

# Hang Up on Stereotypes: Domestic Violence and Anti-Abuse Helpline Campaign

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## Abstract

We estimate the consequences of a Government-led anti-domestic-abuse campaign launched in the midst of the covid-19 pandemic on the number of calls to the Italian domestic violence helpline. In the week after the start of the campaign, we document a two-fold increase in the number of calls, which keep increasing throughout the lock-down. There is no evidence that the surge in the number of calls is associated with past levels of violence. Rather, we show that the effectiveness of the media campaign is hindered in areas where gender stereotypes are stronger, even when economic factors are accounted for. Policy-makers should then intensify efforts to break down gender stereotypes to successfully increase domestic violence reporting.

**Keywords:** Domestic violence; Welfare policy; Gender stereotypes; Covid-19.

**JEL codes:** I18; I38; J12.

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# 1 Introduction

According to the World Health Organisation, one in three women will experience physical and/or sexual violence at some point in her life. The vast majority of violent acts against women are perpetrated by current or former intimate partners.<sup>1</sup> Consequences are far-reaching, as they affect both victims and their families in terms of worse physical and mental health (Ellsberg et al., 2008) and labour market outcomes (Sabia et al., 2013), in the short- and the long-run.

With the occurring of the covid-19 pandemic, Government authorities and NGOs across the world have promptly flagged that containment measures designed to protect people from the contagion, while successfully “flattening the curve” (Hsiang et al., 2020), might have exacerbated this phenomenon.<sup>2</sup> Women are likely to be those that will bear most of the costs of the crisis and the surge in domestic violence simultaneously (Alon et al., 2020). On these grounds, the United Nations have urged governments to take action against this shadow pandemic of violence (UN Women, 2020).

There are different potential reasons behind the expected rise in domestic violence. Shedding light on these drivers is decisive for policy-makers that aim at implementing new policies or reinforcing the ones currently in place. Gelles & Straus (1979) and Finkelhor et al. (1983) find that domestic violence increases with social isolation, which reduces the cost of violence by trapping women inside their home with their abuser. Other mechanisms point to a decrease in the bargaining power for women (Anderberg et al., 2016; Aizer, 2010). These triggers are likely to be exacerbated by quarantine measures. Police statistics on homicides indicate the likely increase in domestic violence during the pandemic in Italy. The fraction of women killed out of the total number of murders in the period January–May increased from 32% in 2019 to 48% in 2020. A similar pattern exists among homicides committed within the household, which increased from 57% in 2019 to 75% in 2020.<sup>3</sup>

At the same time, shelter-in-place orders are likely to discourage reporting of domestic abuse. The reduction of external contacts and the prolonged time shared in domestic spaces with a violent partner could prevent women from seeking help. Official figures on domestic violence reporting indicate a 50% drop in charges for domestic abuse. Over the first 22 days of March, “only” 652 episodes were reported to the police compared to

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<sup>1</sup> <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>

<sup>2</sup> In the Chinese province of Hubei, cases of domestic violence in February 2020 were three times higher than in the same month of 2019. See <https://www.theguardian.com/society/2020/mar/28/lockdowns-world-rise-domestic-violence>.

<sup>3</sup> See the Parliamentary Commission of Inquiry into Femicide at <http://www.senato.it/service/PDF/PDFServer/DF/352661.pdf>.

1,157 in the same period of 2019. However, this does not necessarily imply that domestic violence against women decreased during the lock-down. The decreased number of crimes reported might be interpreted as a signal of the increased difficulties that women face in seeking help due to greater control exerted by their partners.

Our study contributes to the rather scant economics literature on domestic violence.<sup>4</sup> We focus on the impact of an anti-abuse media campaign on the usage of a public helpline that offers support to victims of domestic violence. The campaign was carried out in Italy, the first country to enact a nation-wide lock-down on March 9th, 2020. Solicited by activists and the civil society, on March 23th the Italian government launched a campaign against domestic violence called *Libera puoi* (“You can be free”), massively advertised for 10 days via television, social media, and the press. The campaign aimed at promoting the public free-toll 1522 helpline, which provides support to individuals suffering from abuse from their partners.<sup>5</sup> The helpline offers victims counseling, and information on local authorities, health centers, and shelters. These services are especially relevant considering that domestic abuse is usually reported to the police once victims are in a safe place.

We begin by analysing the effectiveness of the media campaign on the number of calls received by the 1522 helpline. We compare calls received in 2020 and 2019 using an event-study analysis with daily national data. We observe that the number of abuses reported via the 1522 helpline increases by about 200% in the first week and by almost 500% in the fourth week since the launch of the campaign, in comparison to pre-crisis averages. Importantly, we do not detect any increase in calls corresponding to the start of the containment measures in the second week of March. The spike registered on the exact date of the launch of the campaign allows us to rule out a pure lock-down effect.

Exploiting unique province-level data on calls to 1522, we then investigate the existence of heterogeneous effects of the campaign over several dimensions. This allows us to uncover some relevant drivers of domestic violence reporting. Our estimates suggest that the usage of the helpline increase disproportionately more in areas with a larger number of

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<sup>4</sup> In previous contributions, [Aizer & Dal Bo \(2009\)](#) find evidence that policies forbidding to drop charges when prosecutions are initiated yield an increase in emergency calls reporting abuse and in the number of men arrested for domestic violence. Conversely, [Iyengar \(2009\)](#) estimate that laws requiring the arrest of domestic abusers lead to a rise in intimate partner homicides by about 60%, which is compatible with both an increase in reprisals by abusers after they have been arrested and a decrease in the reporting rates from the victims. Other studies find that domestic violence is positively associated to higher levels of gender wage gap ([Aizer, 2010](#)), disappointment from unexpected loss ([Card & Dahl, 2011](#)) and alcohol consumption ([Duailibi et al., 2007](#); [Livingston, 2011](#)). The effects of ruling and law enforcement interventions on domestic violence have also been assessed by [Stevenson & Wolfers \(2006\)](#), [Miller & Segal \(2019\)](#) and [Amuedo-Dorantes & Deza \(2019\)](#).

<sup>5</sup> The 1522 helpline was created in 2006 and is available 24/7 in five languages. The services offered also include live chats with operators via the official website or an app for smartphones.

charges filed for sexual violence per 100,000 inhabitants. At the same time, we find no differential effect when looking at the incidence of homicides perpetrated on women, for which occurrence is hardly under-reported. Further, in communities where autonomy and empowerment of women (measured as female employment rate and the share of women holding office in local governments, respectively) are weaker, the campaign is less effective.

We reconcile these findings by looking at the role of gender stereotypes, a deeply rooted source of reporting that is seldom adequately considered by the economics literature. In her seminal contribution, [Heise \(1998\)](#) synthesizes the determinants of gender violence in a theoretical framework where the interaction between personal, household and community-level features (such as gender norms, acceptance of violence and male entitlement over women) all influence violent behaviour. Scholars usually identify a stronger association between domestic violence and measures of acceptance of violence against women or beliefs about men's sexual entitlement, followed by scales that measured respondents' views on gender roles ([McCarthy et al., 2018](#)). Examples may include the assumption that man and women are compelled rigid roles within the family and in their social relationships or the failure of the justice system to hold perpetrators of sexual violence accountable based on stereotypical views about women's appropriate sexual behaviour.<sup>6</sup> We claim that these mechanisms are also an important determinant of domestic violence reporting.

Indeed, [VanderEnde et al. \(2012\)](#) suggest that the existing literature lacks empirical contributions that associate domestic violence to measures of gender inequality and imbalances between men and women, especially with respect to aspects of family and social life. By exploiting the media campaign that promoted the usage of the 1522 during the covid-19 lock-down, we show that social norms and expectations on the role and prerogatives of women are associated with consistently lower reporting rates.

Trends in domestic violence during the covid-19 pandemic are also analysed by [Beland et al. \(2020\)](#). They find that women's perception of family stress and episodes of domestic violence in Canada is due to financial distress, rather than to working-from-home arrangements or labour market status. [Silverio-Murillo & Balmori de la Miyar \(2020\)](#) document instead of a negligible effect of the lock-down on police calls related to domestic abuse in Mexico, not detecting any evidence on the impact of concurrent prohibitions of alcohol sales. [Agüero \(2020\)](#) detects an increase in calls to the Peruvian anti-abuse helpline during the lock-down, the more so in areas where mobility was reduced the most. Finally, [Leslie & Wilson \(2020\)](#) document an increase in police calls due to domestic violence by

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<sup>6</sup> Indeed, scholars usually identify a stronger association between domestic violence and measures of acceptance of violence against women or beliefs about men's sexual entitlement, followed by scales that measured respondents' views on gender roles ([McCarthy et al., 2018](#)).

around 10% in 15 large US metropolitan areas in the midst of the covid-19 pandemic. Our study contributes to the rather scant economics literature on domestic violence.

We are among the first to investigate the effectiveness of anti-violence media campaigns on the usage of support helplines. The only other similar contribution ([Agüero, 2019](#)) finds that awareness campaigns in Peru are followed by an increase in calls to anti-abuse helpline, femicides, and intimate partner violence-related visits to health clinics. Moreover, our paper provides a novel contribution by highlighting that gender stereotypes play a crucial role in the reporting-decision process. Importantly, as in [Charles et al. \(2018\)](#), we can distinguish the effects of men’s stereotypical beliefs from those of women’s. Our results suggest that the reporting of domestic violence abuse decreases in those communities where women self-stereotypes about gender norms are stronger, while men’s beliefs play a negligible role in shaping the similar reporting rates.

To conclude, this paper also contributes to the literature on the impact of exposure to the media on family outcomes, and, in particular, on the part played by role models. Indeed, the 1522 media campaign featured some of the best-known Italian celebrities.<sup>7</sup> [Jensen & Oster \(2009\)](#) argue that the introduction of cable television in India brought about a reduction in the share of women believing that it is acceptable for a man to beat his wife and a rise in women’s economic autonomy.

The remainder of this paper is structured as follows. Section 2 describes the data source. Section 3 focuses on the impact of awareness campaign. Section 4 reports the heterogeneous effects of the campaign where we show the relevance of gender stereotypes. Section 5 concludes.

## 2 Data

### 2.1 Anti-Abuse Helpline Calls

We use a novel and unique database detailing administrative data calls to the 1522 anti-abuse helpline from the Italian Department for Equal Opportunities. Every year the helpline receives around 18,650 calls, the majority of which consists of requests for help from victims of stalking or violence or generic requests for information (around 7,500 and

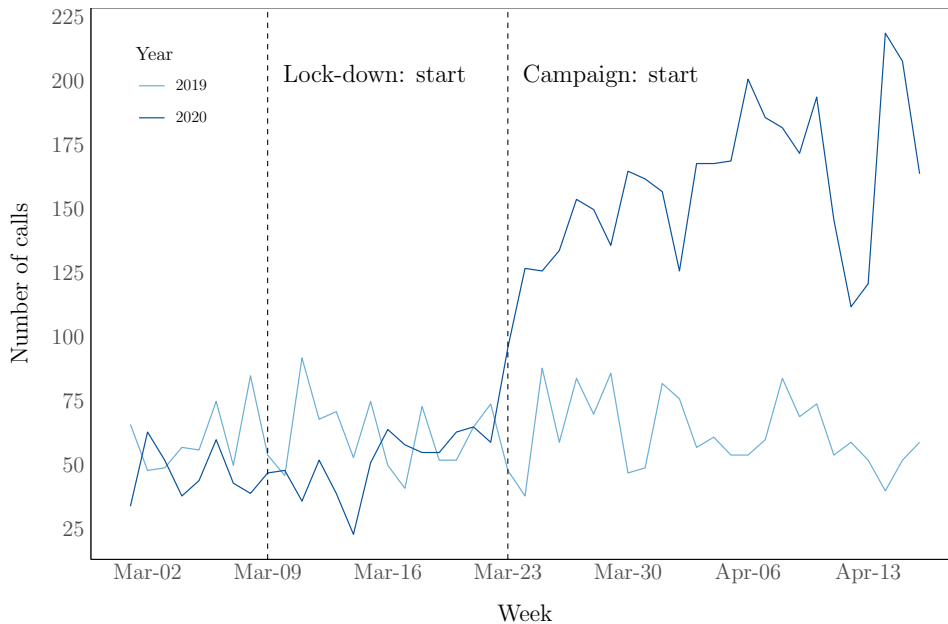
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<sup>7</sup> For instance, the diffusion of television and the lifestyles and role models portrayed by soap operas contributed to a decline in fertility rates ([La Ferrara et al., 2012](#)). The spread of channels showing *novelas* also led to an increase in divorce rates ([Chong & La Ferrara, 2009](#)). See [DellaVigna & La Ferrara \(2015\)](#) for a review of the literature on media effects.

9,000, respectively, see Table A.1).<sup>8</sup> The latter group potentially hide several attempts of first contact from people in need of support. More than 1,600 calls are also made to report violence that is perpetrated on a third person. Most of the calls come from Italian citizens, yet non-Italians account for 15% of the requests for help in case of violence or emergency. Victims and people in need of support are mainly females, although males account for 20% of the callers who report an episode of violence inflicted on someone else.

The data on calls is released in two different formats, both covering March 1st–April 16th for the years 2015–2020: (i) the number of calls at national level with daily frequency; and (ii) the total number of calls over the period disaggregated by province. Figure 1 displays the time-series of daily calls to the 1522 helpline over the period March 1st–April 16th for the years 2019 (light blue) and 2020 (dark blue). The plot anticipates our main finding on the success of the policy showing that, while the number of calls has been stable in 2019, a substantial increase follows the launch of the campaign on March 23rd 2020. In fact, on the first day after the beginning of the media campaign the number of calls doubles immediately and keeps on increasing until the end of our observational period.<sup>9</sup>

Figure 1: Daily calls to the 1522



Note: The graph reports the daily number of valid calls to the 1522 helpline over the period March 1st–April 16th in the years 2019 (light blue) and 2020 (dark blue).

<sup>8</sup> Averages computed over the years 2015-2019. Statistics by reason of call provided in Table A.1 are only available yearly and at national level.

<sup>9</sup> We cannot fully exclude that victims of abuse decide to call for help only after some time (i.e.

It is worth stressing that part of the success of the campaign is surely to be attributed to the unprecedented occurrence of the orders that forced citizens to stay at home. Since March 11th, 2.7 million people (11.5 percent of total employment) stopped working, while around 8 million switched to remote working arrangements. On March 21th, Italy’s Prime Minister announced a strengthening of the lock-down by shutting down all non-necessary businesses and industries starting from March 25th. Only groceries, pharmacies, basic necessities shops and industries defined as essential (about 49,4% of the total) were allowed to operate, along with remote work activities.<sup>10</sup> As a consequence, around 5.2 million additional workers remained at home (Barbieri et al., 2020). The decree also imposed restrictions on traveling, as it prohibited moving across municipalities, except for proven work needs, health reasons or reasons of absolute urgency.<sup>11</sup> The provision of the Decree was extended until May 4th. Yet, if the increase observed in the calls to the 1522 helpline was only due to the large number of people being forced to stay at home, probably we would have observed such rise on March 9th also in raw data.

In addition, as individuals found themselves confined into their homes, it is unsurprising that TV viewing has soared over this period. As a result, the pool of people reached by the media campaign promoting the use of has been unusually vast, contributing to the success of the campaign. Indeed, during the campaign period (March 23rd–April 2nd), about 5.25 million people watched the networks on which the campaign was on-air. Over same days in 2019, roughly 3.7 million people watched the same channels, i.e. a 41% increase from 2019 to 2020.

The media campaign successfully raised awareness on the availability of the 1522 helpline as also shown in Figure 2. The graph reports the daily relative search volume of Google queries for the 1522 helpline in the period January 13th–June 13th 2020. The search volume index slightly increases in the wake of the pandemic (i.e. beginning of March) and skyrockets immediately after the media campaign launch on March 23rd. The timeline also reveals that searches soon return to pre-pandemic levels, although it registers a second spike around May 4th, when containment measures were partially lifted and citizens were allowed to circulate within their region and meet relatives.

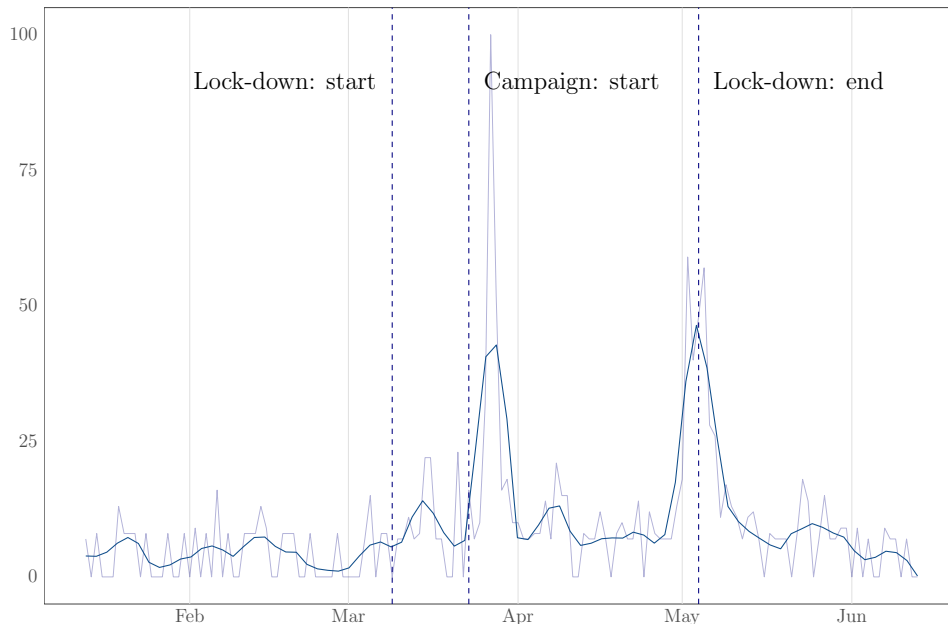
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accumulation effect). If that was the case, however, we would not expect to observe such a sharp increase in the number of calls to 1522 on March 23rd. The jump in the number of calls following the launch of the awareness campaign suggests that the message was successfully conveyed.

<sup>10</sup> See the Decree of the President of the Council of Ministers of March 22, 2020 at <http://www.protezionecivile.gov.it/web/guest/amministrazione-trasparente/provvedimenti/-/content-view/view/1235328>.

<sup>11</sup> Requesting help for domestic abuse was explicitly listed among these reasons in order to encourage victims to escape from violence.

Figure 2: Web searches for the 1522



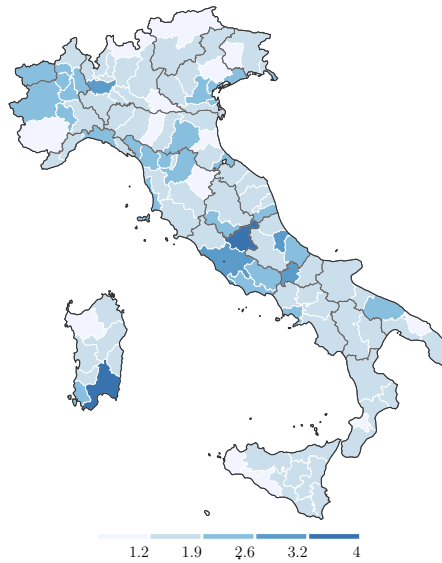
Note: Data are collected from Google Trends (<https://trends.google.com/>). The search for the query “1522” is normalised for its relative popularity on a 0 to 100 scale over the period January 13th–June 13th. See [https://support.google.com/trends/answer/4365533?hl=en&ref\\_topic=6248052](https://support.google.com/trends/answer/4365533?hl=en&ref_topic=6248052) for additional information. Vertical dashed lines represent: the day when full lock-down measures were implemented in Italy (March 9th); the day when the governmental campaign against domestic violence began (March 24th); and the day in which full lock-down measures were lifted (May 4th). The light blue line is the raw data; the dark blue line is its local polynomial regression fitting (i.e. LOESS) with  $\alpha = 0.1$ .

Different patterns arise in other European countries that have experienced similar lock-downs (Figure A.1). In France, searches for the national women’s helpline (3919) show a two-fold increase around the date of the lock-down (March 17th) before beginning a steady return to their pre-pandemic levels. In Spain, searches for the 016 helpline do not show any sizable change throughout the period considered. Italy displays a seven-fold increase in searches for the 1522 with respect to the pre-lock-down average value. Undoubtedly, the evidence is in line with a prominent role of media at fostering awareness on the anti-abuse helpline.

Next, Figure 3 provides the geographical distribution of the panel data of calls to the anti-abuse helpline. It depicts the average number of calls per 100,000 inhabitants made by victims of abuse in the period March 1st–April 16th over the years 2015–2020 by province. The map highlights substantial geographical heterogeneity across provinces and within regions. At first glance, Figure 3 shows weak evidence of its typical North-South divide. Venice (North), Rieti (Centre) and Cagliari (South) provinces are at the top of



Figure 3: Calls to the 1522 from victims



Note: The legend reports the average number of calls from victims per 100,000 inhabitants in the period March 1st–April 16th over the years 2015–2020 and for each of the 110 provinces considered. Grey and white lines signal regional and province boundaries, respectively.

the distribution. Conversely, Sondrio (North), Arezzo (Centre) and Catanzaro, Crotone and Vibo Valentia (South) rank at the bottom of the distribution.<sup>12</sup>

## 2.2 Violence Reporting and Gender Stereotypes

To understand the determinants of reporting, we match data on calls to various measures of socio-economic characteristics and acceptance of gender stereotypes at the provincial and regional levels. We use two measures of women’s economic autonomy and empowerment, and two pertaining to violent crimes perpetrated against women (charges for sexual violence and homicides) to capture attitudes in reporting violence at provincial levels. Moreover, we link regional information on the beliefs and opinions of men and women on gender stereotypes.

Charges for sexual violence and homicides measure the pervasiveness of violence at the local level.<sup>13</sup> While the latter is unlikely to be underreported, the former requires

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<sup>12</sup> Provinces (NUTS-3) are 110, regions (NUTS-2) are 20. Figure A.2 considers the overall number of users (including requests for information) and displays an analogous pattern.

<sup>13</sup> Data on charges for sexual violence come from the Italian State Police (*Polizia di Stato*). Homicides are extracted from administrative data on causes of death provided by ISTAT, which cover all deaths

a person who reports the abuse to be recorded by the police in the crime statistics. In Section 4 we discuss how the two measures are informative of the pervasiveness of actual violence and on attitudes towards victimisation.

The employment rate of women, gathered from the 2011 Census, proxies for a stronger autonomy of women at the local level. The share of women elected officials in municipal councils is computed on data released by the Ministry of Interior. The indicator provides a measure of the empowerment of women in a given area (Iyer et al., 2012). Although the average share of women holding office in local governments increased from 6.66% in 1986 to 31.88%, this is still far from being balanced with male representativeness in Italy.

Finally, we exploit an exceptionally designed survey on intimate partner violence and gender stereotypes carried out by ISTAT and the Department for Equal Opportunities in 2018.<sup>14</sup> The survey spotlights the role of gender stereotypes, distinguishing between

Table 1: Gender stereotypes

<b>GRF</b>	<i>Gender roles within the family (Agree)</i>
.1	Men should take the most important decisions within the household
.2	Men are less apt to take care of housework
<b>GRW</b>	<i>Gender roles at work (Agree)</i>
.1	At times of labour shortage, employers should give priority to men rather than women
.2	Success at work is more important for men than for women
<b>SDO</b>	<i>Sexual dominance (Agree)</i>
.1	Women can incite sexual violence with how they dress
.2	Women who do not wish to have sexual intercourse can avoid it
.3	Dependable women are never sexually harassed
.4	If a man forces his wife/girlfriend into having sex this is not violence
.5	When offered to have sexual intercourse women often say no but they mean yes
.6	If a woman is sexually abused while under influence of alcohol or drugs she's partially responsible of the abuse
.7	Violence claims are often false
<b>VAC</b>	<i>Violence acceptability (Sometimes/always acceptable)</i>
.1	A man slapping his girlfriend because she flirted with another man
.2	Slapping in the couple every once in a while is normal

Notes: The survey is provided by the Italian National Institute of Statistics (ISTAT) run in 2018. For each question, the shares of men and women that agree or find acceptable several statements related to gender stereotypes are available. The aggregate categories (GRF, GRW, SDO, VAC) are calculated as having at least one of the specific subcategories above the 75th percentile of the corresponding distribution.

occurring in a calendar year. The medical information contained in the individual death certificates is encoded according to the WHO International Statistical Classification of Diseases, Injuries and Causes of Death, X Revision (ICD-10).

<sup>14</sup> The survey covers 15,034 families and it is representative at the provincial level for those aged

what women and men believe to be acceptable or agreeable on violence, abuse, and gender discrimination-related topics. The variables used in the analysis are listed in Table 1. We aggregate the information provided into 4 indicators that summarize different dimensions: gender roles within the family (GRF), gender roles at work (GRW), male entitlement and sexual dominance (SDM), and acceptability of violence (VAC).

### 3 The Media Campaign and Daily Calls

Using administrative data on phone calls to the national helpline for domestic violence, we provide evidence that the launch of the campaign on March 23rd 2020 induces a massive increase in the number of calls to the 1522. We employ a typical event-study analysis comparing the 2019 and 2020 daily time series:

$$Y_d = \alpha + \sum_{\tau=1}^7 \delta_{\tau} D_{w+\tau} + \epsilon_d, \quad (1)$$

where  $Y_d$  is the outcome of interest measured as the daily difference between calls made by victims between 2019–2020. The baseline period corresponds to the week preceding the launch of the Government campaign (15th–21st March), namely two weeks after the implementation of the lock-down. Hence, the set of coefficients  $\delta_{\tau}$  corresponds to the average weekly difference between calls received in 2020 and 2019. To provide additional support to our identification strategy we run a placebo test comparing calls received in 2018 and 2019.

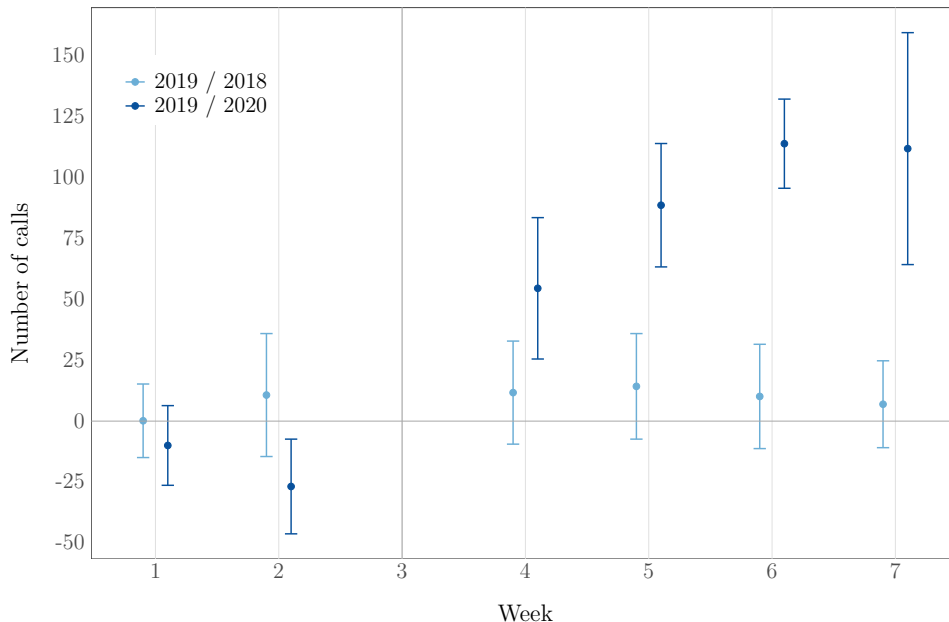
Estimates are shown in dark blue in Figure 4. They mirror the pattern presented in Figure 1. The coefficients associated with the first week of observation (March 1st–7th), which correspond to the pre-lock-down period, are not statistically different from the baseline value. Over the first week of the lock-down, calls to the 1522 helpline slightly decrease, while in the first week of the media campaign, we observe a sudden jump of 54 additional calls per day. This corresponds to an increase of about 200%.<sup>15</sup> Coefficients

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18–74, albeit only regional aggregation is available. The survey follows the same sampling scheme of the Italian Labour Force Survey (LFS). In particular, the sample of the survey on intimate partner violence and gender stereotypes is a sub-sample of the fourth wave of the 2018 LFS. Only one individual per household is selected to respond to the questionnaire. Interviews, which are done using the Computer-Assisted Telephone Interviewing (CATI) method, have been carried out from June to November 2018. Table A.2 displays the descriptive statistics.

<sup>15</sup> The average difference in the number of calls received in 2020 and 2019 in the first two weeks of March is 22. It may be worth reminding that the campaign lasted for 10 days, therefore week 4 and 5 are to be considered partially treated, with 5 days of exposure each.

Figure 4: Event study on time series data



Note: Confidence intervals at  $p < 0.05$ . In dark blue the weekly differences between valid calls in 2020 and 2019. In light blue differences between valid calls in 2019 and 2018. Each week consists of a 7-days period (e.g., week 1 represents the days between March 1st and March 7th) with the exception of period 7, which plots 4 days only (April 12th to April 16th).

become increasingly positive over time and reach almost 120 calls per day by the seventh and last week observed. This implies a striking increase of about 500% compared to the baseline. The increase in the number of calls stabilizes once the media campaign terminates, i.e. in the last two weeks.<sup>16</sup>

Our result for the first week of lock-down is in contrast with that of [Leslie & Wilson \(2020\)](#) and [Agüero \(2020\)](#), who show that self-quarantining practices brought about an increase in violence reported in, respectively, US and Peru. Two non-mutually exclusive hypotheses can explain the finding. The negative coefficient in the first week of lock-down might signal a potential and unintended consequence of shelter-in-place orders in terms of reporting. Indeed, being trapped inside the house for a long time with a violent partner could have made it even more difficult to call for help. While the campaign does not solve the “lock-in” issue, the involvement of celebrities as role-models on the one

<sup>16</sup> We acknowledge that the number of operators at the 1522 call-centre did not vary throughout the period prior to March 23rd. It was gradually raised *only after* the surge in the number of calls that followed the launch of the media campaign in response to the increased demand. Therefore, we can confidently exclude that the number of calls in the first three weeks of observation is underestimated due to the congestion of call-centres.

hand, and the perception of “not being alone” conveyed by the campaign on the other might have changed victims’ attitudes and self-confidence, pushing them to seek help, similarly to [Jensen & Oster \(2009\)](#). Further, the *Andrà tutto bene* (“Everything will be alright”) slogan, which echoed for weeks, together with the perception of the lock-down as a temporary circumstance, might have led to under-reporting or postponed reporting of abuse.<sup>17</sup>

To corroborate the causal interpretation of the effect of the anti-abuse campaign, we estimate the same model using as dependent variable the difference between calls received in 2019 and 2018. The coefficients of this placebo test are reported in light blue in [Figure 4](#). The absence of any statistical difference between the number of calls in 2018 and 2019 supports our claim.

Two additional robustness tests are presented in [Figure A.3](#). Dark blue dots represent differences between calls in 2020 and the average calls in the same weeks in 2015–2019. This is to prove that the results discussed above are not due to any specific pattern in 2019. The light blue dots refer to the difference between the calls in 2015 and in 2020. Since both years have the same weekly patterns (i.e. in both years March 1st is a Sunday), these estimates implicitly account for day-of-the-week heterogeneity. The estimated coefficients in these two graphs are not statistically different from those presented in [Figure 4](#).

To conclude, we also gather data on invalid calls (namely, those made by mistake or pranks) which represent roughly 45% of the total number of calls received by the 1522 operators, a share rather constant across years. We use them as a control group in a Difference-in-Differences analysis. The difference between valid and invalid calls can isolate the estimated effect of the overall media exposure of the 1522 helpline during the campaign. Estimates in [Figure A.4](#) yields comparable results. Overall, we provide robust evidence that the campaign successfully increased domestic violence reporting. On average, in the post-campaign period, the average number of calls per day increases by roughly 90 calls.

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<sup>17</sup> In Italy, shortly after the announcement of the lock-down (9th March), people began drawing banners with rainbows which displayed optimistic messages such as *Andrà tutto bene*. These were hung on windows and balconies, communicating collective positive thinking towards a challenging situation. The message spreads quickly across Italy. Similar to other slogans, for example, *#iorestoacasa* (*I stay at home*), it has become one of the most popular sequences of words associated with the pandemic. From Italy, the rainbow signs spread to other countries such as Belgium, the Netherlands, and the UK.

## 4 Violence, Empowerment and Gender Stereotypes

After assessing the causal impact of the campaign on the reporting of domestic violence, we investigate whether a set of geographical characteristics is associated with the differential effects of the campaign. The generic event-study specification used to estimate the differential effects can be written as follows:

$$Y_{p,t} = \alpha + \sum_{t=2015}^{2020} \delta_t D_t + \sum_{t=2015}^{2020} (\beta_t D_t \times H_p) + \sum_{t=2015}^{2020} (\gamma_t D_t \times LowInc_p) + \mu_p + \epsilon_{p,t}, \quad (2)$$

where  $Y_{p,t}$  is the number of calls per 100,000 inhabitants in province  $p$  and year  $t$ ;  $H_p$  takes value one when province  $p$  belongs to the bottom or top quartile of the variable distribution.<sup>18</sup> Each dummy is then interacted with a full set of year fixed effects where the baseline is 2019. The empirical specification controls for: the interaction between a dummy for low-income province and year dummies to account for income-driven differential trends; province fixed effects to address potential time-constant unobserved differences; and year fixed effects. Standard errors are clustered at province level.<sup>19</sup>

The main variables of interest are the full set of  $\beta_t$  estimates. A critical assumption for our identification strategy is that differences in the levels of the selected characteristics are not associated with differential trends in the absence of the campaign. The event-study design allows us to test for the existence of differentials in the pre-implementation period. This test, though not a formal proof, is usually interpreted as supportive of the parallel trend assumption.

We start by exploiting variation in the rate of sexual assaults and the incidence of homicides of women. We do so to test whether the effectiveness of the campaign depends on pre-existing cross-sectional differences in the pervasiveness of violence against women. These two indicators have been frequently used in the literature (e.g., [Iyengar, 2009](#); [Iyer et al., 2012](#); [Amuedo-Dorantes & Deza, 2019](#)). Since sexual assaults are highly gender-specific, 90% of victims are females and almost all the people imprisoned for sexual assault

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<sup>18</sup> In the case of the aggregate indicators on gender stereotypes (GRF, GRW, SDM, and VAC), the dummy takes value one if the share of people responding to any of the subcategories is above the percentile of the distribution. Data on gender stereotypes is only available at the regional level. Thus, when this information is exploited Equation 2 changes accordingly.

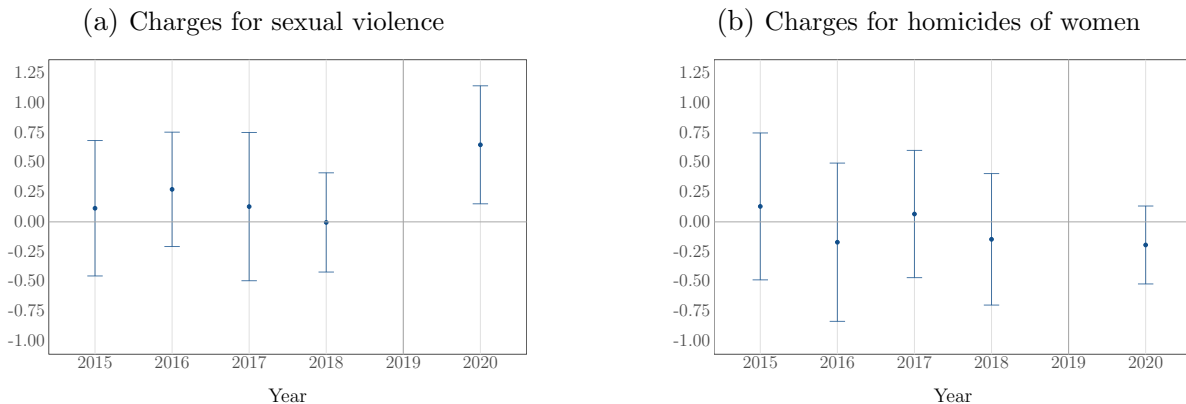
<sup>19</sup> The low-income dummy takes value 1 if the average amount of per-capita taxable income between 2013–2018 is in the first quartile of the national distribution. Moreover, year-by-region dummies to control for changes in regional regulations concerning the management and the financing of anti-abuse services are considered as a further check. Results are similar, if anything, more precise.

are men, statistics on this type of crime are in principle good proxies of violence against women. However, the rate of sexual assaults is likely to suffer from the same reporting issues as our dependent variable, i.e. calls to the 1522 helpline. The rate of women homicides, on the other hand, is free from this concern but captures the occurrence of extreme events which is not necessarily representative of the degree of diffusion of the underlying phenomenon (Amuedo-Dorantes & Deza, 2019).

Results are depicted in Figure 5. Panel (a) shows a marked increase in the number of calls in provinces where documented episodes of sexual violence are more numerous.<sup>20</sup> This heterogeneous effect recorded in 2020, however, could be due to either a higher actual incidence of crimes and violence in these areas or to higher reporting rates (holding violence constant). In panel (b) we test whether this pattern holds also when considering areas with the largest incidence of homicides perpetrated on women. The plot reveals the absence of any heterogeneity in the effect across provinces with a high incidence of female homicides and those where this crime is less frequent. Thus, the increase observed in panel (a) is likely due to higher reporting rates, rather than to higher pervasiveness of violence per se in these areas.

We further investigate whether this heterogeneity emerges when other measures that might be associated with higher reporting of victimisation are considered, namely the female employment rate and the share of women in office in local governments, which proxy for the degree of autonomy and empowerment of women in a given province.

Figure 5: Calls to 1522 and violence



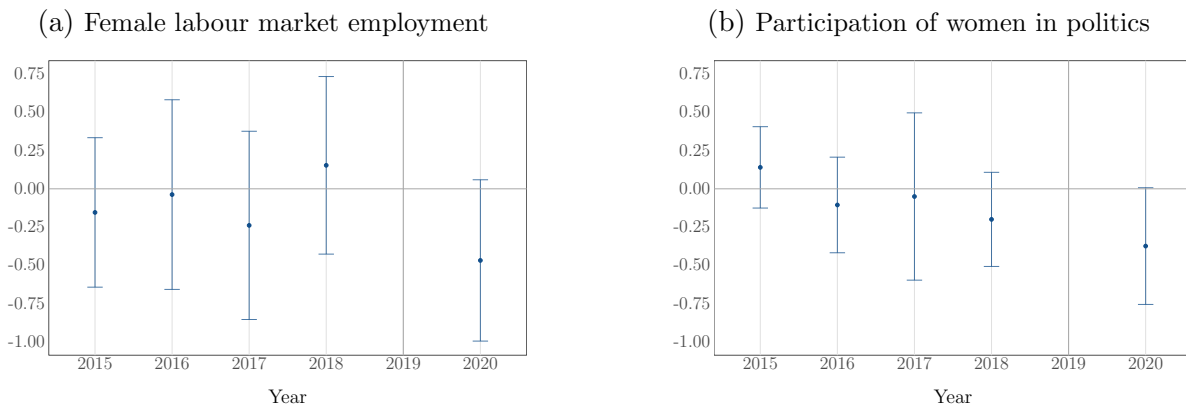
Note: Confidence intervals at  $p < 0.05$ . We plot coefficients as in Equation 2, where 2019 is the baseline. All years consist of calls between March 1st and April 16th. The regressions control for year dummies, province fixed effects and income per capita (measured as average of 2013-2018) interacted with years. Errors are clustered at province levels.

<sup>20</sup> Coefficients and standard errors are reported in Table A.3, columns 1–2.

Policies aiming at accelerating the process towards economic gender equality and fostering women’s empowerment are at the centre of the debate in many countries around the world. Gender inequality is even more prominent when considering a more specific indicator synthesising women’s representation in decision-making positions. Even in countries where women participate in the labour market in high numbers, only a minority make it to the highest positions (Profeta, 2017; Baltrunaite et al., 2014, 2019).<sup>21</sup> Iyer et al. (2012) find that female representation in local governments brings about an increase in reporting rates of crimes against women in India. As the authors argue, this could be due both to the public becoming more self-confident in reporting crimes and to the politicians at local institutions being more aware of the distress experienced by those whom they represent. Thus, in our setting, areas, where the share of women elected officials in local government institutions is lower, are those where women tend to have lack of empowerment. For this reason, reporting rates in these areas are expected to be lower.

Similarly, by considering provinces at the bottom quartile of the distribution of average employment rates, we expect to identify areas where women’s degree of autonomy is lower and victimisation is likely to be disproportionately under-reported. Indeed, panels (a) and (b) of Figure 6 suggest that the campaign to promote the 1522 helpline has been less effective in provinces that are characterised by the lowest levels of women’s autonomy (measured with the average female employment rates in the years 2015-2018)

Figure 6: Calls to 1522 and women’s autonomy and empowerment



Note: Confidence intervals at  $p < 0.05$ . We plot coefficients as in Equation 2, where 2019 is the baseline. All years consist of calls between March 1st and April 16th. The regressions control for year dummies, province fixed effects and income per capita (measured as average of 2013-2018) interacted with years. Errors are clustered at province levels.

<sup>21</sup> See Hessami & da Fonseca (2020) for a literature review on substantive effects of female representation on policies.



and empowerment (proxied by the average share of women elected in local governments over the period 2015-2018), respectively.<sup>22</sup> In other words, the increase in the number of calls in 2020 is less pronounced in these provinces.

These results, however, might find their roots in cultural and social norms that are inherited from the past and refer to sexual stereotypes and to the role of women in society. We investigate the existence of heterogeneous effects of the campaign considering different cultural factors that can be ascribed to the role of men and women in society and within the family and to the existence of gender stereotypes. By doing so we are able to shed some light on the role played by stereotypes in the decision to report episodes of domestic violence.

Unconscious bias can lead to the unintended application and enforcement of negative stereotypes, which might cause negative distortions on the capacity to develop personal abilities, pursue one's professional career and make choices (Bordalo et al., 2016; Glover et al., 2017; Bursztyn et al., 2017; Kim & Loury, 2019; Guiso et al., 2008; Driva et al., 2016). For instance, stereotypes contribute to exaggerating true aspects of reality (Bordalo et al., 2016), providing less support to new ideas (Coffman, 2014), amplifying gender gaps (Bordalo et al., 2019) and affecting teacher grading (Carlana, 2019). In a cross-country comparison using World Value Survey data, Fortin (2005) show that gender differences in employment and wages are significantly explained by gender stereotypes. Similarly, Charles et al. (2018) find that social norms and sexist beliefs in the place of origin yield higher levels of gender gap in both wages and employment in the US. Moreover, by being internalised by women, such beliefs tend to affect non-economic outcomes as well, such as age at first birth and marriage decisions. With specific reference to Italy, Bozzano (2017) finds that gender-related social norms attached to religion play a significant role in determining the share of women employed in high-ranking jobs and of those holding office.

Figure A.5 displays the existence of a negative and statistically significant relationship between the reporting of sexual violence and the four indicators of the gender stereotypes, while the variable measuring the incidence of homicides perpetrated on women is never statistically associated to gender stereotypes indicators.<sup>23</sup> In addition, Figure A.6 shows how gender stereotypes correlate to the empowerment measures considered above, i.e. female employment rates and participation of women into politics. The negative relationship is large in terms of magnitude and statistical power in the case of gender stereotypes

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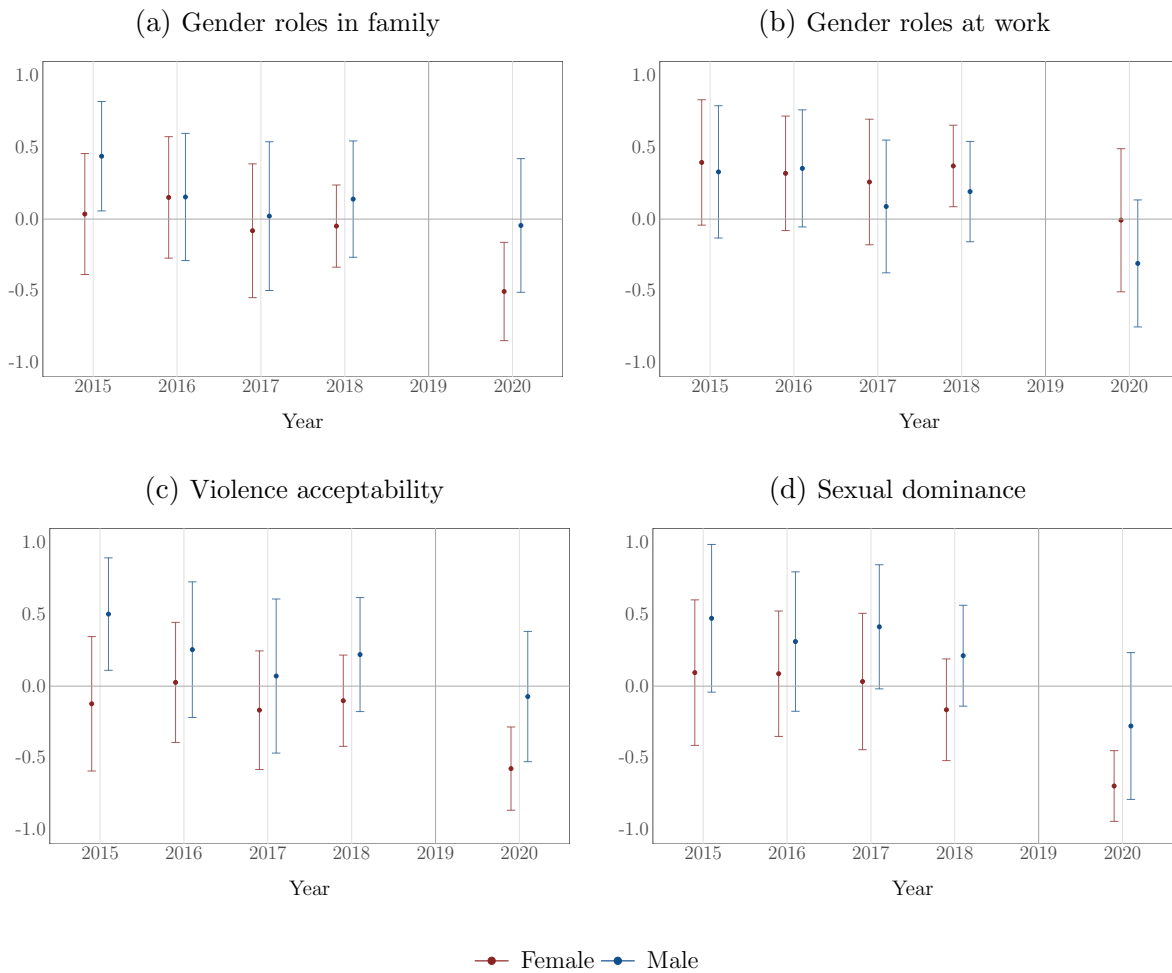
<sup>22</sup> Coefficients and standard errors are reported in Table A.3, columns 3–4.

<sup>23</sup> Stereotype intensity is measured as the share of females that agree on various statements on gender disparities at the local level.

within the family and at work. Sexual dominance and violence acceptability indicators, which are meant to capture sentiments of female misperception of domestic violence, follow similar negative patterns, though they are not statistically significant.

Our results show that these cultural traits are important drivers of the effectiveness of the media campaign. The campaign is less successful in areas where gender stereotypes are more pervasive, in comparison to areas where this sentiment is less prevalent (Figure 7). This result holds regardless of the dimension of gender stereotypes and gender norms considered, namely, gender roles within the family and at work, violence acceptability,

Figure 7: Calls to 1522 and gender stereotypes



Note: Confidence intervals at  $p < 0.05$ . We plot the yearly differences between high and low exposed provinces where 2019 is the baseline. All years consist of calls between March 1st and April 16th. The regressions control for year dummies, province fixed effects and income per capita (measured as average of 2013-2018) interacted with years. Errors are clustered at regional levels.

and sexual dominance (see Table 1).<sup>24</sup>

Remarkably, the comparison across answers reported by women and men suggests that the differential effect of the media campaign is stronger in areas where gender stereotypes are highly internalised by women. This is in line with the recent contributions to the economic literature that document how stereotypes tend to amplify differences across groups (Bordalo et al., 2016) and may turn into a self-fulfilling prophecy (Glover et al., 2017). Our data also provide support for many of the theoretical predictions of the self-stereotyping model presented by Bordalo et al. (2019). In particular, their model predicts that gender stereotypes shape self-assessments and that these self-assessments discourage women from participating in male-typed domains. In the case under consideration, in fact, the prevalence of these types of beliefs among women themselves seems to disproportionately hinder the usage of the anti-abuse helpline, for which women constitute the largest target group.

## 5 Conclusion

Even outside times of crisis, women face the greatest dangers from people they know. In the EU, 33% of women have been physically or sexually abused since the age of 15. Out of those who have had at least one partner, one in five has experienced physical or sexual violence by an intimate partner (European Union Agency for Fundamental Rights, 2015). Besides being a major problem in terms of violation of human rights, violence against women also has numerous consequences to women’s physical and mental distress and to their autonomy.

Our analysis takes place during an extraordinary period characterized by the enactment of measures to contain the spread of the Covid-19 pandemic. We demonstrate that reporting of domestic violence sharply increases following the advertising campaign of the 1522 anti-abuse helpline launched in Italy two weeks after the nation-wide lock-down in 2020. Interestingly, we observe a drop in calls over the first week of lock-down while the domestic violence awareness campaign triggers a sudden and exceptional increase in calls by victims. After an immediate jump, the impact reaches about 500% increase after a month.

Moreover, we investigate how the policy effectiveness varies depending on several measures of violence and women’s empowerment at the local level. We find higher rates of

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<sup>24</sup> Coefficients and standard errors are reported in Table A.3. Detailed results by sub-category are provided in Table A.4.

reporting in areas where the charges for sexual violence per 100,000 inhabitants are more numerous, but no differential effects on the basis of female homicides. On the contrary, lower levels of women's autonomy and empowerment are associated to a less prominent increase in the number of calls to 1522 helpline. This suggests that the success of the media campaign is largely responsive to attitudes towards reporting, but this is not related to the incidence of violence per se.

We then explore the role of social norms and gender stereotypes, which are at the root of the emergence of the gap between men and women. Exploiting a unique survey, we find strong evidence that, even when income differentials are accounted for, gender stereotypes hamper the effectiveness of the anti-abuse campaign. Moreover, the evidence highlights that the intervention is less effective where female self-stereotypes are more compelling, while men's beliefs follow much weaker patterns.

These results raise questions on how to design appropriate interventions to encourage reporting of abuse and ultimately taper domestic violence. If only income matters, policy-makers should invest in programs aimed at reinforcing women's autonomy, via improvements in labour market opportunities and the expansion of shelters availability. However, the presence of stereotypes plays a substantial role.

Neglecting the relevance of social norms might lead to an imperfect understanding of domestic violence and the mechanisms that incentives the reporting of abuse and, in turn, loosely designed policies. Although the Covid-19 pandemic brought about an undoubtedly unprecedented situation, the final message of this paper points to the need of breaking down stereotypes. Potential policies may aim at informing people about their own bias or training them to ensure equal behaviour, both within and outside the household. Other solutions may target the self-confidence of women and provide alternative role models. Indeed, supporting the civil society and public services in preventing and combating gender stereotypes is a priority of the European Commission's Gender Equality Strategy 2020-2025.<sup>25</sup>

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<sup>25</sup> See [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_357](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_357).

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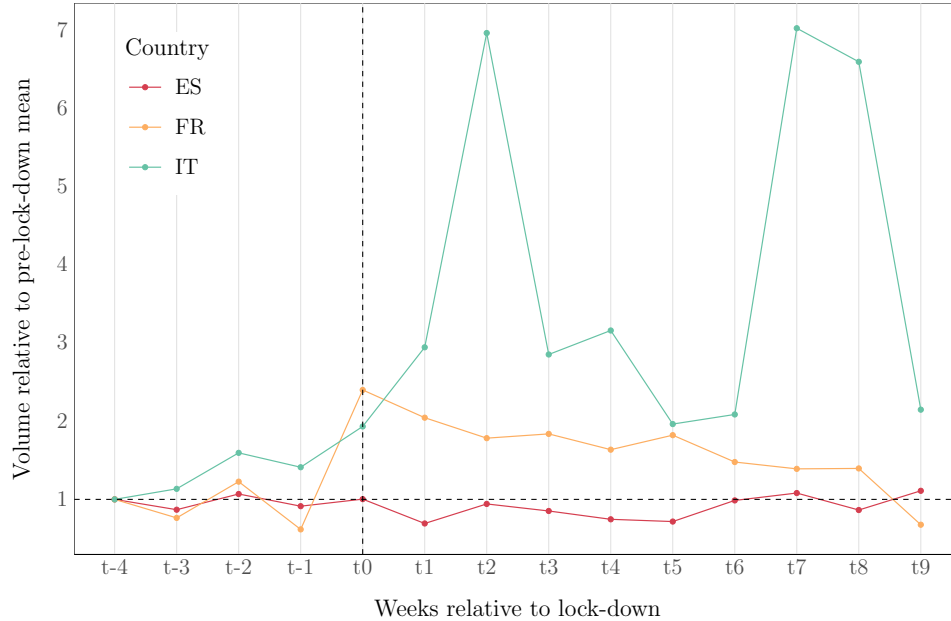


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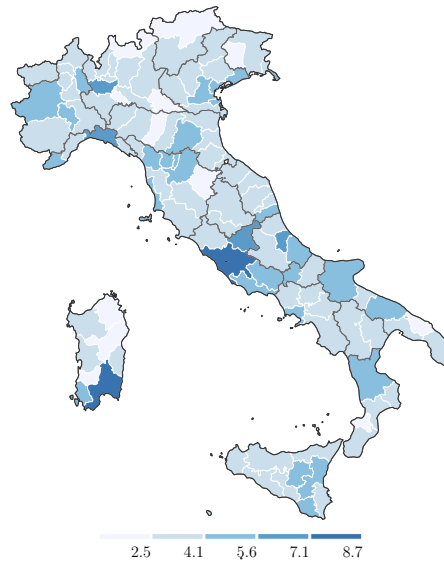
# Appendix

Figure A.1: Google Trends: searches for National helplines in France, Italy and Spain



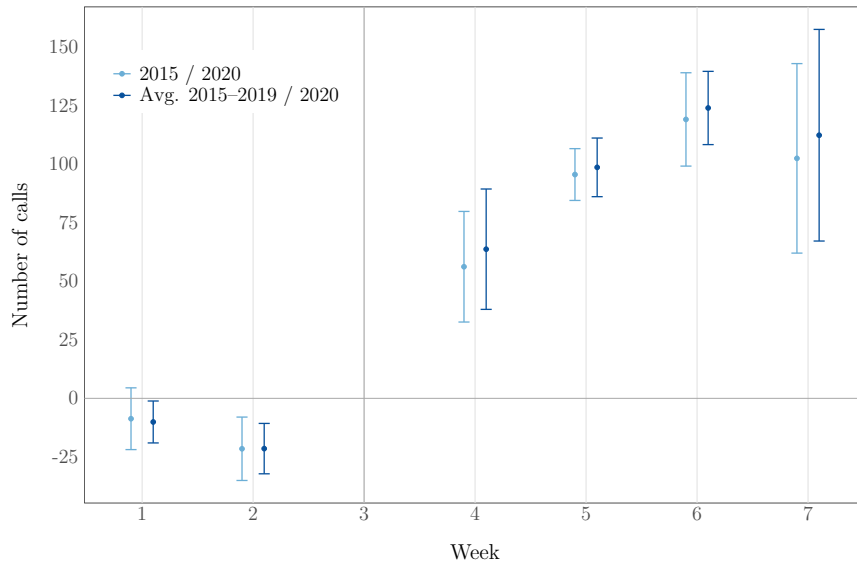
Note: Data are collected from Google Trends. The search for the queries 3919 (France), 1522 (Italy) and 016 (Spain) is normalised for its relative popularity within each country on a 0 to 100 scale over the period January 13th–June 13th. See [https://support.google.com/trends/answer/4365533?hl=en&ref\\_topic=6248052](https://support.google.com/trends/answer/4365533?hl=en&ref_topic=6248052). The vertical dashed line represents the day when full lock-down measures were implemented: France (17th March); Italy (9th March); and Spain (14th March). On the x-axis are the weeks since the lock-down date in each country. Each country point represents the weekly search volume relative to the pre-lock-down average (week  $t - 9$  up to week  $t - 4$  included).

Figure A.2: Calls to the 1522 from users



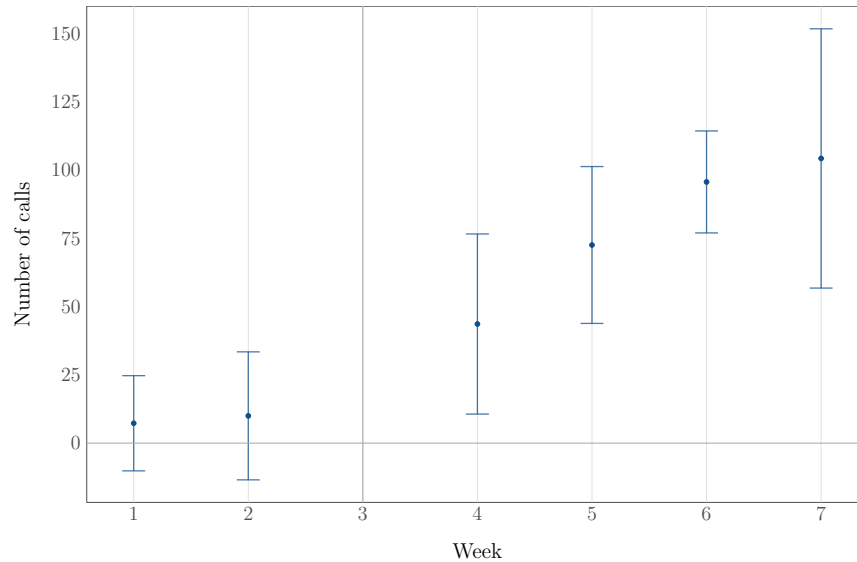
Note: average number of calls from all users per 100,000 inhabitants in the period March 1st–April 16th over the years 2015–2020 and for each of the 110 provinces considered. Grey and white lines signal regional and province boundaries, respectively.

Figure A.3: Event study on time series data: robustness tests



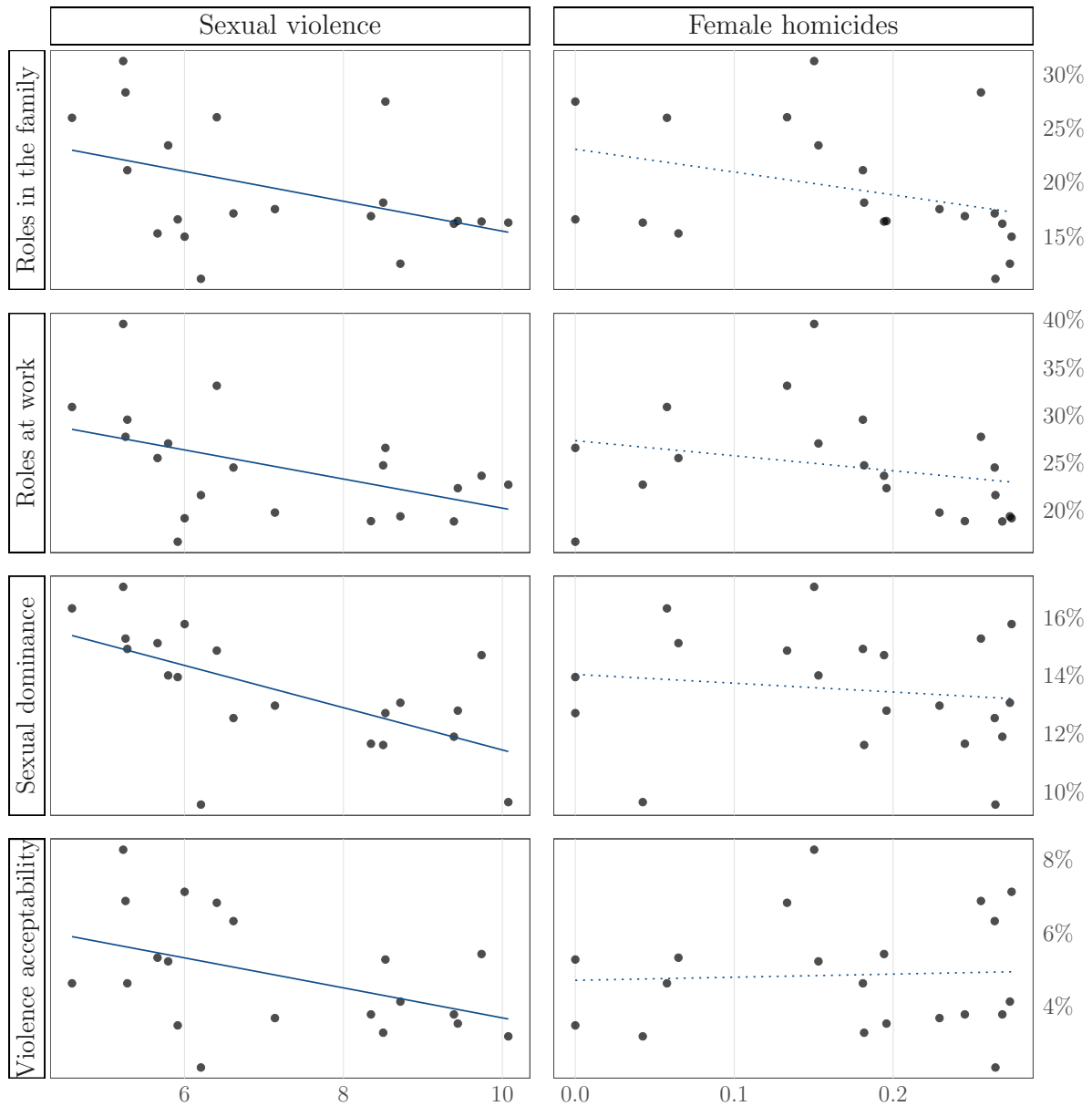
Note: Confidence intervals at  $p < 0.05$ . In dark blue the weekly differences between valid calls in 2020 and the average for the years 2015–2020. In light blue differences between valid calls in 2020 and 2015. The latter includes day-of-the-week fixed effects. Each week consists of a 7-days period, with the exception of week 7, which comprises 4 days only (April 12th to April 16th).

Figure A.4: Event study on time series data, valid vs invalid calls



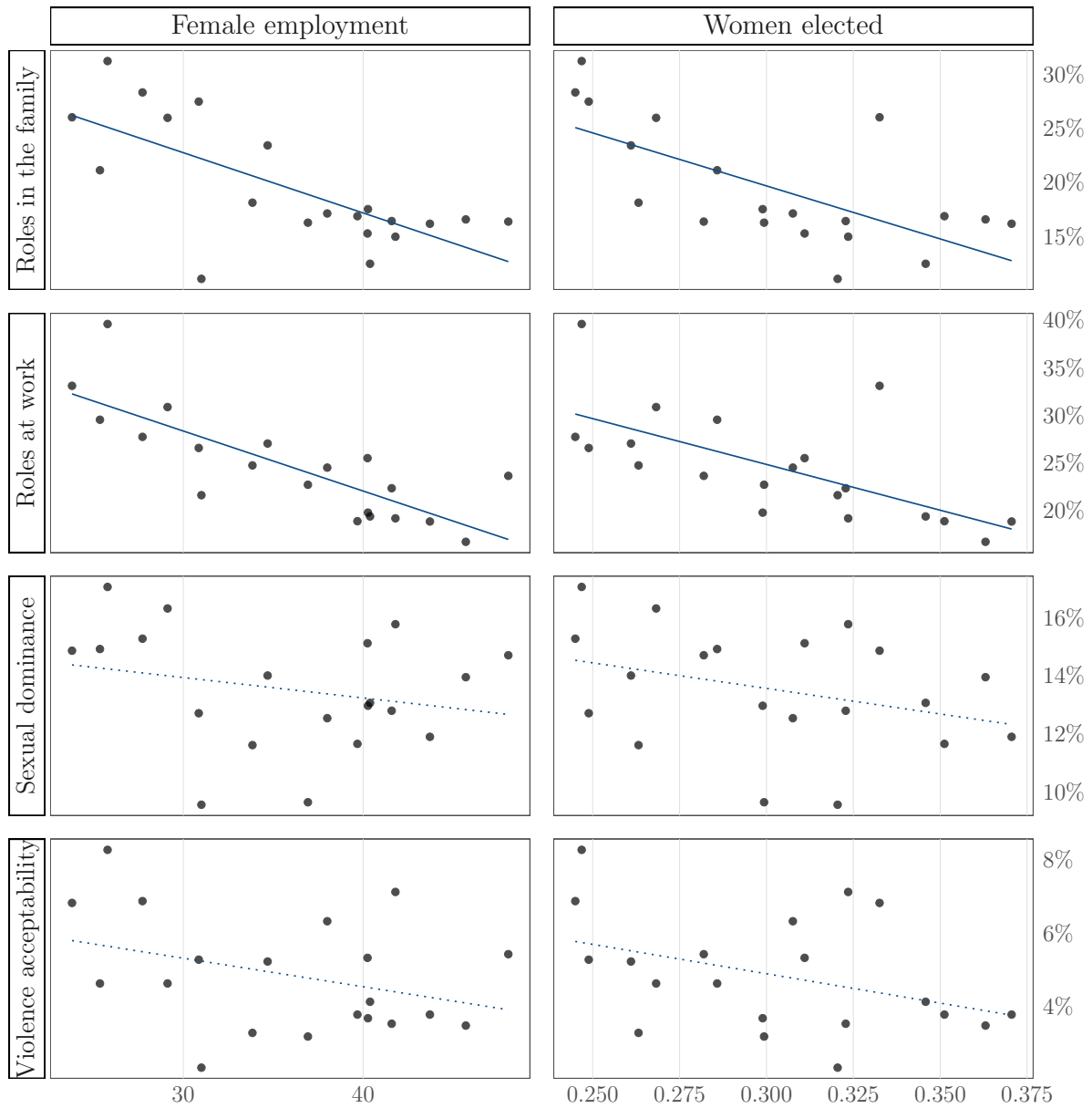
Note: Confidence intervals at  $p < 0.05$ . In blue the weekly differences between valid and invalid calls in 2020 and 2019. Each week consists of a 7-days period, with the exception of week 7, which comprises 4 days only (April 12th to April 16th).

Figure A.5: Stereotypes and violence



Note: Cross-sectional regression between gender stereotypes indicators and sexual violence and female homicide rates. Solid and dashed lines represent statistically and not significant relationships, respectively.

Figure A.6: Stereotypes, women's autonomy and empowerment



Note: Cross-sectional regression between gender stereotypes indicators and sexual violence and female homicide rates. Solid and dashed lines represent statistically and not significant relationships, respectively.

Table A.1: Calls to the 1522 helpline by reason, national averages over 2015–2019

Reason of the call	Total	Nationality		Gender	
		Italian	Foreign	Female	Male
Request for help: Stalking	1137.43	91%	09%	88%	12%
Request for help: Violence	6463.00	84%	15%	97%	03%
Emergency	193.71	82%	15%	92%	07%
Reporting: Violence	1678.57	91%	09%	80%	20%
Request for info	9051.00	92%	07%	87%	13%
Out of target	2827.71	89%	07%	82%	17%
Other	141.43	63%	33%	86%	13%

Notes: “Request for info” includes info on the service, info on National Anti-violence Centres, legal info, info on procedures from professionals, info on legal responsibilities of public operators; “Other” includes reporting on malfunctioning of services, reporting on misleading media coverage, international call out of office hours.

Table A.2: Categories of violence and gender stereotypes: descriptive statistics

	Women				Men			
	mean	min	max	sd	mean	min	max	sd
<b>SDM</b>	6.78	0.30	22.65	5.99	8.15	0.00	30.20	6.86
.1	11.57	6.70	15.35	2.56	12.24	8.20	18.10	2.68
.2	18.42	14.30	22.65	2.51	21.82	13.80	30.20	3.39
.3	2.67	1.45	4.35	0.86	3.54	0.75	8.80	2.00
.4	0.98	0.30	2.10	0.44	0.88	0.00	2.20	0.59
.5	2.83	1.45	5.60	1.12	4.20	1.65	7.45	1.42
.6	6.80	3.10	9.40	1.70	7.69	3.10	14.35	2.37
.7	4.17	2.70	6.05	0.89	6.72	4.45	9.30	1.49
<b>GRF</b>	9.76	0.65	21.90	6.95	10.53	2.85	18.75	5.52
.1	3.55	0.65	9.40	2.28	5.66	2.85	10.60	2.50
.2	15.97	10.50	21.90	3.57	15.40	8.75	18.75	2.51
<b>GRW</b>	12.35	3.10	23.80	5.07	11.49	4.60	20.30	4.75
.1	8.21	3.10	15.55	3.28	7.92	4.60	14.30	3.29
.2	16.48	13.35	23.80	2.46	15.06	10.20	20.30	2.93
<b>VAC</b>	2.44	0.70	4.40	1.03	4.37	1.15	11.00	2.08
.1	2.85	1.60	4.40	0.81	4.74	2.60	11.00	2.06
.2	2.02	0.70	4.40	1.07	3.99	1.15	8.75	2.08

Notes: See Table 1 for a description of the variables. Statistics refer to the share of women and men that agree or find acceptable each statement. *Mean* represents the national average; *min* and *max* describes, respectively, the lowest and highest value recorded across regions; *sd* is the standard deviation.

Table A.3: Event study on main variables

Year	Victimisation			Empowerment			Stereotypes - responses from women			Stereotypes - responses from men		
	VIO	OMI	WER	WIP	GRF	GRW	VAC	SDO	GRF	GRW	VAC	SDO
2015	-0.441*** (0.13)	-0.422** (0.146)	-0.37** (0.147)	-0.417** (0.14)	-0.358** (0.149)	-0.51** (0.178)	-0.32* (0.164)	-0.371* (0.207)	-0.438** (0.147)	-0.428** (0.157)	-0.456** (0.143)	-0.632** (0.24)
2016	-0.777*** (0.143)	-0.635*** (0.114)	-0.663*** (0.133)	-0.654*** (0.124)	-0.672*** (0.127)	-0.773*** (0.155)	-0.657*** (0.142)	-0.669*** (0.176)	-0.672*** (0.127)	-0.739*** (0.129)	-0.695*** (0.124)	-0.821*** (0.224)
2017	-0.732*** (0.135)	-0.695*** (0.176)	-0.641*** (0.147)	-0.674*** (0.138)	-0.652*** (0.145)	-0.788*** (0.176)	-0.615*** (0.168)	-0.677*** (0.2)	-0.672*** (0.144)	-0.689*** (0.158)	-0.683*** (0.144)	-0.933*** (0.191)
2018	-0.141 (0.136)	-0.113 (0.124)	-0.169 (0.124)	-0.113 (0.117)	-0.117 (0.124)	-0.305** (0.115)	-0.096 (0.141)	-0.029 (0.133)	-0.154 (0.118)	-0.178 (0.13)	-0.173 (0.121)	-0.267* (0.149)
2020	0.699*** (0.142)	0.994*** (0.147)	1.035*** (0.145)	1.011*** (0.146)	1.042*** (0.134)	0.937*** (0.176)	1.14*** (0.119)	1.299*** (0.055)	0.949*** (0.152)	1.032*** (0.148)	0.956*** (0.153)	1.119*** (0.215)
H×2015	0.114 (0.29)	0.13 (0.315)	-0.154 (0.249)	0.14 (0.136)	-0.253 (0.197)	0.281 (0.215)	-0.239 (0.211)	-0.056 (0.262)	0.287 (0.273)	0.147 (0.291)	0.38 (0.281)	0.392 (0.271)
H×2016	0.273 (0.245)	-0.171 (0.339)	-0.038 (0.316)	-0.106 (0.159)	0.021 (0.293)	0.256 (0.234)	-0.037 (0.22)	0 (0.239)	0.02 (0.272)	0.32 (0.307)	0.164 (0.299)	0.252 (0.256)
H×2017	0.128 (0.318)	0.066 (0.273)	-0.239 (0.314)	-0.05 (0.279)	-0.195 (0.316)	0.263 (0.262)	-0.21 (0.216)	-0.01 (0.273)	-0.063 (0.355)	0.032 (0.342)	0.012 (0.353)	0.419* (0.236)
H×2018	-0.005 (0.213)	-0.147 (0.282)	0.154 (0.296)	-0.2 (0.157)	-0.174 (0.204)	0.4** (0.186)	-0.147 (0.17)	-0.251 (0.191)	0.078 (0.27)	0.163 (0.259)	0.188 (0.262)	0.206 (0.199)
H×2020	0.647** (0.253)	-0.194 (0.167)	-0.468* (0.269)	-0.374* (0.195)	-0.584*** (0.156)	0.045 (0.267)	-0.581*** (0.146)	-0.755*** (0.109)	0.04 (0.34)	-0.354 (0.23)	-0.007 (0.311)	-0.273 (0.273)

Notes: VIO indicates changes for sexual violence. OMI refers to female homicides. WER and WIP are female employment rate and share of women in politics, respectively. The rest of the indicators are defined as in Table 1. Coefficients are as shown in Figures ?? and 7. All regressions include controls as in Equation 2.



Table A.4: Event study on sub-category variables

	GRF.1	GRF.2	GRW.1	GRW.2	VAC.1	VAC.2	SDO.1	SDO.2	SDO.3	SDO.4	SDO.5	SDO.6	SDO.7
<b>Panel A: Women</b>													
2015	-0.367** (0.149)	-0.347** (0.146)	-0.37** (0.152)	-0.414** (0.173)	-0.381** (0.154)	-0.291* (0.152)	-0.285* (0.153)	-0.365** (0.145)	-0.382** (0.146)	-0.352** (0.135)	-0.394** (0.14)	-0.313** (0.153)	-0.398** (0.147)
2016	-0.684*** (0.126)	-0.653*** (0.127)	-0.665*** (0.132)	-0.694*** (0.15)	-0.709*** (0.128)	-0.606*** (0.137)	-0.623*** (0.136)	-0.626*** (0.132)	-0.635*** (0.13)	-0.627*** (0.129)	-0.659*** (0.124)	-0.628*** (0.138)	-0.645*** (0.136)
2017	-0.662*** (0.145)	-0.636*** (0.143)	-0.644*** (0.15)	-0.704*** (0.164)	-0.647*** (0.153)	-0.61*** (0.155)	-0.599*** (0.156)	-0.599*** (0.151)	-0.627*** (0.149)	-0.654*** (0.154)	-0.648*** (0.138)	-0.601*** (0.159)	-0.722*** (0.149)
2018	-0.132 (0.125)	-0.111 (0.12)	-0.159 (0.122)	-0.207 (0.127)	-0.142 (0.133)	-0.099 (0.128)	-0.088 (0.128)	-0.087 (0.126)	-0.138 (0.121)	-0.094 (0.118)	-0.119 (0.116)	-0.132 (0.126)	-0.087 (0.115)
2020	1.032*** (0.134)	1.039*** (0.13)	1.023*** (0.138)	1.003*** (0.156)	1.067*** (0.139)	1.098*** (0.114)	1.115*** (0.113)	1.072*** (0.129)	1.02*** (0.138)	1.008*** (0.134)	0.98*** (0.138)	1.1*** (0.116)	1.007*** (0.141)
H×2015	-0.192 (0.201)	-0.397** (0.154)	-0.16 (0.263)	-0.052 (0.216)	-0.074 (0.218)	-0.437** (0.165)	-0.455** (0.162)	-0.14 (0.241)	-0.063 (0.267)	-0.351* (0.205)	-0.025 (0.2)	-0.318 (0.221)	0.02 (0.159)
H×2016	0.102 (0.29)	-0.136 (0.296)	-0.024 (0.321)	0.072 (0.196)	0.196 (0.237)	-0.263 (0.211)	-0.191 (0.217)	-0.197 (0.207)	-0.152 (0.218)	-0.337** (0.148)	-0.119 (0.226)	-0.16 (0.229)	-0.177 (0.15)
H×2017	-0.133 (0.315)	-0.369 (0.299)	-0.234 (0.348)	0.067 (0.239)	-0.172 (0.241)	-0.298 (0.212)	-0.34* (0.204)	-0.376** (0.191)	-0.243 (0.239)	-0.22 (0.166)	-0.396* (0.234)	-0.311 (0.226)	0.297 (0.202)
H×2018	-0.073 (0.207)	-0.263 (0.21)	0.102 (0.304)	0.189 (0.176)	-0.006 (0.154)	-0.183 (0.173)	-0.224 (0.165)	-0.253* (0.147)	-0.021 (0.226)	-0.398** (0.162)	-0.277** (0.135)	-0.041 (0.216)	-0.413** (0.174)
H×2020	-0.515** (0.174)	-0.681*** (0.108)	-0.426* (0.247)	-0.142 (0.282)	-0.556*** (0.147)	-0.598*** (0.142)	-0.658*** (0.119)	-0.535*** (0.159)	-0.29 (0.26)	-0.429** (0.219)	-0.293 (0.264)	-0.561** (0.182)	-0.384* (0.208)
<b>Panel B: Men</b>													
2015	-0.414** (0.144)	-0.4** (0.139)	-0.37** (0.152)	-0.448** (0.14)	-0.463** (0.142)	-0.425** (0.143)	-0.389** (0.151)	-0.432** (0.139)	-0.370** (0.151)	-0.446** (0.143)	-0.376** (0.151)	-0.49** (0.161)	-0.384** (0.146)
2016	-0.645*** (0.127)	-0.662*** (0.123)	-0.665*** (0.132)	-0.692*** (0.124)	-0.707*** (0.123)	-0.669*** (0.125)	-0.694*** (0.128)	-0.69*** (0.129)	-0.665*** (0.132)	-0.694*** (0.125)	-0.665*** (0.132)	-0.674*** (0.167)	-0.637*** (0.131)
2017	-0.656*** (0.142)	-0.652*** (0.138)	-0.644*** (0.15)	-0.673*** (0.143)	-0.692*** (0.144)	-0.667*** (0.141)	-0.664*** (0.15)	-0.699*** (0.156)	-0.651*** (0.151)	-0.671*** (0.145)	-0.651*** (0.151)	-0.81*** (0.153)	-0.638*** (0.145)
2018	-0.157 (0.116)	-0.122 (0.118)	-0.159 (0.122)	-0.169 (0.118)	-0.186 (0.122)	-0.16 (0.117)	-0.177 (0.125)	-0.149 (0.127)	-0.173 (0.124)	-0.175 (0.121)	-0.173 (0.124)	-0.184* (0.109)	-0.132 (0.123)
2020	0.949*** (0.146)	0.99*** (0.138)	1.023*** (0.138)	0.952*** (0.148)	0.948*** (0.153)	0.954*** (0.148)	1.025*** (0.14)	0.975*** (0.148)	1.018*** (0.138)	0.956*** (0.151)	1.018*** (0.138)	0.904*** (0.158)	1*** (0.141)
H×2015	0.152 (0.287)	0.046 (0.224)	-0.16 (0.263)	0.395 (0.306)	0.422 (0.275)	0.234 (0.286)	-0.039 (0.24)	0.36 (0.234)	-0.112 (0.23)	0.327 (0.276)	-0.112 (0.23)	0.291* (0.167)	-0.091 (0.157)
H×2016	-0.21 (0.246)	-0.075 (0.288)	-0.024 (0.321)	0.172 (0.317)	0.238 (0.301)	-0.004 (0.292)	0.135 (0.26)	0.205 (0.297)	-0.022 (0.251)	0.164 (0.286)	-0.022 (0.251)	0.014 (0.173)	-0.256 (0.159)
H×2017	-0.216 (0.346)	-0.327 (0.315)	-0.234 (0.348)	-0.067 (0.363)	0.067 (0.352)	-0.115 (0.374)	-0.095 (0.297)	0.177 (0.273)	-0.172 (0.283)	-0.069 (0.324)	-0.172 (0.283)	0.395** (0.152)	-0.342 (0.219)
H×2018	0.116 (0.307)	-0.233 (0.178)	0.102 (0.304)	0.197 (0.296)	0.276 (0.267)	0.133 (0.296)	0.18 (0.234)	0.057 (0.24)	0.168 (0.239)	0.208 (0.267)	0.168 (0.239)	0.128 (0.228)	-0.084 (0.16)
H×2020	0.047 (0.379)	-0.382* (0.204)	-0.426* (0.247)	0.025 (0.344)	0.045 (0.306)	0.005 (0.355)	-0.373 (0.231)	-0.198 (0.224)	-0.351 (0.242)	-0.004 (0.309)	-0.351 (0.242)	0.158 (0.249)	-0.356* (0.19)

Notes: Indicators are defined as in Table 1. Coefficients are as shown in Figure 7, by sub-category. All regressions include controls as in Equation 2.