hit with his fist or in a way that hurts	-0.003** (0.001)	-0.016 (0.015)	-0.021 (0.021)	117	2903	0.04
Kick, pull on the ground, or beat	-0.003** (0.001)	-0.019 (0.014)	-0.026 (0.021)	107	2712	0.03
Choke or burn	-0.002** (0.001)	-0.013 (0.013)	-0.019 (0.019)	109	2768	0.02
Physical violence	-0.009*** (0.002)	-0.020 (0.026)	-0.028 (0.036)	96	2487	0.10
Panel B: Sexual violence indicators						
Forced sexual act	-0.004*** (0.001)	-0.012 (0.015)	-0.016 (0.020)	108	2754	0.03
Forced sex out to fear	-0.004*** (0.001)	-0.023 (0.016)	-0.027 (0.019)	125	3059	0.04
Humiliating sexual act	-0.008*** (0.002)	-0.026 (0.026)	-0.034 (0.032)	194	4030	0.10
Sexual violence	-0.006*** (0.001)	-0.030 (0.019)	-0.034 (0.021)	130	3171	0.05
Panel C: Psychological violence indicators						
Insult	-0.010*** (0.002)	-0.018 (0.029)	-0.020 (0.032)	143	3364	0.21
Humiliate	-0.008*** (0.002)	-0.026 (0.026)	-0.034 (0.032)	194	4030	0.10
Threaten or scare	-0.006*** (0.002)	-0.032 (0.029)	-0.042 (0.041)	94	2420	0.13
Psychological violence	-0.011*** (0.002)	-0.040 (0.037)	-0.048 (0.044)	121	2993	0.26
Panel D: Financial control indicators						
Take her income without her approval	-0.001* (0.001)	0.005 (0.013)	0.010 (0.027)	96	2191	0.02
Refuse to give money for household spending	-0.006*** (0.001)	-0.014 (0.017)	-0.021 (0.027)	98	2374	0.05
Financial control	-0.001* (0.001)	0.005 (0.013)	0.010 (0.027)	96	2191	0.02

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. See Table 2 for table notes.

TABLE A9: LEGAL AWARENESS, DOMESTIC VIOLENCE AND DIVORCE OUTCOMES

	(1) IV	(2) Bandwidth	(3) N	(4) Mean
Physical violence index	-0.845 (0.688)	105	2,647	0.05
Sexual violence index	-1.068 (0.698)	107	2,718	0.03
Psychological violence index	-0.525 (0.674)	141	3,350	0.03
Financial control behavior	-0.222 (0.568)	119	2,884	0.00
Ever left home	0.813 (0.893)	88	648	0.35
Ever divorced	-0.124 (0.193)	95	2,646	0.05
Second marriage	-0.046 (0.096)	157	4,172	0.03

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. Column (1) reports two-stage least squares (IV) RD treatment effects by using exposure to the reform as an instrument for the awareness about new laws index with a linear control function in the month-year of birth on each side of the discontinuity. See Table 2 for additional estimation details.

	(1) OLS	(2) RF	(3) IV
Panel A: Awareness of new laws index			
Schooling × Mother experienced violence	-0.011**	0.027	0.026
	(0.006)	(0.046)	(0.035)
Schooling	0.015***	0.101**	0.094**
	(0.003)	(0.040)	(0.037)
Mother experienced violence	0.058	-0.060**	-0.241
	(0.058)	(0.028)	(0.296)
Observations	3646	3646	3646
Mean	-0.02	-0.02	-0.02
Bandwidth	137	137	137
Panel B: Physical violence index			
Schooling × Mother experienced violence	-0.015	-0.021	-0.077
	(0.014)	(0.111)	(0.115)
Schooling	-0.016**	-0.096	-0.104
	(0.006)	(0.086)	(0.092)
Mother experienced violence	0.377***	0.268***	0.874
	(0.138)	(0.068)	(0.944)
Observations	2566	2566	2566
Mean	0.05	0.05	0.05
Bandwidth	104.71	104.71	104.71

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. The outcome variables are awareness of new laws index in Panel A and physical violence index in Panel B. The interaction variables are years of schooling of the respondent interacted with an indicator variable of whether the respondent's mother experienced domestic violence. Column 1 reports OLS results using years of schooling, a dummy for whether mother experienced violence, and their interaction as explanatory variables. Columns 2 and 3 report reduced-form and IV regression discontinuity estimates of being born after January 1987 and its interaction with a dummy for whether mother experienced violence, controlling for a dummy for whether mother experienced violence. See Table 2 for additional specification details.

TABLE A11: EFFECTS OF EDUCATION ON FERTILITY AND OTHER MARRIAGE MARKET OUTCOMES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Number of children	-0.144***	-0.113	-0.137	73	2,056	1.51
	(0.007)	(0.100)	(0.112)			
Ever used contraceptive	-0.002	-0.036	-0.042	69	1,647	0.80
	(0.003)	(0.046)	(0.057)			
Ever given birth	-0.005***	-0.021	-0.027	88	2,467	0.96
	(0.001)	(0.019)	(0.025)			
Partner disapproves contraception	-0.001	-0.035	-0.051	94	2,205	0.08
	(0.002)	(0.026)	(0.043)			
Pregnancy age	0.441***	0.183	0.442	121	2,481	21.48
	(0.025)	(0.253)	(0.600)			
Marriage age	0.386***	0.307	0.635	36	922	21.36
	(0.029)	(0.435)	(0.902)			
Husband's age	0.310***	0.501	0.781	131	2,753	25.28
	(0.033)	(0.361)	(0.630)			
Husband's religiosity index	-0.001	0.009	0.014	92	2,372	-0.01
	(0.005)	(0.067)	(0.101)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE A12: EFFECTS OF EDUCATION ON LABOR MARKET OUTCOMES

	(1) OLS	(2) RF	(3) IV	(4) Bandwidth	(5) N	(6) Mean
Employed	0.021***	0.013	0.012	198	4,675	0.24
	(0.002)	(0.027)	(0.023)			
Employed in services	0.028***	0.014	0.012	143	3,905	0.18
	(0.002)	(0.029)	(0.024)			
Social security	0.029***	0.007	0.006	136	3,731	0.15
	(0.002)	(0.025)	(0.023)			
Personal income index	0.020***	-0.061	-0.080	99	2,793	-0.06
	(0.003)	(0.040)	(0.068)			
Asset ownership index	0.016*	0.056	0.068	74	2,056	0.06
	(0.008)	(0.050)	(0.065)			

Notes: Data are from the 2014 National Survey on Domestic Violence against Women in Turkey. The optimal bandwidth is estimated by using the Imbens and Kalyanaraman (2009) algorithm. Column 1 reports OLS results using years of schooling as the independent variable for an optimal bandwidth $\hat{h}$ estimated by the Imbens and Kalyanaraman algorithm. Columns 2 and 3 report reduced-form (RF) RD treatment effects and two-stage least-squares (IV) RD treatment effects (by using treatment as an instrument for years of schooling) of being born after January 1987 with a linear control function in the month-year of birth on each side of the discontinuity. The variables are described in Appendix A. All specifications control for a dummy variable for whether the respondent grew up in a rural location, a dummy variable for whether the respondent's mother tongue is not Turkish, month-of-birth fixed effects, region fixed effects, and interactions of region fixed effects with an indicator of rural regions. Standard errors are clustered at the month-year cohort level. Standard errors are clustered at the month-year cohort level. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.