

Hang up on stereotypes: Domestic violence and an anti-abuse helpline campaign

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Abstract

We estimate the effectiveness 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 sharp increase in the number of calls. By exploiting geographical variation in the exposure to the campaign ads aired on public TV networks, we find that greater exposure is associated with an increase in the number of calls after the launch of the campaign. However, the effectiveness of the media campaign is hindered in areas where gender stereotypes are stronger.

KEYWORDS

covid-19, domestic violence, gender stereotypes, welfare policy

JEL CLASSIFICATION

I18, I38, J12

1 | INTRODUCTION

According to the World Health Organization, one in three women will experience physical and/or sexual violence at some point in their lives, with the vast majority of violent acts against women being perpetrated by current or former intimate partners. The consequences of this are far-reaching, with effects on both victims and their families in terms of poorer physical and mental health (Ellsberg et al., 2008) and labor market outcomes (Sabia et al., 2013) in both the short- and long-run.¹ With the occurrence of the covid-19 pandemic, government authorities and NGOs across the

Abbreviations: AGCOM, Italian Competition Authority for the Communication Industries; DAG, directed acyclic graph; DiD, difference-in-differences; EU, European Union; IPV, intimate partner violence; ISTAT, Italian National Institute of Statistics; LFS, labor force survey; Rai, radio audizioni italiane; SDO, sexual dominance; VAC, acceptability of violence.

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world have flagged that containment measures designed to protect people from the disease, while successfully ‘flattening the curve’ (Hsiang et al., 2020), might also have triggered an increase in domestic violence, with victims being trapped with their abusers (Evans et al., 2020). With personal movement limited and families confined to their homes, women have borne most of the costs of the crisis (Alon et al., 2020; Ravindran & Shah, 2020) and of the simultaneous surge in intimate partner violence (IPV hereafter) (UN Women, 2020).

In response to these growing concerns, on March 23, 2020, just 2 weeks after the introduction of the first national lockdown measures, the Italian government launched an awareness campaign to promote the use of the official anti-violence helpline. While stay-at-home orders, by forcing cohabitation with abusive family members, might have made violence more recurrent and seeking help more difficult, the campaign was specially conceived to encourage women undergoing domestic violence to contact the institutional 1522 helpline, which offers support to victims of abuse and stalking. To this end, the campaign was extensively aired on TV.

In this paper, we assess the effectiveness of the Italian campaign on the use of the 1522 helpline in reporting an abuse. We also investigate the role of socio-economic and cultural mediating factors that could potentially favor or hinder its efficacy in terms of encouraging help-seeking behavior. To shed light on potential mechanisms, we consider measures of women’s relative economic autonomy and empowerment and the prevalence of gender stereotypes at the local level.

Similarly to other commonly used measures of domestic violence (e.g., survey questionnaires, calls to the police), calls to helplines are imperfect proxies of the incidence of the phenomenon. Indeed, as is typical in the crime literature, only reported incidents are observable in the data. Nonetheless, helpline calls have recently been used to measure the prevalence of domestic violence (Agüero, 2021) and psychological and social distress (Armbruster & Klotzbücher, 2020; Brühlhart & Lalive, 2020; Brühlhart et al., 2021), as well as to help predict the incidence of suicide (Choi et al., 2020).

We substantiate the change in the demand for anti-violence support by comparing daily totals of calls received in 2019 and 2020 across all of Italy from the beginning of February to the end of May. We observe that with the start of the lockdown, the number of calls dropped by 50% with respect to pre-crisis averages. This might be the result of difficulties encountered by victims in finding safe solutions. Following the launch of the awareness campaign, however, abuse reported via the 1522 helpline increased sharply: by about 100% in the first week (March 23–29) and by almost 300% in the fifth week (April 13–19) with respect to the baseline period, that is, the first week of February 2019. Despite the sudden rise in calls precisely at the time of the campaign launch, the increase might also be driven by a heightened level of domestic violence brought about by the continuing lockdown, with recent studies reporting that stay-at-home restrictions are associated with an overall increase in domestic violence (e.g., Agüero, 2021; Arenas Arroyo et al., 2021; Beland et al., 2020; Leslie & Wilson, 2020; Silverio-Murillo et al., 2020).²

To identify the effect of the campaign on the use of the helpline, we exploit the fact that the campaign ads were aired only on public TV channels (*Rai Radiotelevisione Italiana*, henceforth *Rai*) in a Difference-in-Differences (DiD) setting. First, we show that both the cross-sectional variation in the *Rai*’s share of viewers and that of its major competitor *Mediaset* (both measured at regional level) has not been differentially affected by the lockdown. We then use the share of *Rai*-over-*Mediaset* viewers in a DiD setting to demonstrate the success of the campaign in terms of reporting abuses. Calls to the helpline are 40% higher in places characterized by a one standard deviation (0.26) higher share of *Rai*-over-*Mediaset* viewers. The results also hold true considering differential trends in pre-determined characteristics such as income, education, the relative employment of women and violence. The only other similar contribution finds that awareness campaigns in Peru are followed by an increase in calls to the national anti-abuse helpline, femicides and IPV-related visits to health clinics (Agüero, 2019).

Next, we investigate possible drivers of domestic violence reporting to understand potential interference or complementarity with the awareness campaign. Typically, the decision to seek help can be explained by a combination of personal, interpersonal and socio-cultural factors. These include coercion by the abusive partner, women’s socio-economic status relative to their partner, religious and social norms, identification with traditional gender roles, the acceptability of violence, the availability and awareness of formal support services and trust in the judicial system (Lelaurain et al., 2017; Liang et al., 2005; Palermo et al., 2014).³ Heise and Kotsadam (2015) put together 66 surveys from 44 different countries to test the role of the status of women and other gender-related factors on the prevalence of IPV using victim survey data. According to their analysis, partner violence is less prevalent in countries with a higher fraction of women in formal employment, while norms related to men’s authority over women and norms justifying women beating are good predictors of the geographical distribution of domestic abuse.

Thus, we explore potential mechanisms for the effectiveness of the campaign based on two measures of the socio-economic status of women relative to men (Aizer, 2010; Alonso-Borrego & Carrasco, 2017; Atkinson et al., 2005;

Guarnieri & Rainer, 2018; Iyer et al., 2012): the female-to-male wage ratio at the province level and the share of female politicians in local government institutions. We fail to find differential patterns in help-seeking according to women's relative economic status, with the campaign being just as effective in areas with low and medium-high female-to-male wage ratios and shares of women serving in local government.

In contrast, we uncover a differential effectiveness of the anti-abuse campaign in increasing IPV reporting depending on the prevalence of gender norms. Recent works by Tur-Prats (2019), González and Rodríguez-Planas (2020) and Alesina et al. (2020) document the prominent role of cultural and social norms, which mainly refer to sexual stereotypes and to the role of women in society.⁴ We use data from a survey carried out by the Italian National Statistics Institute in 2018 to analyze the importance of different survey-based measures of the pervasiveness of inequitable gender norms. In the aftermath of the campaign, the number of calls to the helpline increased less in areas where masculine sexual domination and violence within intimate relationship are more accepted. Importantly, all results are robust to considering differences in per capita income and the incidence of female homicide, which account for any potential correlation with economic factors and the pervasiveness of violence at the local level. Overall, our evidence points to gender stereotypes being, to some extent, more relevant in affecting help-seeking behavior than local-level economic factors. By uncovering relevant heterogeneity based on the pervasiveness of stereotypes at the local level, our analysis also speaks to the literature assessing the role of traditional cultural norms and customs in the response to public policies (Ashraf et al., 2020; La Ferrara & Milazzo, 2017).

The remainder of this paper is structured as follows. In the next section, we provide information on the helpline and its use, exploiting a daily time series of calls to the helpline at the national level. Section 3 presents the data sources and the identification strategy. Section 4 describes the findings on the overall impact of the campaign at the provincial level and the heterogeneous results found in relation to the role of socio-economic factors and cultural norms. Section 5 offers some concluding remarks.

2 | HELPLINE CALLS AND THE AWARENESS CAMPAIGN

About 31% of Italian women aged 16 to 70 have suffered some form of physical or sexual violence during their lifetime, and for nearly 14% the violence was perpetrated by a current or former partner (ISTAT, 2014). It is estimated that one in 20 women (5.4%) over the age of 15 have been raped. These figures are largely in line with EU averages with highest reporting rate of physical and/or sexual violence found in Denmark, Norway, and Sweden (above 45%) and lowest in Austria and Poland (20%).

To help fight this phenomenon, in 2006 the Italian government created the 1522 helpline, with the specific aim of responding to and supporting individuals suffering from violence or stalking. The helpline is toll-free and available in five languages 24/7. The 15 operators at the helpline are specifically trained to deal with victims of abuse and act as a first contact point for information about health centers and shelters. While anonymity is always guaranteed to those who call, the helpline can redirect calls to the police, hospitals or health centers upon request or in case of emergency. Its services are especially relevant considering that victims of domestic violence tend to report abuses to the police only once they find refuge in a safe place.

Every year, the helpline receives around 19,900 calls, the majority of which consist of requests for help or requests for information (43% and 46%, respectively).⁵ While the former tend to represent the most urgent cases, the latter potentially mask a number of attempts of first contact from people in need of help. Indeed, most requests for information concern the services provided by anti-violence centers and shelters.

Figure A1 in the Appendix shows that calls to the helpline positively correlate with other observed measures of violence, namely the share of female survey respondents who have experienced physical or sexual violence in the past 12 months and the number of family abuse reports to the police where the victim is a woman.⁶

2.1 | Conceptual framework

Using a directed acyclic graph (DAG), in Figure 1 we postulate the relationship between an observable proxy of violence (Y), such as IPV measures in surveys, reports to the police and, as in our case, calls to a helpline, the true latent and unobservable violence intensity (V^*), the unobserved reporting bias (ψ^*) and the potential impact of an awareness campaign (A) on the reporting of IPV.

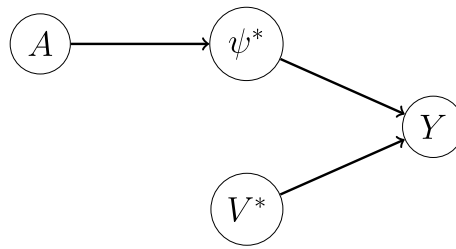


FIGURE 1 Violence, reporting, awareness, and helpline calls—a directed acyclic graph representation

The start of lockdown measures on March 9, 2020, was flagged as potentially triggering an increase in domestic violence, as victims would be confined to their homes with their co-habiting abusers, thus increasing the chances for violent episodes occurring. Indeed, the Italian lockdown was particularly stringent in comparison to other European countries.⁷

During the covid-19 pandemic, shelter-in-place orders might have impacted victims' propensity to seek help due to abusive partners preventing them from reaching out, thus leading to a potential drop in the reporting of violence (ψ^*). Indeed, official statistics show that the number of domestic violence reports to the Italian police dropped by one third with respect to 2019. At the same time, it is coherent with stay-at-home orders unbalancing the relative economic positions within households due to job loss or wage decrease, thus determining an increase in violence (V^*), as predicted by the backlash and household bargaining models.⁸ In other words, the lockdown potentially induced higher levels of violence (V^*) but also increased non-reporting (ψ^*) because forced cohabitation with violent partners makes violence more recurrent and seeking help more difficult, and this might be exacerbated by power disequilibria within the household (Arenas Arroyo et al., 2021). The net effect of these two opposite forces determines the observed proxy of violence Y .

In response to concerns about the expected increase in violence and the simultaneous drop in reporting, the Italian government launched the *Libera puoi* ('*You can be free*') campaign on March 23. An ad featuring Italian film and music stars was broadcasted repeatedly throughout the day, including immediately before and immediately after all newscasts and all press conferences in which national health authorities gave daily updates on the pandemic. The ad was primarily addressed to women, reminding them that even though a stay-at-home order was in place, anti-violence centers were accessible and victims of abuse within the household should seek help by calling the helpline. The effect of the campaign can be thought of as an increase in awareness (A) of existing services for victims of IPV. This per se is not likely to induce higher levels of violence (V^*), but it encourages reporting, either from victims or from third parties (e.g., other family members or neighbors), decreasing the reporting bias (ψ^*).

2.2 | Preliminary evidence on helpline calls and campaign ads

We examine patterns in calls (Y) using a novel and unique administrative database detailing calls to the 1522 anti-abuse helpline provided by the Italian Department for Equal Opportunities. Data are released in two different formats, both covering the period of February 1 to May 31 for the years 2015–2020: (1) *daily* frequency of calls at the national level, which we analyze in this Section; and (2) the *weekly* number of calls disaggregated by *province*, which are discussed in Section 3. The data provide information on the number of valid (i.e., excluding prank or erroneous) calls and those made specifically to seek help. The path out of an abusive situation often begins with initial contact in which victims learn about their outside options, and even more so in the context of the covid-19 pandemic, during which judicial restraining orders and reception in shelters was particularly problematic. For these reasons, our main measure also includes calls made to request information.⁹

Figure A2 presents the time series of daily calls to the 1522 helpline over the February 1 to May 31 period for the years 2019 and 2020. The 2019 series fluctuates around an average of 58 calls per day. While the number of calls in the first weeks of the 2020 series follow the same stable pattern, a substantial increase follows the launch of the campaign on March 23, 2020. On the first day of the campaign, the number of calls almost doubles, continuing to increase until the end of the period.¹⁰ It is worth noting that the number of operators at the 1522 call center did not vary throughout the period before March 23. It was gradually increased *only after* the surge in the number of calls that followed the

launch of the media campaign in response to the high level of demand. This leads us to exclude that the calls prior to the start of the campaign are underestimated due to congestion of the helpline.

In Figure 2, we compare the 2019 and 2020 daily time series through a typical event-study analysis.¹¹ The coefficients associated with the weeks preceding March 9 are not statistically different from the baseline. Over the first week of the lockdown, calls to the helpline decreased slightly. This suggests that the predicted rise in domestic violence (V^*) due to the implementation of the stay-at-home orders (Agüero, 2021; Arenas Arroyo et al., 2021; Leslie & Wilson, 2020) might have been more than compensated by the difficulties victims faced in reaching out for help (Silverio-Murillo et al., 2020), that is, an increase in reporting bias (ψ^*).¹²

With the start of the campaign, we observe a sudden upward jump of 50 additional calls per day, that is, an increase of about 100% with respect to the first week of February 2019. Coefficients become increasingly positive over time and reach almost 120 calls per day by the 12th week observed, implying a striking increase of almost 300%. Importantly, the number of calls remained high after lockdown measures were eased on May 4.¹³ Additionally, if we compare the trend in calls received in 2019 and in 2018, the coefficients—reported in light blue in Figure 2—show no departure from zero.

While the sudden increase in the number of calls soon after the launch of the campaign speaks to the awareness effect described, the evolution of Y throughout the post-campaign period is likely to be driven by a combination of increased awareness A and increased violence V^* . If the increase observed in helpline calls were only due to the large number of people being forced to stay at home, we would expect this to occur when mobility plunges in the first 2 weeks of March (Carteni et al., 2020). Data from Google Mobility Reports demonstrate that the time spent at residential places increases sharply after the first lockdown announcement on March 9, while the subsequent tightening of restrictions has a limited effect on mobility (Figure A3). Daily relative search volumes of Google queries corroborate the evidence on the increase in interest in the 1522 helpline in the same days (Figure A4).¹⁴

However, disentangling the effect of the campaign from the potential increased level of violence is difficult because the two are observationally similar, that is, they both increase Y . Moreover, the campaign was, in principle, homogeneous across geographic areas. We rely on the fact that ads were extensively aired on the public TV network, and we exploit geographical exposure at the regional level to separately identify the effect of the campaign on helpline calls.

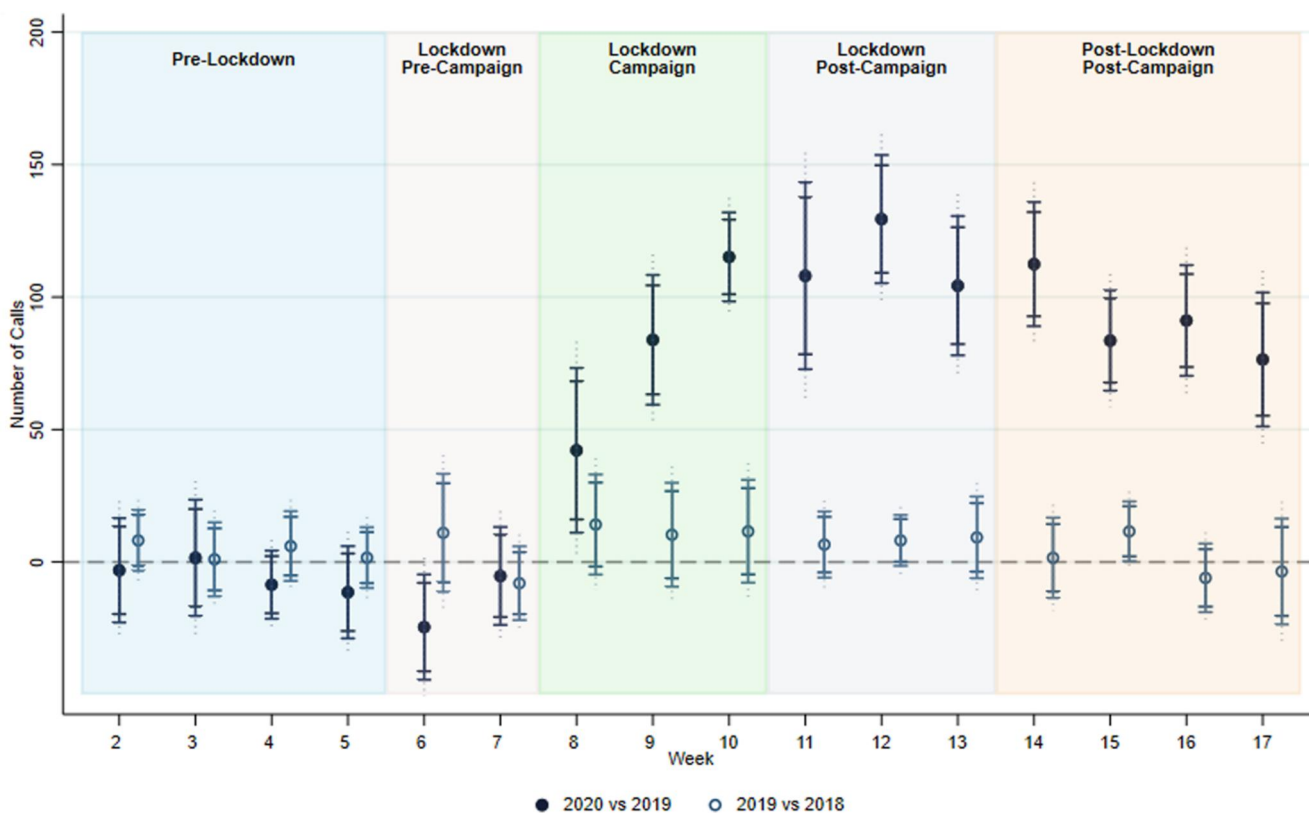


FIGURE 2 Event study on time series data. Coefficients and their respective 90%, 95% and 99% confidence intervals. The weekly differences between calls in 2020 and 2019 are in dark blue. Differences between calls in 2019 and 2018 are in light blue. Each week consists of a 7-day period (e.g., week 2 corresponds to February 9–15), while the baseline is the first week (February 2–8)

As individuals found themselves confined to their homes, the pool of people reached by the media campaign promoting the use of the helpline was unusually vast. Indeed, TV viewing soared in 2020. During the first days of the campaign (March 23–April 2), the number of people who watched the networks on which the campaign was aired increased by 41% with respect to 2019 (from 3.7 to 5.3 million people).

We exploit cross-sectional regional variation in pre-campaign exposure to the public *Rai* TV channels in a DiD setup. Our exposure variable accounts for the structure of the Italian broadcasting market and, in particular, the presence of *Rai*'s main generalist competitor network *Mediaset*. Since the end of 1990, the Italian TV broadcasting market had been dominated by *Rai* and its private competitor *Mediaset*. They represent a de facto duopoly as regards terrestrial unencrypted broadcasting, even after the recent digital transition allowed the creation of numerous new thematic networks owned by new operators (Durante et al., 2019). *Rai* and *Mediaset* air similar generalist show schedules, with news, political insights, variety and reality shows. Thus, we proxy TV viewing habits with the share of *Rai*-over-*Mediaset* TV viewers measured in 2019. A detailed discussion of our DiD setup and the validity of the parallel trend in our context is provided in Section 3.2.

Finally, we consider the interactive effect of the campaign with local characteristics such as the relative socio-economic status of women and the pervasiveness of gender stereotypes, which are addressed in Section 4.

3 | DATA AND EMPIRICAL STRATEGY

3.1 | Data description

Province-level data on 1522 helpline calls cover the February 1–May 31 period for the years 2015–2020, at a weekly frequency. Figure 3 displays the geographical distribution of the average number of calls per 100,000 inhabitants in 2019 and 2020. The maps highlight a sizable degree of geographical heterogeneity across the 110 provinces and within the 20 regions and show no evidence of the typical North–South Italian divide.

As previously mentioned, the campaign was extensively aired on the public *Rai* TV networks. During the lockdown, TV viewing intensified but the increase in viewers was rather homogeneous across broadcasters. Weekly data on TV audience shares from the Italian competition authority for the communication industries (AGCOM) shows that while the number of viewers increases equally by roughly 20% across *Rai*, its main competitor *Mediaset* and other TV channels, audience shares are almost unchanged when comparing 2019 and 2020 (Table 1). Figure A5 also shows that

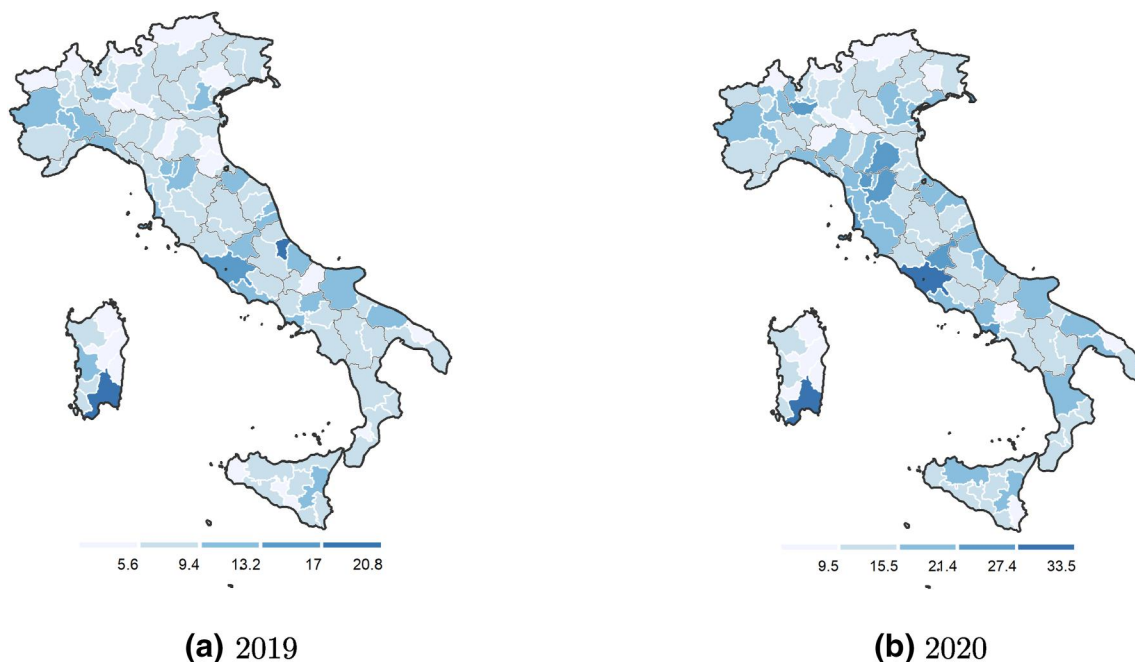


FIGURE 3 Calls to the 1522 hotline. Average number of calls per 100,000 inhabitants in the February–May period in 2019 and 2020 by province. The gray and white lines are regional (NUTS-2; 20 areas) and province (NUTS-3; 110 areas) boundaries, respectively

trends in audience shares over the February–May period in 2020 remained identical to 2019 (solid and dashed lines, respectively). In our analysis, we leverage the fact that in areas with higher *Rai* audience shares people were more exposed to the campaign ads promoting the 1522 helpline.

We also consider potential mediating factors that might have influenced the effectiveness of the campaign. We use the female-to-male wage ratio and the political representation of women as measures of women's socio-economic status in a given province. The former, gathered from the Labor Force Survey, is the ratio of the female hourly wage divided by that of males in the years 2015–2018 and proxies the relative economic status of women at the province level. The share of women in politics is computed as the average share of women elected to municipal councils over the 2015–2018 period, using data from the Ministry of Interior. This indicator accounts for the empowerment of women in a given area (Iyer et al., 2012). Although the average share of women holding office in local Italian governments increases from 6.66% in 1986 to 31.88% in 2018, it is far from being balanced with male representativeness. In both cases, we consider a dummy variable that takes a value of one in provinces where the corresponding indicator is below the bottom quartile of the national distribution.

Moreover, we exploit a survey on gender stereotypes carried out by the Italian National Institute of Statistics (ISTAT) and the Department for Equal Opportunities in 2018.¹⁵ The survey highlights the role of gender stereotypes, distinguishing between what women and men believe to be acceptable or agreeable regarding violence, abuse and gender discrimination-related topics. Each variable measures the share of respondents who agree with or find acceptable the corresponding statement. These are listed in Table 2 and summarized in Table A1. We aggregate the information provided into two indicators that summarize different dimensions: male entitlement and sexual dominance (SDO) and the acceptability of violence (VAC). These take a value of one if the share of respondents agreeing with at least one of the corresponding statements is above the top quartile of the national distribution. Thus, the regional information on beliefs and opinions of women and men quantifies the pervasiveness of inequitable gender norms.

TABLE 1 TV audience shares

	2019				2020				2020–2019 Growth viewers (%)
	Avg viewers	Avg share	Min share	Max share	Avg viewers	Avg share	Min share	Max share	
<i>Rai</i>	3,836,984	0.411	0.392	0.478	4,577,774	0.409	0.394	0.488	19
<i>Mediaset</i>	3,349,892	0.354	0.309	0.367	4,055,147	0.353	0.308	0.363	19
Other	2,202,422	0.235	0.213	0.250	2,724,761	0.238	0.204	0.250	20

Note: Average number of viewers and audience shares computed over the February–May period. “Other” channels include De Agostini, Discovery, La7, Fox and SKY.

TABLE 2 Gender stereotypes

SDO Sexual dominance (Agree)	
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 propositioned for sexual intercourse women often say no when they mean yes
6	If a woman is sexually abused when under the influence of alcohol or drugs, she is partially responsible for the abuse
7	Violence claims are often false
VAC Violence acceptability (Sometimes/always acceptable)	
1	A man slapping his girlfriend because she flirted with another man
2	Slapping between a couple every once in a while is normal

Note: Variables appearing in the survey provided by ISTAT. Each variable measures the share of respondents who agree with or find acceptable the corresponding statement. The aggregate categories (SDO and VAC) are calculated as having at least one of the specific subcategories above the 75th percentile of the corresponding distribution.

3.2 | Difference-in-differences using TV viewer shares

Our main analysis consists of evaluating the effects of the campaign on the use of the 1522 helpline. Since the campaign was advertised nationwide, it is difficult to isolate its effects from other concurrent changes. We address concerns regarding confounding effects by exploiting variation in the regional exposure to ads on national TV, that is, differences in the initial prevalence of *Rai-over-Mediaset* audience shares. To test whether the anti-abuse campaign has been effective, we use the following DiD specification on week-province data spanning February to May in 2019 and 2020:

$$Y_{p,r,w} = \alpha + \sum_{\tau=2}^6 \beta^{\tau} D_w^{\tau} I_w^{2020} + \sum_{\tau=2}^6 \delta^{\tau} D_w^{\tau} RAI_r + \sum_{\tau=2}^6 \phi^{\tau} D_w^{\tau} I_w^{2020} RAI_r + \gamma RAI_r I_w^{2020} + \theta X_{p,w} + \tau I_w^{2020} + \omega_{p,r} + \epsilon_{p,r,w}, \quad (1)$$

where $Y_{p,r,w}$ is the number of calls per 100,000 inhabitants in province p (110 NUTS-3 areas), region r (20 NUTS-2 areas) and week w ; $\tau = \{2...6\}$ represents the pre-lockdown (*PreLD*, February 23–March 7), lockdown and pre-campaign (*PreCamp*, March 8–21), lockdown and campaign (*Camp*, March 22–April 11), lockdown and post-campaign (*PostCamp*, April 12–May 2), and post-lockdown and post-campaign (*PostLD*, May 3–May 31) periods, respectively; and D_w^{τ} is the corresponding dummy variable. Our baseline (February 9–22) is prior to the first lockdown zone imposed over 11 municipalities in Northern Italy on February 23. I_w^{2020} is a dummy variable for the year 2020, while RAI_r is the demeaned share of TV audience for the public *Rai* channels over that of its private generalist competitor, *Mediaset*, in a given region during our baseline period, that is, the first week of February 2019. Given that the campaign ads were aired on *Rai* channels only, this indicator measures the exposure of a given regional population to the campaign.

The set $X_{p,w}$ includes double and triple interactions between the period τ , year, and income per capita and the number of female homicides per 100,000 inhabitants measured at the province level (2015–2018 and 2015–2017 averages, respectively).¹⁶ Since we do not have information on provincial characteristics varying weekly, we allow for non-linear differential trends based on these covariates, that is, we multiply each cross-sectional characteristic by τ and year dummy variables. This is done to rule out potential residual correlations between pre-existing cross-sectional differences in income and violence against women with both the prevalence of violence and TV viewing habits, which might confound our main estimates. In the robustness checks, we also allow for additional differences in education, the relative occupation of women versus men and sexual abuse. The double interactions between I_w^{2020} and our period dummy variables τ indicate the evolution of the underlying violence. Lastly, $\omega_{p,r}$ accounts for province-specific unobservable factors while $\epsilon_{p,r,w}$ is the error term. All regressions are weighted by the province-level population as of the 2011 census and standard errors are clustered at the province level.¹⁷

The main coefficients of interest are the full set of ϕ^{τ} estimates. They identify differences in calls per 100,000 inhabitants across regions with higher and lower exposure to the TV campaign in each period. Thus, we expect estimates to be positive after March 23 if a higher initial *Rai-over-Mediaset* exposure predicts a larger increase in calls via a rise in awareness. The main identifying assumption for our DiD strategy is that differences in the shares of *Rai-over-Mediaset* viewers are not associated with differential trends in the outcome 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 (Bertrand et al., 2004). Indeed, in the absence of pre-policy differential patterns we should detect no impact in the periods prior to the campaign.

In addition, our identifying assumption is that as a consequence of the lockdown, the level of violence did not increase proportionally more in areas with a relatively higher share of *Rai-over-Mediaset* viewers. Assuming a constant reporting bias, this would lead to an overestimation of the effect. On the one hand, the household bargaining (e.g., Aizer, 2010; Anderberg et al., 2016) and backlash theories (e.g., Atkinson et al., 2005) predict that a shift in the relative power within households might induce a drop or a rise in violence, respectively. On the other hand, stay-at-home orders might have enhanced the probability of undergoing abuse because they increased the time victims spend with their abusers (Dugan et al., 1999) and reduced the chances of interacting with friends or other relatives (Finkelhor et al., 1983). In Figure A6, we show that the geographical distribution of TV viewers is uncorrelated to changes in relative economic outcomes (measured by women's relative loss of jobs in the second quarter of 2020) or to residential mobility during the lockdown.¹⁸ Finally, in the same Figure A6, we also show that the share of *Rai-over-Mediaset* viewers is not correlated with helpline calls in 2019 or with the other two proxies of violence drawn from IPV survey responses and police reports.

4 | RESULTS

4.1 | Main

Table 3 reports our main results; column 1 refers to the baseline specification without control variables and column 2 to our preferred fully specified model.¹⁹

The first set of coefficients, which are associated with the interaction between the 2020 indicator and period dummy variables, denote that while potentially yielding an overall increase in violence, stay-at-home orders might have simultaneously diminished the chances of seeking help for IPV victims, as discussed in Section 2. The coefficients associated with the reference group become positive in the weeks following the launch of the campaign, implying an overall increase in the number of calls that is consistent with the surge in IPV throughout the country during lockdown (Agüero, 2021; Arenas Arroyo et al., 2021) and an increase in awareness across the less exposed areas as well.

Our coefficients of interest, which are also shown in Figure 4, are those associated with the differential effect of the campaign on the number of helpline calls between areas with a larger share of *Rai* viewers for each of the periods considered (*Main Effects* panel, Table 3). Estimates show that while the number of calls did not change across groups in the period prior to the lockdown (PreLD) or in the first weeks after the stay-at-home order was enacted (PreCamp), they increased significantly after the launch of the campaign to promote the 1522 helpline. The increase amounts to 0.73 in the weeks the campaign was aired on TV and persists in the following weeks (0.50), meaning that a one-standard-deviation higher share of *Rai* over *Mediaset* viewers (0.26) produces almost 40% and 30% more calls, respectively. The estimated effects then return to being non-distinguishable from zero after the end of the lockdown, as a reduction in the number of helpline calls is seen in highly exposed areas. This may be driven by the fact that when restrictions are eased victims are again able to distance themselves from their violent partners.

Importantly, the coefficients associated with the triple interactions in the pre-lockdown and lockdown periods uncover the absence of differential effects in the weeks preceding the launch of the campaign. This supports the validity of the design.²⁰ In addition, our fully specified model accounts for differential trends in pre-2017 averages of income per capita and female homicides rates. While differential trends in income are never different from zero, places characterized by a higher degree of extreme violence against women display differential positive trends in the number of helpline calls. Yet, our main coefficients of interest are not affected by the inclusion of these additional controls. Nonetheless, we acknowledge that these might not fully capture locality characteristics that are potentially correlated with TV watching habits or the prevalence of domestic violence. Thus, in Figure A8 we increasingly add non-linear differential trends in the pre-existing levels of education, the relative employment of women versus men, and sexual violence, which are meant to absorb other possible confounding factors. The inclusion does not change our results.²¹

In columns 3 and 4 of Table 3, we consider a dichotomous exposure variable that takes a value of one for regions in the top quartile of the *Rai*-over-*Mediaset* distribution. Regardless of the specification used, the estimates presented in Table 3 display an increase in the number of calls after the launch of the campaign in areas where *Rai* channels have more viewers.

The evidence is also robust to considering calls for requests for help only (i.e., excluding requests for information; Table A2, column 1) and to computing different TV exposure measures: the share of *Rai* viewers or the share of *Mediaset* viewers taken separately and the *Rai*'s audience share over that of all other channels (columns 2–4). In column 3, the sign of the coefficients is rightly inverted, as *Mediaset* audiences would not view the campaign ads. Finally, in column 5 we find similar results on the basis of a Poisson pseudo log-likelihood (PPML) estimator, which might better account for potential incidental parameter issues (Santos Silva & Tenreiro, 2006).²²

4.2 | Where was the campaign most effective?

After assessing the impact on the reporting of domestic violence, we investigate whether a set of local characteristics is associated with a differential response to the campaign. In our exercise, we are particularly interested in pinpointing the relevant drivers of help-seeking behavior by victims of domestic violence.

We begin by following a long-established literature investigating the relationship between IPV and the socio-economic status of women (Aizer, 2010; Alonso-Borrego & Carrasco, 2017; Atkinson et al., 2005; Guarneri & Rainer, 2018; Iyer et al., 2012). We exploit variation in the female-to-male wage ratio and in women's political representation to proxy for the relative economic autonomy and empowerment of women, respectively.

TABLE 3 Calls to 1522 and Rai/Mediaset audience shares

	(1)	(2)	(3)	(4)
	Calls per 100,000 inhabitants			
RAI:	Share RAI-over-Mediaset		High RAI-over-Mediaset	
2020 * Pre-Lockdown	-0.105** (0.043)	-0.084 (0.233)	-0.106** (0.048)	-0.026 (0.221)
2020 * Lockdown	-0.122*** (0.041)	-0.277 (0.247)	-0.134*** (0.043)	-0.257 (0.226)
2020 * Campaign	0.820*** (0.111)	0.670* (0.342)	0.666*** (0.072)	0.201 (0.322)
2020 * Post-Campaign	1.100*** (0.131)	0.965** (0.399)	0.979*** (0.117)	0.647 (0.450)
2020 * Post-Lockdown	0.791*** (0.077)	0.259 (0.360)	0.788*** (0.091)	0.401 (0.376)
Main effects				
2020 * Pre-Lockdown * RAI	-0.085 (0.165)	-0.078 (0.177)	0.013 (0.105)	0.012 (0.109)
2020 * Lockdown * RAI	0.019 (0.174)	-0.024 (0.187)	0.051 (0.103)	0.022 (0.109)
2020 * Campaign * RAI	0.764* (0.423)	0.734*** (0.225)	0.608* (0.330)	0.469*** (0.137)
2020 * Post-Campaign * RAI	0.520 (0.544)	0.496* (0.282)	0.484 (0.356)	0.312** (0.143)
2020 * Post-Lockdown * RAI	-0.070 (0.329)	-0.214 (0.252)	0.021 (0.182)	-0.096 (0.130)
Controls				
2020 * Pre-Lockdown * Femicide		0.008 (0.024)		0.010 (0.025)
2020 * Lockdown * Femicide		0.030 (0.019)		0.030 (0.022)
2020 * Campaign * Femicide		0.184*** (0.037)		0.158*** (0.029)
2020 * Post-Campaign * Femicide		0.240*** (0.034)		0.222*** (0.038)
2020 * Post-Lockdown * Femicide		0.126*** (0.039)		0.133*** (0.039)
Observations	3740	3740	3740	3740
R-squared	0.559	0.613	0.564	0.614
Province FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Province-specific income trends	N	Y	N	Y

Note: The dependent variable is the total number of calls per 100,000 inhabitants. The exposure variable is defined as the average share of Rai viewers over the average share of Mediaset viewers over the February 2–15 2019 period (columns 1–2) or as a dummy equal to one for regions in the top quartile of the Rai-over-Mediaset distribution over the same period (columns 3–4). Sub-periods are defined as: baseline (February 9–22), pre-lockdown (February 23–March 7), pre-campaign (March 8–21), campaign (March 22–April 11), post-campaign (April 12–May 2) and post-lockdown (May 3–31). All regressions include province fixed effects. Controls account for province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants, as defined in Equation (1) (columns 2 and 4).

* $p < .10$ ** $p < .05$ *** $p < .01$.

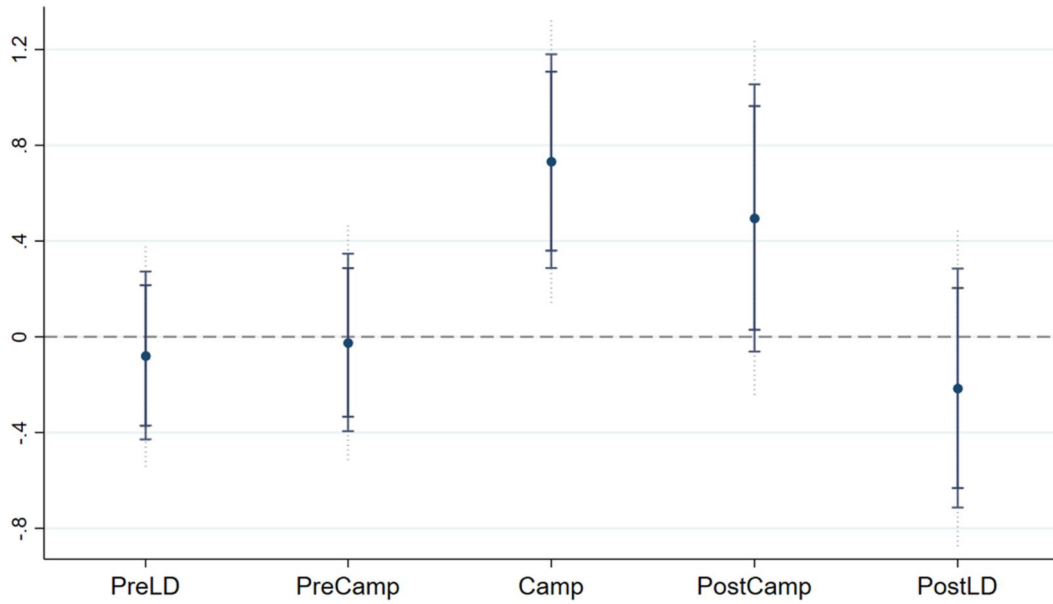


FIGURE 4 Calls to 1522 and *Rai/Mediaset* audience shares. Coefficients intervals estimated from Equation (1). The extended set of coefficients is displayed in Table 3, column 2. The dependent variable is the total number of calls per 100,000 inhabitants. The exposure variable is defined as the average share of *Rai* viewers over the average share of *Mediaset* viewers in the period of February 2–15, 2019. Sub-periods are defined as: baseline (February 9–22), pre-lockdown (February 23–March 7), pre-campaign (March 8–21), campaign (March 22–April 11), post-campaign (April 12–May 2) and post-lockdown (May 3–31). Includes province and period-year fixed effects and province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants

In our main specification (Equation 1), we include an interaction with the dummy variable H_p , which takes a value of one when province p belongs to the bottom quartile of the national distribution of the variables considered. Thus, our coefficient of interest is the new set σ_H^τ associated with the interaction term $D_w^\tau I_w^{2020} RAI_r H_p$, which captures the differential effect of exposure to the campaign in areas where women have a *low* socio-economic status. We then consider the following augmented model:

$$\begin{aligned}
 Y_{p,r,w} = & \alpha + \sum_{\tau=2}^6 \beta^\tau D_w^\tau I_w^{2020} + \sum_{\tau=2}^6 \delta^\tau D_w^\tau RAI_r + \sum_{\tau=2}^6 \phi^\tau D_w^\tau I_w^{2020} RAI_r \\
 & + \sum_{\tau=2}^6 \beta_H^\tau D_w^\tau I_w^{2020} H_p + \sum_{\tau=2}^6 \delta_H^\tau D_w^\tau RAI_r H_p + \sum_{\tau=2}^6 \phi_H^\tau D_w^\tau I_w^{2020} RAI_r H_p \\
 & + \gamma RAI_r I_w^{2020} + \theta X_{p,w} + \tau I_w^{2020} + \omega_{p,r} + \epsilon_{p,r,w},
 \end{aligned} \tag{2}$$

By considering provinces at the bottom quartile of the distribution of the female-to-male wage ratio, we identify areas where women's degree of autonomy is lower with respect to men and victimization is likely to be disproportionately under-reported. Similarly, areas where the share of female elected officials in local government institutions is low are those where women tend to experience lower levels of empowerment. For this reason, reporting rates in these areas are expected to also be lower.

Our analysis, however, indicates no differential trends in the reporting of violence to the helpline across provinces with different levels of female relative autonomy or empowerment during the campaign, holding constant differentials in pre-determined levels of income per capita and homicides perpetrated against women (Figure 5 and Table A3, columns 1–2). This suggests that the effectiveness of the campaign in enhancing help-seeking from victims is not significantly affected by factors that can be directly ascribed to female socio-economic status.

We then explore the role of gender norms. Recent works by González and Rodríguez-Planas (2020), Tur-Prats (2019) and Alesina et al. (2020) identify deeply rooted traditional gender norms and gender stereotypes as important determinants of IPV and its reporting. Building on these findings, we investigate whether pre-existing differences in

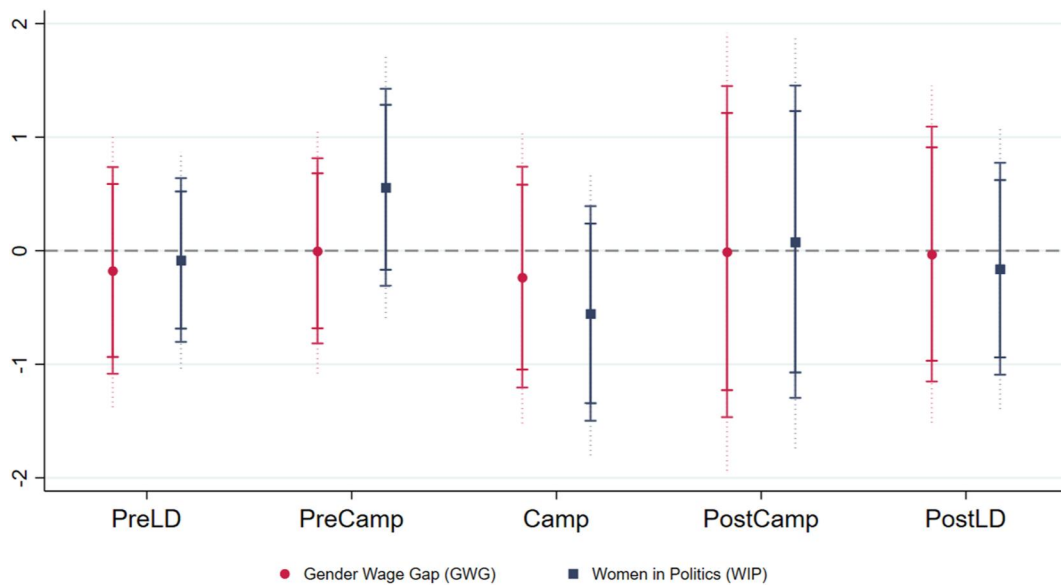


FIGURE 5 Calls to 1522 and socio-economic factors. Coefficients and their respective 90%, 95% and 99% confidence intervals associated with the interactions with a dummy variable that takes a value of 1 for provinces at the bottom quartile of the distribution of the female-to-male median hourly wage ratio and of the share of women elected to local government institutions. The extended set of coefficients is displayed in Table A3, columns 1–2. Sub-periods are defined as: baseline (February 9–22), pre-lockdown (February 23–March 7), pre-campaign (March 8–21), campaign (March 22–April 11), post-campaign (April 12–May 2) and post-lockdown (May 3–31). All regressions include province and period-year fixed effects. Controls account for province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants

cultural factors across regions are associated with differential effects of the campaign in fostering the use of the anti-abuse helpline.

We consider the two indicators conveying information on the pervasiveness of male entitlement and sexual dominance (SDO) and on the acceptability of violence (VAC). Also in this case, we include in our main specification an interaction with the dummy variable H_p , which takes a value of one when province p belongs to the top quartile of the national distribution of the indicator considered.

Figure 6 shows the set of estimated interaction coefficients σ_H^T separately for the SDO and VAC indicators based on female respondents.²³ In both cases, the interaction terms corresponding to the campaign and post-campaign periods are negative and statistically significant. In order to address concerns about these findings being explained by a lower increase in actual domestic violence during the lockdown in areas with stronger gender stereotypes with respect to areas where they are less pervasive, our estimates account for differential trends in the rate of female homicide and income at the province level.²⁴ Once restrictions are eased, the differential effect disappears, suggesting constant trends in calls between areas with high and low pervasiveness of gender stereotype.

The correlation between exposure to the campaign and calling the helpline is significantly lower in areas where gender stereotypes are more pervasive, with respect to “low-stereotype” areas. In the latter, the coefficient is positive and statistically significant (Table A3, columns 3–4). We interpret these results as suggestive of a lower degree of effectiveness of the media campaign in fostering help-seeking in areas where inequitable gender norms are more prevalent. This holds both when considering gender norms in terms of masculine sexual domination and in terms of the acceptability of violence in intimate relationships.

Finally, the comparison across answers by women and men suggests that the differential effect of the media campaign is similar, although it is less precisely estimated in the case of men (Table A3, columns 5–6).

5 | CONCLUSION

Even outside of times of crisis, women face the greatest danger within their own households. In the EU, 33% of women over the age of 15 have been physically or sexually abused. Out of those who have had at least one partner, one in five have experienced physical or sexual violence by an intimate partner (European Union Agency for Fundamental

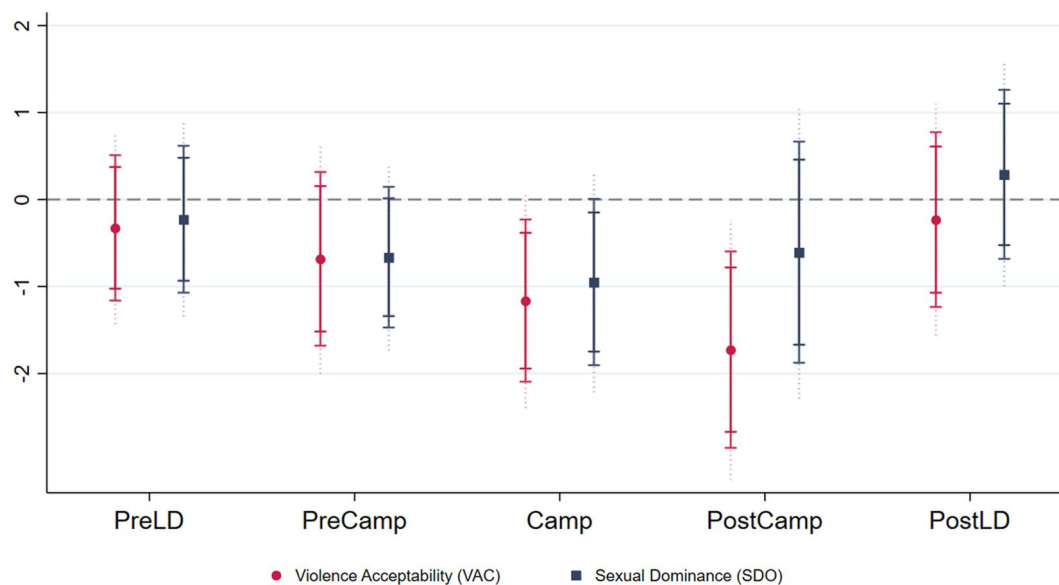


FIGURE 6 Calls to 1522 and gender stereotypes. Coefficients and their respective 90%, 95% and 99% confidence intervals associated with interactions with a dummy variable that takes a value of 1 for provinces at the top quartile of the distribution of the violence acceptability and sexual dominance indicators. The extended set of coefficients is displayed in Table A3, columns 3–4. Sub-periods are defined as: baseline (February 9–22), pre-lockdown (February 23–March 7), pre-campaign (March 8–21), campaign (March 22–April 11), post-campaign (April 12–May 2) and post-lockdown (May 3–31). All regressions include province and period-year fixed effects. Controls account for province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants

Rights, 2015). Besides being a major problem in terms of the violation of human rights, violence against women also has numerous consequences in terms of women's physical and mental distress, ultimately hampering female 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 the reporting of domestic violence increased sharply following an advertising campaign for the 1522 anti-abuse helpline launched in Italy 2 weeks after the nationwide lockdown in 2020. We observe a drop in calls over the first week of lockdown, whereas the domestic violence awareness campaign triggered a sudden and exceptional increase in calls by victims. Following an immediate jump, calls increased by about 300% after a month. The number of calls remained high even once lockdown measures were eased.

We address the challenge of identifying the effects of a national intervention separately from increasingly stringent lockdown measures by exploiting regional variation in the audience share of the only broadcaster that aired the ads. We find that the awareness campaign significantly enhanced help-seeking behavior from victims.

We then investigate variation in the campaign's effectiveness depending on the strength of gender stereotypes. Exploiting a survey, we find evidence that strong gender stereotypes hamper the effectiveness of the anti-abuse campaign. This holds true after accounting for differentials in income and violence, the latter being proxied by female homicides. We do not find robust evidence on differential effects on calls based on women's socio-economic status at the local level. This suggests that the success of the media campaign is, to some extent, responsive to gender stereotypes rather than female economic status.

Our analysis refers to a period of undoubtedly exceptional circumstances, as people throughout Italy faced very stringent and prolonged lockdown measures. As a result, it is likely that the campaign reached an otherwise impracticable audience size, reducing to some extent the external validity of our results. Nonetheless, these same circumstances have enabled the assessment of the effects of an awareness campaign on the reporting of violence. This is key for policymakers to understand what drives domestic violence and how to design appropriate interventions to encourage the reporting of abuse and work to reduce domestic violence. If only income matters, policymakers should invest in programmes aimed at reinforcing women's autonomy via improvements in labor market opportunities and the expansion of shelter access. However, our analysis shows that the pervasiveness 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 encourage the reporting of abuse, in turn potentially leading to the implementation of poorly designed policies.

Overall, our results highlight the need to break down stereotypes while promoting women's socio-economic status and autonomy. Potential policies may be aimed at informing people about their own biases or training them to ensure

equal behavior, both within and outside the household. Other solutions may target the self-confidence of women and provide alternative role models. Indeed, supporting civil society and public services in preventing and combating gender stereotypes is a priority of the European Commission's Gender Equality Strategy 2020–2025.

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CONFLICT OF INTEREST

The authors have no relevant financial or non-financial interests to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the Italian Department of Equal Opportunities. Restrictions apply to the availability of these data, which were used under license for this study. Data are available from the Italian Department of Equal Opportunities with the permission of Presidency of the Council of Ministers (segreteria.pariop@governo.it) detailing: (i) what is the aim of the research; (ii) what data is needed; (iii) which institutions are involved.

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ENDNOTES

- ¹ See details on the risk factors and health consequences of violence against women at <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>.
- ² See Peterman et al. (2020) and Peterman and O'Donnell (2020a,b) for a thorough review of the recent literature on domestic violence during the covid-19 pandemic.
- ³ The economic literature on social norms, following the seminal contribution by Akerlof and Kranton (2000), analyses the drivers and consequences of social norms with a specific reference to women's labor market outcomes (Alesina et al., 2013; Bertrand et al., 2015; Fernandez, 2007; Fortin, 2005). Culture is also studied as a mediating factor in the relationship between IPV and women's economic status (Cools & Kotsadam, 2017; Tur-Prats, 2021). Recently, Bhalotra et al. (2020) show that in countries where women have limited access to divorce, domestic violence is increasing with higher female employment rates. The opposite is true in countries where women have more difficulties leaving their violent husbands. Fajardo-Gonzalez (2021) finds a positive association between domestic violence and women's employment in Colombia, possibly because women choose to improve their options outside an abusive relationship via labor market participation.
- ⁴ Tur-Prats (2019) uses contemporaneous and historical Spanish data to test the hypothesis that family structures are associated with different beliefs about gender roles and can explain differences in rates of IPV. González and Rodríguez-Planas (2020) identify the effects of traditional gender norms measured in the country of origin on IPV incidence and intensity among first- and second-generation immigrant women in Europe. Alesina et al. (2020) show that the historical-cultural traits of ethnic groups in terms of the economic role of women, marriage and living arrangements have long-lasting effects on current levels of domestic violence and women's labor market participation in African countries.
- ⁵ Yearly national averages over the 2015–2019 period. Requests for help include calls from victims of violence (30%) or stalking (5%), reporting of violence by a third person (usually a family member or friend, 7%) and emergencies (1%). Information on the reason for the call is only available as yearly national counts. Prank and erroneous calls are excluded.
- ⁶ The first comes from a multi-purpose survey conducted by ISTAT in 2014 that contains specific questions on violence against women. The second measure is drawn from aggregate statistics provided by the Italian State Police. We obtain identical results if we consider the share of female respondents who have experienced physical or sexual violence from partners or non-partners, separately, and the number of charges reported by the police on all crimes attributable to violence against women (i.e., including also beating, harassment and sexual violence).
- ⁷ Schools and universities nationwide closed on March 5, although in some areas of northern Italy their closure started around the last week of February. From March 9, 2.7 million people stopped working (11% of total employment) while almost 8 million switched to remote

working arrangements as the government imposed closure on most retail shops, bars and restaurants. Two weeks later, the lockdown was strengthened and all non-necessary businesses and industries were interrupted. Around 5.2 million additional workers remained at home (Barbieri et al., 2020). Only groceries, pharmacies and shops and industries defined as essential (49.4% of Italian industries) were allowed to operate, along with remote work activities. The decree also imposed restrictions on traveling, as it prohibited moving across municipalities unless for proven work needs, health reasons or reasons of absolute urgency. These provisions were extended until May 4, when lockdown measures began to be eased.

- ⁸ Atkinson et al. (2005), Alonso-Borrego and Carrasco (2017) and Guarneri and Rainer (2018) provide evidence consistent with the predictions of male backlash theory, according to which increased economic opportunities for women might lead to a higher prevalence of IPV because men feel threatened by losing their traditional breadwinner role in the household. In sharp contrast, Aizer (2010) and Anderberg et al. (2016) find results compatible with a bargaining model where the greater economic independence of women has a negative effect on IPV due to improved outside options and intra-household bargaining power (Farmer & Tiefenthaler, 1997; Tauchen et al., 1991).
- ⁹ Yet, as shown in the robustness checks, only considering calls to request help leads to similar results. Daily national counts and province-week-level counts covering the second half of the year are not available. Information on the identity of the caller is not disclosed.
- ¹⁰ The last official communication about the campaign is recorded on April 16.
- ¹¹ The event study is based on the following model: $Y_d = \alpha + \sum_{\tau=2}^{17} \delta_{\tau} D_{w+\tau} + \varepsilon_d$, where Y_d is the daily difference in calls to the 1522 helpline between 2019 and 2020 and $D_{w+\tau}$ are weekly dummy variables (the first week of February as a baseline, i.e., $\tau = 1$).
- ¹² This is also consistent with a drop in the reporting of episodes of violence involving non-cohabiting abusers. Moreover, while the shocks to household finances induced by covid-19 measures could potentially determine a reduction in violence, we note that the evidence produced so far (Arenas Arroyo et al., 2021) goes in the opposite direction.
- ¹³ The results also hold when comparing calls in 2020 to: (i) the average number of calls over the years 2015–2019, to exclude specific pattern in 2019; (ii) the calls in 2015, to account for day-of-the-week heterogeneity, since in both years January 1 is a Wednesday.
- ¹⁴ We cannot fully exclude that victims of IPV decide to call for help only after some time. If this was the case, however, we would not expect to observe such a sharp increase in the number of calls at the launch of the campaign on March 23.
- ¹⁵ The survey covers 15,034 families and is representative of the population aged 18–74 at the provincial level, albeit only regional aggregation by gender is available. The survey follows the same sampling scheme as the Italian Labour Force Survey (LFS). In particular, the sample for 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 conducted using the computer-assisted telephone interviewing (CATI) method, were carried out from June to November 2018.
- ¹⁶ Both variables are provided by ISTAT. Data on female homicides come from administrative data on causes of death, which cover all deaths occurring in a calendar year. The medical information from individual death certificates is encoded according to the WHO International Statistical Classification of Diseases, Injuries and Causes of Death, Revision X (ICD-10). The latest available data refer to 2017.
- ¹⁷ Similarly to Agüero (2021), we compute robust standard errors clustered at the region-year (40 clusters) and region-week level (340 clusters) and find robust evidence. Using the Driscoll–Kraay correction yields smaller standard errors, which would imply larger t-statistics. Hence, we opt for a more conservative approach.
- ¹⁸ The former is computed as the share of female-to-male job losses in 2020q2 compared to 2019q2. The latter is the average residential mobility index drawn from Google Mobility reports (see the note to Figure A3).
- ¹⁹ Adding region-by-year fixed effects yields identical results.
- ²⁰ We further substantiate the reliability of the common trend assumption by extending our panel to 2017 and substituting our period indicators τ with weekly dummy variables. Figure A7 shows that this alternative strategy yields no differences in the number of calls across highly and less exposed areas until the launch of the campaign, when the first statistically significant rise in helpline calls is registered.
- ²¹ We do so interacting each provincial cross-sectional characteristic multiplied by period τ and year dummy variables, controlling for all other double interactions. We reach similar conclusions using other proxies of economic status such as wage, the gender wage ratio and the unemployment rate.
- ²² PPML accounts for dependent variables with many zeros and different patterns of heteroskedasticity, and it is robust to outcome measurement errors. Its consistency does not depend on the distributional assumption on the dependent variable, but rather on the correct specification of its conditional mean (Santos Silva & Tenreiro, 2006).
- ²³ The full list of coefficients is reported in Table A3 (columns 3–4). Detailed results by sub-category are provided in Table A4.
- ²⁴ Importantly, while other measures of gender violence suffer from under-reporting, this is hardly the case for homicides.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX

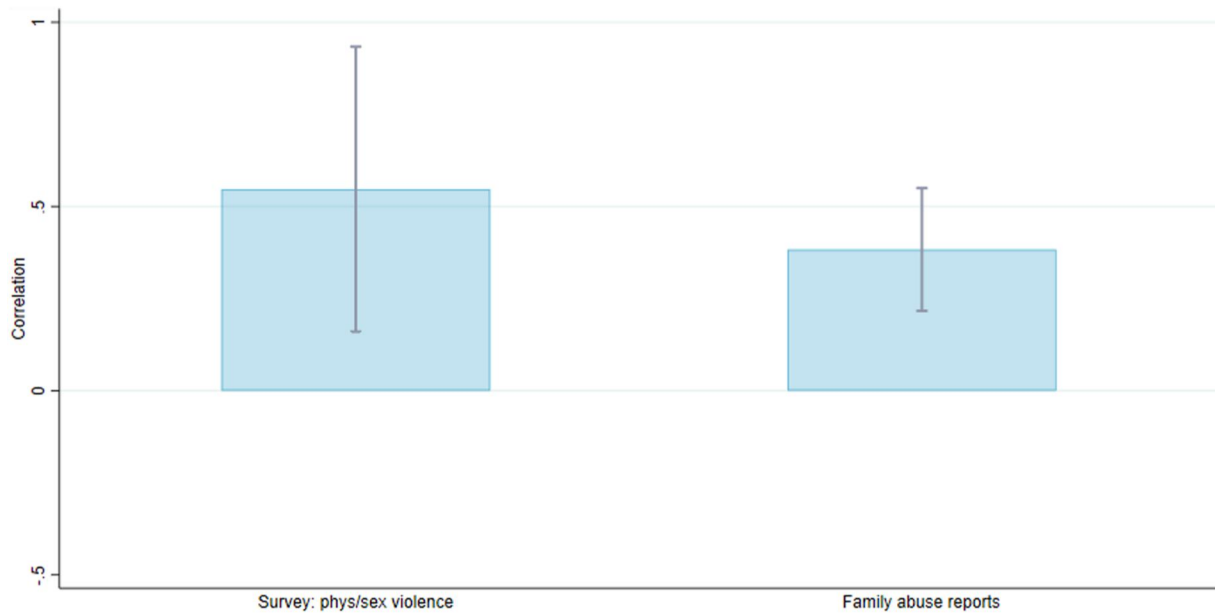


FIGURE A1 Helpline calls and other proxies for violence. Correlations and corresponding 95% confidence intervals between the number of calls to the 1522 helpline and (i) the share of survey female respondents who have experienced physical or sexual violence in the past 12 months and (ii) the number of reports of family abuse to the police

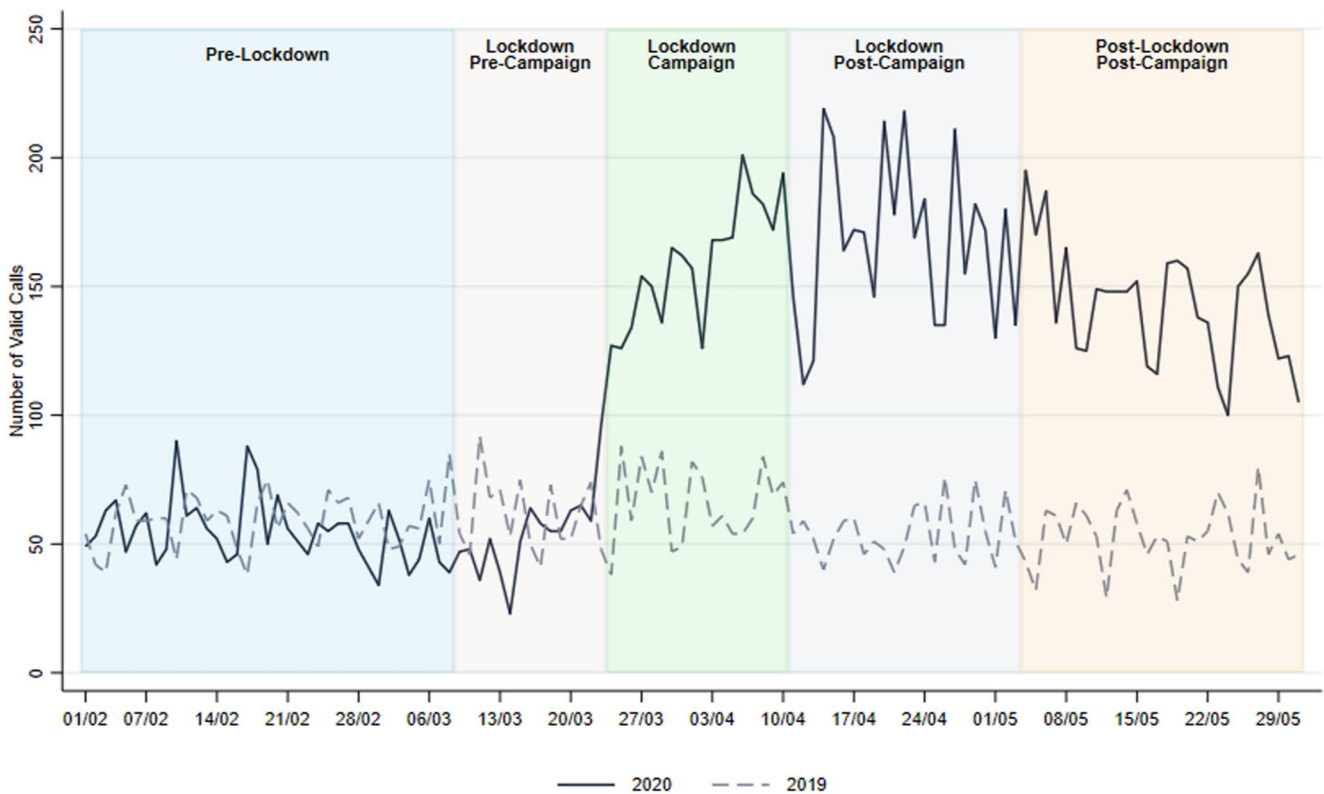


FIGURE A2 Daily calls to the 1522 helpline. Daily number of valid calls to the 1522 helpline over the February–May period in 2019 (light blue) and 2020 (dark blue)

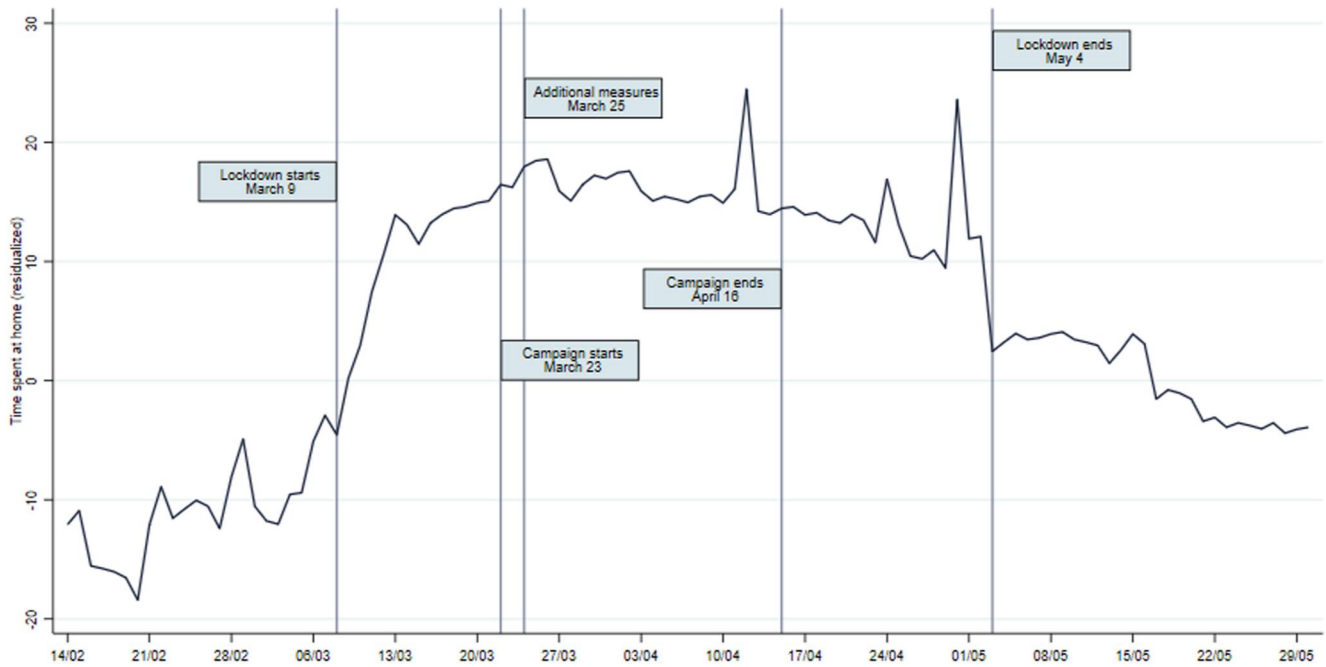


FIGURE A3 Time spent at residential places. Mobility trends, Google Mobility reports. The index measures time spent at residential places with respect to a baseline (the median value for the corresponding day of the week during the 5-week period from January 3 to February 6, 2020). The values shown are the residuals of a regression of the index on day-of-the-week dummies. Residential places are the usual places of residence of Google and Android users

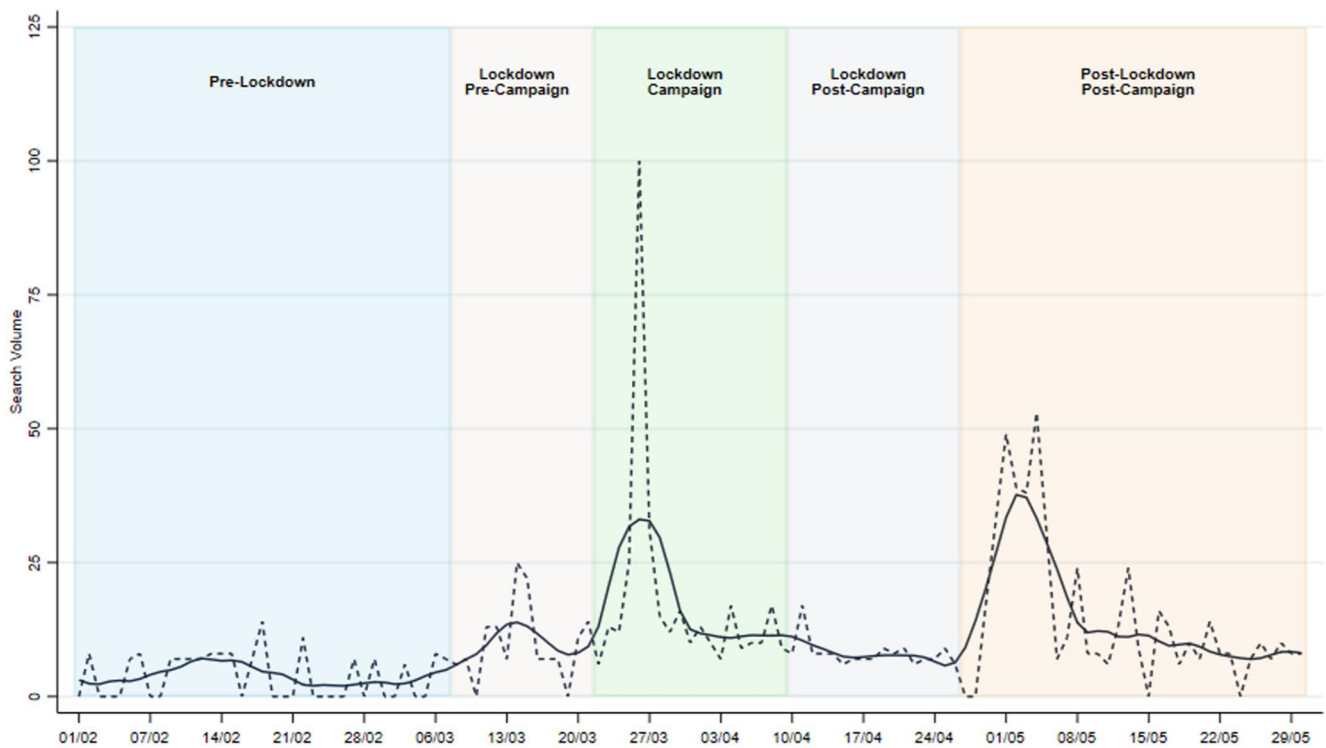


FIGURE A4 Web searches for 1522. Data are collected from Google Trends. The search for the query '1522' is normalized for its relative popularity on a scale of 0–100 over the February 1–May 31 period. The dashed line is the raw data, and the solid line is its local polynomial regression fitting (i.e., LOWESS) with $\alpha = 0.1$

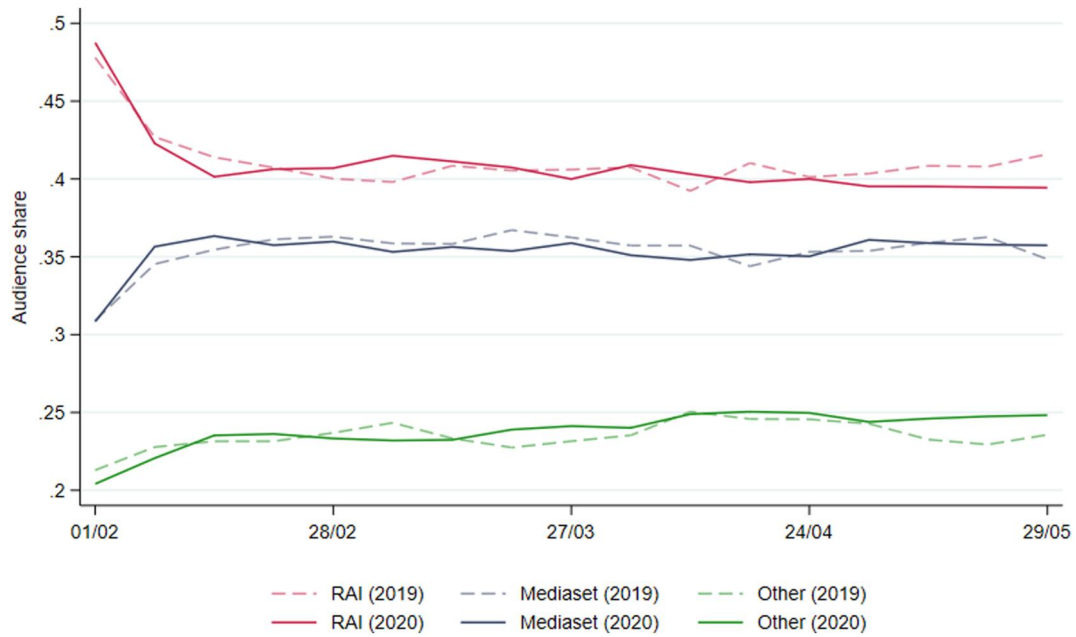


FIGURE A5 Audience share trends. TV audience shares computed on data from AGCOM for the February–May period in 2019 and 2020. “Other” channels include De Agostini, Discovery, La7, Fox and SKY

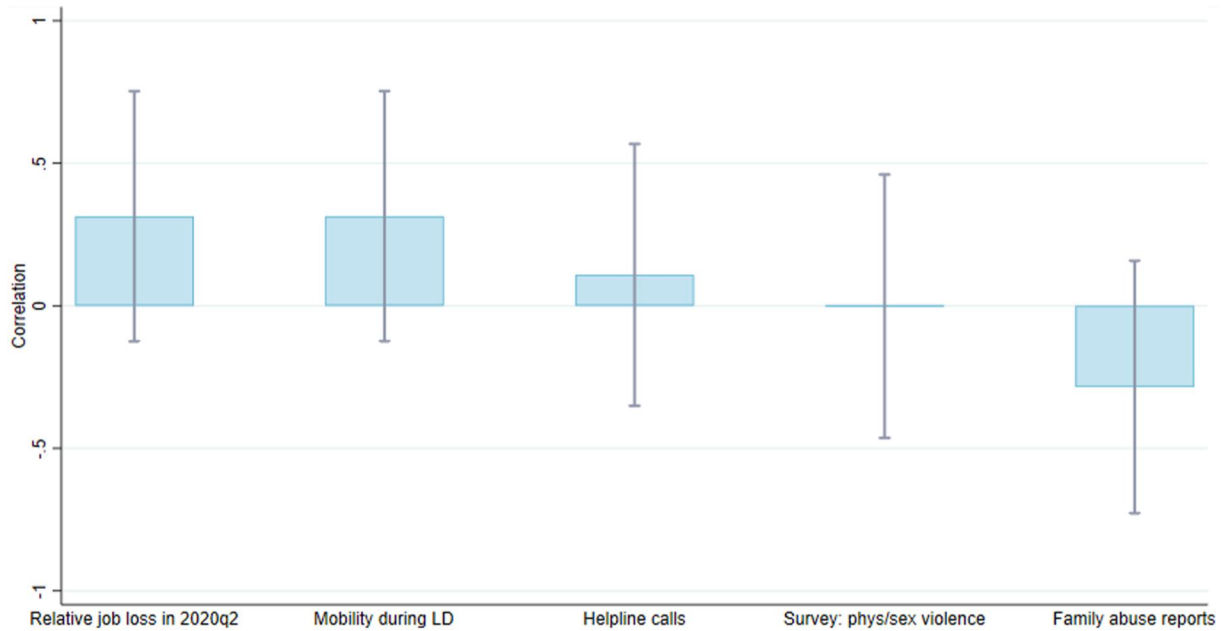


FIGURE A6 TV viewer shares, proxies for violence and their predictors during the pandemic. Correlations and corresponding 95% confidence intervals between the share of Rai-over-Mediaset TV viewers and (i) the number of helpline calls, (ii) the share of female survey respondents who have experienced physical or sexual violence in the past 12 months, (iii) the number of family abuse reports to the police, (iv) the relative female-to-male loss of jobs in 2020q2 compared to 2019q2 and (v) the residential mobility index during the lockdown

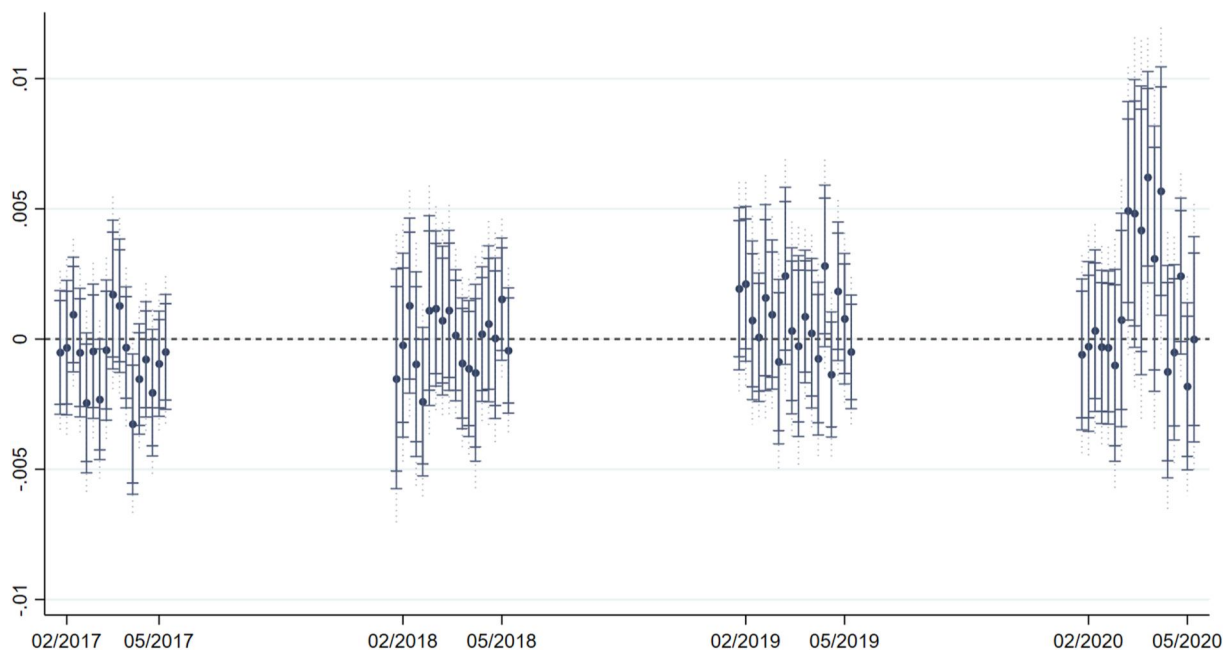


FIGURE A7 Alternative DiD with weekly coefficients, 2017–2020. Coefficients and their respective 90%, 95% and 99% confidence intervals estimated from Equation (1), where weekly dummy variables substitute period indicators τ . The data cover the years 2017–2020. Includes province and year-week fixed effects and province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants

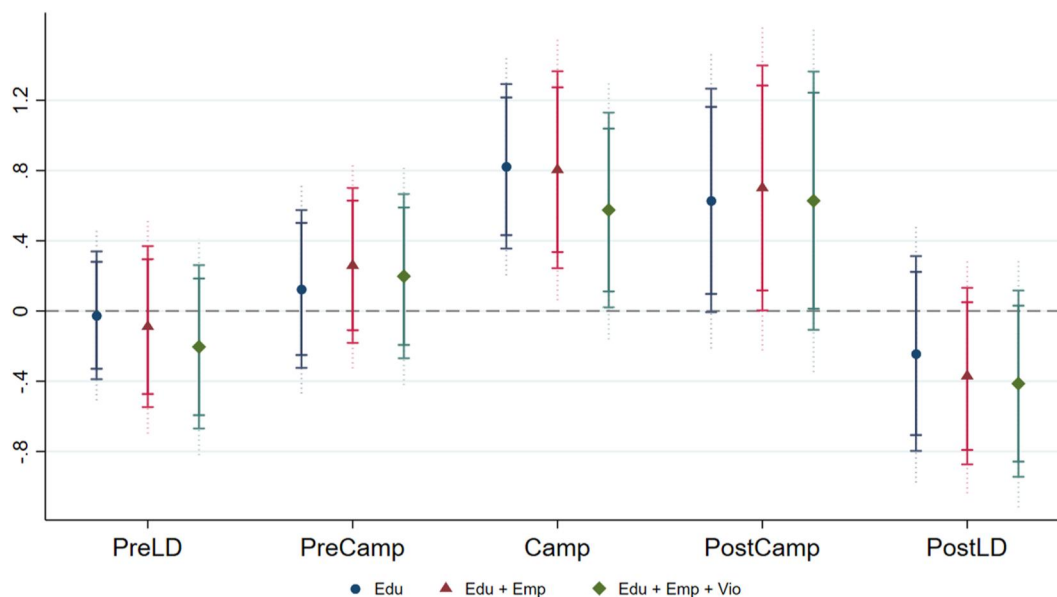


FIGURE A8 Calls to 1522 and Rai/Mediaset viewership shares: additional controls. Coefficients and their respective 90%, 95% and 99% confidence intervals estimated from Equation (1). Sub-periods are defined as: baseline (February 9–22), pre-lockdown (February 23–March 7), pre-campaign (March 8–21), campaign (March 22–April 11), post-campaign (April 12–May 2) and post-lockdown (May 3–31). All regressions include province and year-period fixed effects and province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants. Estimates also include differential trends in education, proxied by the number of illiterates per capita (Edu, blue circles); differential trends in the relative employment of women versus men (Emp, red triangles); and differential trends in violence, measured by sexual violence per capita (Vio, green diamonds). Data for these variables are from the 2011 census

TABLE A1 Categories of gender stereotypes: descriptive statistics

SDO	Women				Men			
	Mean	Min	Max	SD	Mean	Min	Max	SD
	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
VAC	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

Note: Each indicator refers to the share of women and men who report agreeing or finding acceptable several statements about gender stereotypes. See Table 2 for definitions of variables. *Mean* represents the national average; *min* and *max* describe, respectively, the lowest and highest value recorded across regions; *sd* is the standard deviation.

TABLE A2 Calls to 1522 and Rai/Mediaset viewership shares—robustness checks

Calls RAI	(1)	(2)		(3)	(4)	(5)
	Help calls per 100k pop Share RAI over Mediaset	All calls per 100k pop		Share RAI	Share RAI over all others	All calls Share RAI over Mediaset
2020 * Pre-Lockdown	−0.136 (0.188)	−0.041 (0.235)	−0.229 (0.287)	−0.037 (0.233)	−0.289 (0.402)	
2020 * Lockdown	−0.124 (0.196)	−0.312 (0.246)	−0.526* (0.306)	−0.309 (0.245)	−0.667* (0.402)	
2020 * Campaign	0.226 (0.175)	−0.064 (0.323)	0.948** (0.424)	−0.047 (0.321)	0.836** (0.420)	
2020 * Post-Campaign	0.398 (0.269)	0.387 (0.487)	0.909** (0.401)	0.403 (0.484)	1.248** (0.512)	
2020 * Post-Lockdown	0.065 (0.180)	0.401 (0.411)	−0.036 (0.404)	0.407 (0.408)	0.457 (0.471)	
Main effects						
2020 * Pre-Lockdown * RAI	−0.067 (0.112)	0.401 (1.405)	1.184 (1.380)	0.087 (0.389)	−0.146 (0.319)	
2020 * Lockdown * RAI	−0.093 (0.113)	1.607 (1.837)	1.569 (1.236)	0.458 (0.504)	−0.047 (0.352)	
2020 * Campaign * RAI	0.322*** (0.111)	6.329*** (1.846)	−4.745*** (1.733)	1.749*** (0.507)	0.454** (0.241)	
2020 * Post-Campaign * RAI	0.047 (0.174)	6.783*** (2.241)	−1.775 (2.127)	1.895*** (0.613)	0.347 (0.324)	

TABLE A2 (Continued)

Calls <i>RAI</i>	(1) Help calls per 100k pop Share <i>RAI</i> over <i>Mediaset</i>	(2)	(3)	(4)	(5)
		All calls per 100k pop			All calls
		Share <i>RAI</i>	Share <i>Mediaset</i>	Share <i>RAI</i> over all others	Share <i>RAI</i> over <i>Mediaset</i>
2020 * Post-Lockdown * <i>RAI</i>	-0.079 (0.135)	0.396 (1.889)	2.647 (2.037)	0.056 (0.519)	-0.350 (0.317)
<i>Controls</i>					
2020 * Pre-Lockdown * Femicide	-0.001 (0.013)	0.010 (0.026)	0.004 (0.023)	0.010 (0.025)	0.027 (0.034)
2020 * Lockdown * Femicide	-0.001 (0.016)	0.029 (0.022)	0.022 (0.020)	0.030 (0.022)	0.055* (0.033)
2020 * Campaign * Femicide	0.031*** (0.012)	0.163*** (0.038)	0.191*** (0.041)	0.165*** (0.038)	0.048** (0.024)
2020 * Post-Campaign * Femicide	0.068*** (0.019)	0.224*** (0.038)	0.237*** (0.034)	0.227*** (0.037)	0.082** (0.033)
2020 * Post-Lockdown * Femicide	0.049*** (0.016)	0.131*** (0.043)	0.118*** (0.036)	0.131*** (0.043)	0.026 (0.037)
Estimator	OLS	OLS	OLS	OLS	PPML
Observations	3740	3740	3740	3740	3740
R-squared	0.447	0.613	0.612	0.614	

Note: The dependent variable is the number of calls per 100,000 inhabitants for requests for help only (column 1), the number of calls per 100,000 inhabitants (columns 2-4) and the total number of calls (column 5). The exposure variable is defined as the average share of *Rai* viewers over the average share of *Mediaset* viewers in the period of 2-15 February 2019 (columns 1 and 5), the share of *Rai* viewers or the share of *Mediaset* viewers taken separately (columns 2 and 3) and *Rai*'s audience share over that of all other channels (column 4). Sub-periods are defined as: baseline (February 9-22), pre-lockdown (February 23-March 7), pre-campaign (March 8-21), campaign (March 22-April 11), post-campaign (April 12-May 2) and post-lockdown (May 3-31). All regressions include province fixed effects and province-specific differential trends in income per capita and the number of female homicides per 100,000 inhabitants, as defined in Equation (1).

* $p < .10$ ** $p < .05$ *** $p < .01$.

TABLE A3 Heterogeneity I

Calls per 100k pop <i>H</i> <i>RAI</i>	(1) All calls	(2)	(3)	(4)	(5)	(6)
	WIP	GWG	SDO (Women)	VAC (Women)	SDO (Man)	VAC (Man)
	Share <i>RAI</i> over <i>Mediaset</i>					
2020 * Pre-Lockdown	-0.190 (0.241)	-0.061 (0.248)	-0.115 (0.342)	-0.265 (0.276)	-0.213 (0.284)	-0.186 (0.295)
2020 * Lockdown	-0.372 (0.245)	-0.305 (0.285)	-0.418 (0.411)	-0.376 (0.340)	-0.350 (0.312)	-0.664** (0.301)
2020 * Campaign	0.679** (0.332)	0.788* (0.413)	0.660 (0.441)	0.791* (0.408)	0.426 (0.398)	0.420 (0.492)

(Continues)

TABLE A3 (Continued)

Calls per 100k pop	(1)	(2)	(3)	(4)	(5)	(6)
	All calls					
<i>H</i>	WIP	GWG	SDO (Women)	VAC (Women)	SDO (Man)	VAC (Man)
<i>RAI</i>	Share <i>RAI</i> over <i>Mediaset</i>					
2020 * Post-Campaign	0.856** (0.379)	0.887** (0.417)	0.413 (0.451)	0.887** (0.374)	0.704* (0.414)	0.649 (0.536)
2020 * Post-Lockdown	0.101 (0.353)	0.279 (0.370)	0.077 (0.441)	0.170 (0.362)	0.200 (0.404)	0.165 (0.437)
2020 * Pre-Lockdown * <i>RAI</i>	-0.059 (0.215)	-0.046 (0.198)	0.102 (0.336)	0.088 (0.242)	0.683 (0.682)	-0.009 (0.204)
2020 * Lockdown * <i>RAI</i>	-0.180 (0.194)	-0.013 (0.242)	0.372 (0.402)	0.258 (0.284)	0.303 (0.887)	-0.114 (0.208)
2020 * Campaign * <i>RAI</i>	0.885*** (0.249)	0.744*** (0.274)	1.353*** (0.370)	1.013*** (0.342)	2.010* (1.030)	0.800*** (0.288)
2020 * Post-Campaign * <i>RAI</i>	0.471 (0.329)	0.528 (0.326)	1.545*** (0.399)	0.748* (0.396)	1.775** (0.767)	0.411 (0.313)
2020 * Post-Lockdown * <i>RAI</i>	-0.176 (0.321)	-0.215 (0.264)	-0.048 (0.355)	-0.275 (0.301)	0.068 (0.970)	-0.187 (0.289)
2020 * Pre-Lockdown * <i>H</i>	-0.186* (0.095)	-0.040 (0.139)	-0.025 (0.125)	0.091 (0.135)	0.039 (0.164)	0.012 (0.105)
2020 * Lockdown * <i>H</i>	-0.076 (0.081)	0.026 (0.110)	-0.014 (0.101)	-0.048 (0.090)	0.098 (0.202)	0.378*** (0.125)
2020 * Campaign * <i>H</i>	-0.066 (0.121)	-0.134 (0.164)	-0.142 (0.128)	-0.261** (0.129)	0.188 (0.230)	0.128 (0.133)
2020 * Post-Campaign * <i>H</i>	-0.167 (0.128)	0.071 (0.196)	0.066 (0.131)	-0.053 (0.158)	0.260 (0.198)	0.320 (0.195)
2020 * Post-Lockdown * <i>H</i>	-0.284** (0.117)	-0.021 (0.150)	0.065 (0.131)	0.117 (0.131)	0.064 (0.218)	0.046 (0.140)
Main effects						
2020 * Pre-Lockdown * <i>RAI</i> * <i>H</i>	-0.082 (0.364)	-0.174 (0.459)	-0.326 (0.422)	-0.227 (0.426)	-1.009 (0.705)	-0.234 (0.357)
2020 * Lockdown * <i>RAI</i> * <i>H</i>	0.559 (0.438)	-0.001 (0.411)	-0.682 (0.504)	-0.663 (0.408)	-0.294 (0.935)	0.712* (0.407)
2020 * Campaign * <i>RAI</i> * <i>H</i>	-0.552 (0.477)	-0.232 (0.491)	-1.163** (0.470)	-0.949* (0.482)	-1.482 (1.063)	-0.101 (0.450)
2020 * Post-Campaign * <i>RAI</i> * <i>H</i>	0.079 (0.694)	-0.008 (0.736)	-1.726*** (0.570)	-0.606 (0.641)	-1.362 (0.865)	0.636 (0.692)
2020 * Post-Lockdown * <i>RAI</i> * <i>H</i>	-0.159 (0.471)	-0.029 (0.566)	-0.231 (0.507)	0.289 (0.490)	-0.289 (1.009)	-0.047 (0.498)

TABLE A3 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)
Calls per 100k pop	All calls					
<i>H</i>	WIP	GWG	SDO (Women)	VAC (Women)	SDO (Man)	VAC (Man)
<i>RAI</i>	Share RAI over Mediaset					
Observations	3740	3740	3740	3740	3740	3740
R-squared	0.616	0.614	0.619	0.617	0.616	0.616

Note: WIP is the share of women holding office in local government; GWG is the female-to-male hourly wage ratio computed at the median of the wage distribution; SDO and VAC are the sexual dominance and violence acceptability indicators, respectively, computed for female and male respondents separately. All regressions include province and period-year fixed effects. Controls account for province-level differential trends in income per capita and the number of female homicides per 100,000 inhabitants, as defined in Equation (1).

* $p < .10$ ** $p < .05$ *** $p < .01$.

TABLE A4 Heterogeneity II

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Calls per 100k pop	All calls								
Heterogeneity	VAC								
RAI	1	2	1	2	3	4	5	6	7
	Share RAI over Mediaset								
2020 * Pre-Lockdown	-0.101 (0.239)	-0.265 (0.276)	-0.174 (0.263)	-0.151 (0.238)	-0.167 (0.257)	-0.133 (0.259)	-0.150 (0.255)	-0.242 (0.286)	-0.075 (0.234)
2020 * Lockdown	-0.260 (0.298)	-0.376 (0.340)	-0.414 (0.338)	-0.302 (0.266)	-0.453 (0.279)	-0.284 (0.264)	-0.368 (0.300)	-0.640** (0.309)	-0.260 (0.241)
2020 * Campaign	0.621 (0.375)	0.791* (0.408)	0.845** (0.397)	0.750* (0.387)	0.684 (0.421)	0.839** (0.359)	0.760* (0.422)	0.796* (0.436)	0.700** (0.346)
2020 * Post-Campaign	0.682* (0.355)	0.887** (0.374)	0.780** (0.372)	0.986*** (0.376)	0.909** (0.433)	1.089** (0.440)	0.833** (0.411)	0.391 (0.374)	1.040*** (0.392)
2020 * Post-Lockdown	-0.016 (0.346)	0.170 (0.362)	0.132 (0.378)	0.115 (0.341)	0.020 (0.378)	0.391 (0.375)	0.302 (0.359)	-0.559 (0.348)	0.222 (0.335)
2020 * Pre-Lockdown * RAI	0.017 (0.232)	0.088 (0.242)	-0.064 (0.211)	-0.020 (0.189)	-0.061 (0.182)	-0.049 (0.197)	-0.096 (0.198)	-0.048 (0.184)	-0.062 (0.210)
2020 * Lockdown * RAI	0.172 (0.251)	0.258 (0.284)	0.127 (0.227)	0.115 (0.245)	0.063 (0.234)	0.015 (0.225)	0.065 (0.211)	0.105 (0.230)	0.017 (0.202)
2020 * Campaign * RAI	0.861*** (0.303)	1.013*** (0.342)	0.830*** (0.288)	0.952*** (0.260)	0.941*** (0.253)	0.989*** (0.229)	0.714** (0.273)	0.851*** (0.249)	0.811*** (0.255)
2020 * Post-Campaign * RAI	0.649* (0.341)	0.748* (0.396)	0.810** (0.326)	0.601* (0.309)	0.668** (0.304)	0.807*** (0.298)	0.524* (0.315)	0.811*** (0.287)	0.692** (0.338)
2020 * Post-Lockdown * RAI	-0.130 (0.276)	-0.275 (0.301)	-0.146 (0.248)	-0.164 (0.265)	-0.104 (0.261)	-0.162 (0.278)	-0.257 (0.247)	0.062 (0.231)	-0.337 (0.276)
2020 * Pre-Lockdown * H	-0.036 (0.151)	0.091 (0.135)	0.108 (0.167)	0.050 (0.137)	0.059 (0.152)	0.067 (0.143)	0.196 (0.132)	0.075 (0.153)	-0.141* (0.072)
2020 * Lockdown * H	-0.151 (0.135)	-0.048 (0.090)	-0.008 (0.090)	-0.067 (0.083)	0.069 (0.086)	0.001 (0.080)	0.088 (0.164)	0.085 (0.089)	-0.102 (0.073)

TABLE A4 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Calls per 100k pop									
Heterogeneity									
RAI									
	All calls	VAC	SDO						
	1	2	1	2	3	4	5	6	7
	Share RAI over Mediaset								
2020 * Campaign * H	-0.009 (0.217)	-0.261** (0.129)	-0.378*** (0.109)	-0.272** (0.121)	-0.244* (0.124)	-0.329*** (0.122)	-0.194 (0.195)	-0.268** (0.121)	-0.091 (0.131)
2020 * Post-Campaign * H	0.320 (0.256)	-0.053 (0.158)	-0.161 (0.136)	-0.106 (0.182)	-0.137 (0.141)	-0.275** (0.125)	0.289 (0.244)	-0.030 (0.127)	-0.254** (0.124)
2020 * Post-Lockdown * H	0.352** (0.176)	0.117 (0.131)	0.088 (0.140)	0.162 (0.141)	0.101 (0.134)	-0.216 (0.143)	-0.039 (0.293)	0.212 (0.130)	-0.267* (0.149)
	Main effects								
2020 * Pre-Lockdown * RAI * H	-0.297 (0.456)	-0.227 (0.426)	0.152 (0.538)	-0.170 (0.421)	-0.014 (0.522)	-0.346 (0.334)	0.530 (0.400)	-0.041 (0.555)	-0.201 (0.282)
2020 * Lockdown * RAI * H	-0.755 (0.462)	-0.663 (0.408)	-0.476 (0.414)	-0.505 (0.347)	-0.305 (0.353)	-0.235 (0.279)	-0.155 (0.638)	-0.484 (0.390)	-0.268 (0.368)
2020 * Campaign * RAI * H	-0.326 (0.619)	-0.949* (0.482)	-0.978** (0.393)	-0.887* (0.455)	-1.159** (0.448)	-0.709 (0.554)	-0.370 (0.412)	-0.908** (0.452)	-0.413 (0.525)
2020 * Post-Campaign * RAI * H	0.227 (0.754)	-0.606 (0.641)	-1.255** (0.617)	-0.411 (0.720)	-0.889 (0.730)	-1.177** (0.523)	0.559 (0.796)	-1.506** (0.716)	-1.060** (0.495)
2020 * Post-Lockdown * RAI * H	0.454 (0.526)	0.289 (0.490)	-0.052 (0.587)	-0.085 (0.507)	-0.374 (0.586)	0.233 (0.563)	0.084 (0.931)	-1.000* (0.576)	0.257 (0.482)
Observations	3740	3740	3740	3740	3740	3740	3740	3740	3740
R-squared	0.617	0.617	0.618	0.617	0.617	0.618	0.614	0.619	0.617

Note: SDO and VAC are the sexual dominance and violence acceptability indicators, respectively, computed for female respondents. Sub-categories are defined as in Table 2. All regressions include province and period-year fixed effects. Controls account for province-level differential trends in income per capita and the number of female homicides per 100,000 inhabitants, as defined in Equation (1).

* $p < .10$ ** $p < .05$ *** $p < .01$.