What happens when a women's police station close? Evidence from Brazil

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Resumo

Domestic violence (DV) is any injury, physical, sexual, or psychological suffering, and moral or property damage committed by intimate partners and family members. Despite concerted public efforts to eliminate it, DV persists as a serious national issue in Brazil. I investigate the repercussions of closing Women's Police Stations (DEAMs) on various domestic violence indicators, including hospital reports, hotline calls, and homicides, thereby providing valuable insights into the effectiveness and implications of these specialized police stations in Brazil. The results reveal that the closure of DEAMs is linked to a noteworthy increase in hospital reports and a decrease in hotline calls. This shift in reporting behavior suggests that women may turn to healthcare institutions for assistance when law enforcement mechanisms like DEAMs are no longer available.

Key words: Domestic violence; women's police station; protection; Brazil

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1.1 Introduction

Domestic violence against women encompasses any act or omission based on gender that leads to death, injury, physical, sexual, or psychological suffering, as well as moral or property damage. Homicide represents the extreme and final manifestation within a continuum of violence endured by women. It does not manifest in isolation in cases of domestic violence but instead serves as the culmination of a prolonged history of aggression against the victim, often unreported to the justice system (BRASIL, 2015).

Several studies have indicated higher rates of domestic violence within Latino populations compared to other ethnic groups (CHO; VELEZ-ORTIZ; PARRA-CARDONA, 2014; PONTECORVO *et al.*, 2004). However, it is crucial to note the limited data availability on this issue in Latin America (GARCIA *et al.*, 2015; PONTECORVO *et al.*, 2004; CARRASCO-PORTINO *et al.*, 2007). Brazil stands as the fifth country with the highest number of female murders among the 84 countries surveyed by the World Health Organization (WAISELFISZ, 2015). In 2019, 23 Brazilian states (85.2%) reported rates exceeding 3.0 deaths per 100,000 women, categorizing them as regions with high or very high mortality rates due to female homicide, according to the World Health Organization's classification (CERQUEIRA; MELLO, 2012; CERQUEIRA *et al.*, 2021; UNODC, 2019). The persistence of impunity in cases of violence against women not only fosters recurring aggressions but also contributes to a societal acceptance of such violence, as perpetrators evade accountability. The absence of repercussions communicates to society that male violence against women is permissible or customary. Recognizing this, the World Health Organization (WHO, 2019) emphasizes the need to develop a theory of change for addressing violence against women, requiring an understanding of associated factors and studies on the impacts of interventions to generate practical tools for this public health challenge.

In Brazil, efforts to eliminate domestic violence have led to the enactment of two laws - the Maria da Penha Law and the Feminicide Law - and the implementation of various public policies. These include: i) Specialized Police Stations on Assistance to Women (DEAMS); ii) Women's Helpline (Ligue 180); iii) Courts of Domestic and Family Violence Against Women (*"Juizados de Violência Doméstica e Familiar Contra Mulheres"*); iv) Brazilian Women's House (*"Casa da Mulher Brasileira"*); v) Women's Reference Centers (*"Centro de Referência da Mulher"*); and vi) Shelter Houses (*"Casa Abrigo"*).

This paper specifically focuses on specialized women's police stations, known as DEAMs, were established as an integral part of the Civil Police under the public security policies of respective states to combat violence against women. The authority to establish DEAMs and determine their jurisdiction lies with the state-level Executive and Legislative Branches, while the classification of criminal offenses is exclusively the domain of the federal Legislative Branch. DEAMs' operational scope, responsibilities, and organizational structure are outlined through decrees, ordinances, and resolutions, influenced by the

political direction of each state government. The provision of infrastructure, personnel, and resources for DEAMs is contingent on the financial commitment of state governments.

In this context, the objective of this study is to assess the consequences of the closure of these Women's Police Stations (DEAMs) on three distinct violence indicators. The closures of police stations occurred in the years when MUNIC surveys were conducted. However, the number of closed stations increased gradually until reaching its peak in 2019 (the last year of the survey). Notably, 2012, 2014, and 2018 were municipal election years, and 2014 and 2018 were presidential election years. In Brazil in 2019, 83 stations were closed. Regarding regions, the highest number of closed stations was in the southeast, the region with the highest number of these mechanisms.

This analysis is crucial to determine whether these mechanisms effectively safeguard victims, considering that stringent law enforcement might result in unintended consequences such as potential backlash, underreporting, or reluctance of victims to seek help. The methodology employed involves a fixed-effect model at the municipal level. For hospital reports and homicide, the analysis will be carried out from 2010 to 2019, while for the hotline, I only have data available from 2014 to 2019. Furthermore, the research considers regional disparities, presenting the complex and varied impacts across different regions of Brazil.

This paper contributes significantly to the expanding body of literature on the subject. While numerous studies have scrutinized the impacts of establishing protective measures (PEROVA; REYNOLDS, 2017) or the effects of the presence of such measures, our research addresses a crucial gap by examining what happens to DV measures when a women's police station is closed. This study is a pivotal aspect to explore, given that maintaining a police station entails costs for the state, potentially leading to closures in various municipalities due to government expenditure constraints. Understanding the implications of closing these police stations is vital, particularly considering the potential externalities that may arise for frontier municipalities that still have operational Women's Police Stations (DEAMs).

The remainder of this paper is organized as follows. Section 2 presents the background, and section 3 presents the data with the identification strategy. Section 5 reports the results. Section 6 concludes the paper.

1.2 Background

Domestic violence is a multifaceted issue rooted in power dynamics related to gender, sexuality, self-identity, and societal institutions, posing a significant threat to women's mental health (KUMAR; NIZAMIE; SRIVASTAVA, 2013). Incidents of violence are not only prevalent but also tend to escalate in severity over time (BARSTED; HERMANN, 1999). Hoyle e Sanders (2000) observed that many women experiencing domestic violence only report the abuse to the police after enduring repeated episodes. Consequently, there

is an increased reliance on health, outpatient, and hospital services, creating a substantial client base (KOSS; KOSS; WOODRUFF, 1991; MCCAULEY *et al.*, 1995). However, gender-based violence is often overlooked in health service diagnoses, presenting a formidable challenge to address (SCHRAIBER; D'OLIVEIRA, 1999; SUGG; INUI, 1992).

Furthermore, aggression against women inflicts extensive harm, impacting various facets of victims' lives, including health, the labor market, and socioeconomic status. These consequences manifest in physical and mental health issues, diminished productivity, compromised ability and responsibility to provide for themselves and their families, and incurring economic, social, familial, and societal costs (KUMAR; NIZAMIE; SRIVASTAVA, 2013; WHO, 2019; LEONE *et al.*, 2004; RIGER; RAJA; CAMACHO, 2002; TOLMAN; ROSEN, 2001).

According to a survey carried out by the FBSP (2017a), in Brazil, 29% of women suffered violence or aggression. Women suffered more violence within their own homes, and the perpetrators of violence are people known to the victim (FBSP, 2017a; FBSP, 2019; FBSP, 2017b). The homicide rate among women in Brazil increased by 11.6% between 2004 and 2014 (CERQUEIRA *et al.*, 2016). Meantime, in 2019, 3,737 women were murdered. This estimate is well below the 4,519 female homicides recorded in 2018 (CERQUEIRA *et al.*, 2021). The regions with the highest rates in 2019 were the North, Midwest, and Northeast (CERQUEIRA *et al.*, 2021), reflecting potential regional variations in patterns linked to the cultural acceptance of violence against women and its prevalence.

The establishment of DEAMs lacks a standardized model. It was not until 2005, with the introduction of technical standardization guidelines, that minimum requirements for infrastructure, personnel, and materials were clearly defined. However, the implementation of these guidelines and the overall adequacy of DEAMs are subject to the financial investment made by the state governor.

With only 7 %[1] of Brazilian cities hosting a DEAM, the limited presence of these specialized women's police stations is evident. In Porto Alegre, for instance, only one is in the city center. Despite their crucial societal role, certain DEAMs face challenges due to inadequate staffing levels, with some relying on support from the city hall itself. Furthermore, delegates from the North and Northeast regions highlight the deficiency in exclusive training programs for DEAM professionals, with low overall training levels and insufficient recognition for the invaluable work these individuals perform, leading to demotivation among the professionals (BIROL, 2013). This scarcity and the associated challenges underscore the need for enhanced support and investment in DEAMs to optimize their effectiveness in addressing domestic violence issues.

Perova e Reynolds (2017) utilized municipal-level domestic violence survey data to investigate the impact of establishing a DEAM on homicides. The study presents a 17% reduction in the female homicide rate when a municipality opens a DEAM. In a parallel

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[1]Using data from MUNIC for 2019

vein, (AMARAL; PRAKASH; SONI, 2018) conducted an empirical analysis exploring the causal effects of women's police stations in Indian cities on the rise in rates of violence against women and crime deterrence. Their findings indicate that these stations create safe spaces for victims to report offenses in a female-friendly environment, leading to a substantial 22% increase in crime reporting by women. Also, the study reveals that the implementation of women's police station is associated with increased arrest rates for female kidnappings, subsequently contributing to enhancements in crime deterrence. The research suggests a significant shift in reporting behavior, with victims increasingly choosing the specialized over general police stations for reporting crimes.

To improve responses to sexual assault and domestic violence, police departments should hire more female officers and allow victims to request their involvement in interviews and case management, as female officers play a vital role in preventing domestic violence escalation (NATARAJAN; BABU, 2020). Some studies reveals that an increase in the representation of female officers correlates with significant declines in intimate partner homicide rates and repeated domestic abuse (AMARAL; PRAKASH; SONI, 2018), miller2019female, natarajan2005women. The predominant male composition of Brazil's main police force (MUSUMECI; SOARES, 2004) exacerbates challenges in effectively addressing sexual assault and domestic violence cases, underscoring the urgency of increasing the representation of female officers to enhance responsiveness and support for victims.

Despite the challenges of the DEAM, such as understaffing, limited operating hours, and a lack of gender sensitization training for officers 83% and 84% of men and women, respectively, identify DEAM as the most effective government program to address domestic violence in Brazil (NATARAJAN; BABU, 2020).

Residing in municipalities with a DEAM correlates with more positive perceptions of police legitimacy among women, fostering increased trust in the police compared to men and diminishing the gender gap in opinions on police effectiveness, even though men in such municipalities are aware of the DEAM, they do not utilize heuristic information from it to shape their views on police legitimacy (NATARAJAN; BABU, 2020). Zhao, Schneider e Thurman (2002) demonstrate that police presence reduces fear of crime, suggesting that specialized police services for women may specifically alleviate fear among women. Additionally, the mere existence of a DEAM can be perceived as a deterrent against victimization, further contributing to a decreased fear of crime among women (CÓRDOVA; KRAS, 2020). In Bahia, Brazil, Hautzinger (2007) offers compelling evidence illustrating how women in abusive relationships effectively deter physical aggression by invoking the presence of the nearby DEAM. Particularly noteworthy is the observation that women residing in municipalities with a DEAM display a heightened awareness of its services, utilizing this knowledge as heuristic information to form their opinions about the police (CÓRDOVA; KRAS, 2020).

1.3 Data

I combine administrative data on domestic violence with administrative data on Municipal characteristics. To verify the presence of the women's police station (DEAM) in the municipality of the occurrence report. This data came from the Municipal Basic Information Survey (MUNIC) of the IBGE in 2009, 2012, 2014, 2018, and 2019, where the municipalities responded to whether they had DEAM. [2]

I employ three distinct metrics to assess domestic violence as our dependent variable. The Notifiable Diseases Information System (SINAN), operated by the Ministry of Health, encompasses comprehensive data on all mandated reported conditions and diseases, including assaults. SINAN's assault-level data includes details such as municipality, year, the unique identifier of the reporting health facility, date and time of occurrence, type of violence, weekday or weekend incident, location of assault, recurrence status, means of aggression (e.g., firearms, threat), and the victim's relationship with the aggressor. SINAN also incorporates victim-level data, encompassing date of birth, sex, age, pregnancy status, race, level of schooling, marital status, occupation, and disability status. Observations for 2009 are excluded due to limited national coverage at the beginning of the reporting period.

The second one involves data records on calls to the Women's Service Center, known as *Ligue 180*, from 2014 to 2019. *Ligue 180* registers complaints of aggression against women and refers them to other systems for care, support, and related services. The data used are at the call level, providing information on the caller, the victim's race and sex, the aggressor's sex, the date, and the state and municipality of the aggression. Data on individual calls to *Ligue 180* are available from 2014 onwards. Consequently, regressions using the number of hotline calls by the municipality are limited to the beginning of 2014.

Finally, I utilize data on female homicides by assault tracked in the Mortality Information System (SIM) by the Ministry of Health from 2009 to 2019. Deaths are recorded using the International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes to specify the cause of death. I narrow the sample to deaths by assault of women (ICD-10 codes X92-Y09), providing a broad measure of DV homicide fatalities. The SIM data includes the date and cause of death, along with the age, sex, and race of the victim. Incidents of homicide and assault where the attacker is unknown are excluded, potentially omitting cases of DV where the victim was either unable or unwilling to identify a partner or family member as the assailant. Consequently, my results represent a conservative estimate, constituting a lower bound of the total incidence of DV against women.

Table 2 presents descriptive statistics for my analysis's outcome and treatment

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[2]As the data from the women's police station are not for the same year as the SINAN data, we replicated until the next MUNIC was held (ex: in 2010, the data from the police station answered in the 2009 survey were used; in 2011, we used data from 2009; in 2013, we used data from 2012, and so on).

Table 1 – Summary statistics

Variables	Number of obs	Mean	sd	Min	Max
Homicide per capita	55,620	1.68	4.57	0	106.4963
Hospital per capita	55,620	61.98	121.33	0	3055.556
Hotline per capita	55,620	14.77	30.42	0	2412.869
Close a DEAM vs always opened	3,338	0.038	0.19	0	1
Close a DEAM vs never had	50,498	0.002	0.05	0	1

Note: Elaborated by the author

variables. (Note that I do not present control variable descriptives as my main analysis uses fixed effects, which would be collinear with municipality or region control variables.)
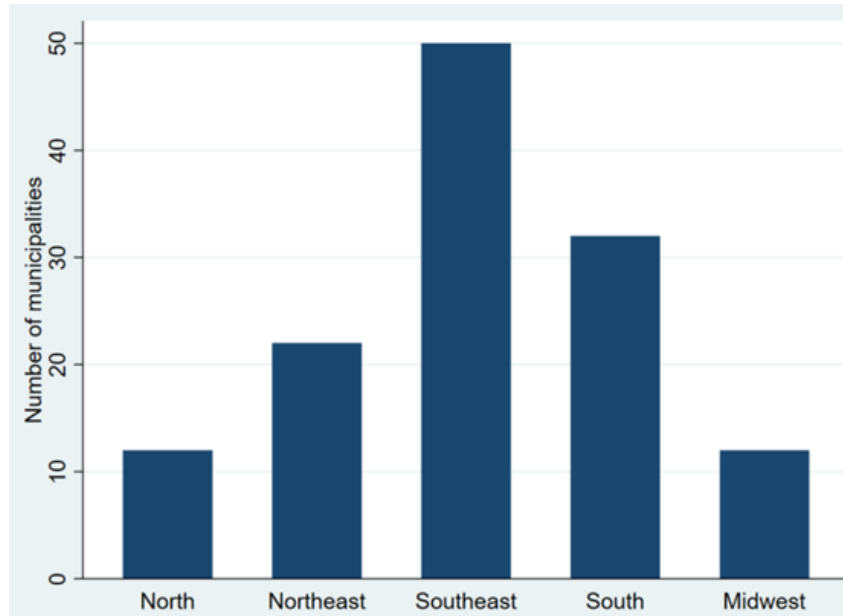
Also, Figure 4 shows the number of municipalities closing a DEAM each year and Figure 5 represents the panorama of those closing by year and region.

Figure 1 – Number of municipalities closing a DEAM for each year
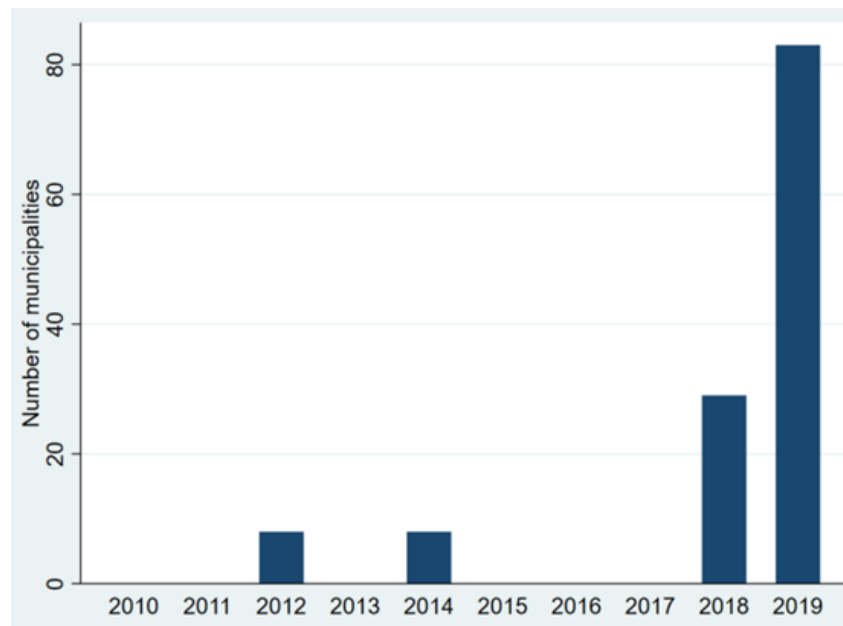
Source: Prepared by the authors using data from MUNIC

Figure 2 – Number of municipalities closing a DEAM by region

Source: Prepared by the authors using data from MUNIC

1.4 Methodology

I apply a fixed effect approach to identify the effects of closing a DEAM on DV measures. I use two different controls: (i) municipalities that had had an operating DEAM in the whole period (from 2009 to 2019); (ii) municipalities that had never had a DEAM in the period. Control (i) tries to capture the possible effect of increasing the distance to nearby stations and overloading them. So, access of citizens to DEAM is reduced, and, police officers would need to travel long distances to attend a case, for example. Moreover, control (ii) tries to see if shutting down one DEAM could lead to aggressors engaging more with violence since they could find it less costly to engage as station closures likely lead to lower presence of police forces, meaning they could feel less threatened to be punished.

My treatment variable is a dummy that receive to one if the municipality has closed a DEAM and 0 if one of the two options occurred. My outcome variable, Y_{ht}, represents the municipal-level: assault events per capita homicide events, per capita assault events, and per capita calls to 180. Because my empirical specifications include fixed effects for year and state, I do not include municipality or region control variables as they would be collinear. When investigating mechanisms, I will use:

$$Y_h t = \alpha + \beta_1 * DEAM_{i,t} + \beta_2 * X_{i,t} + \gamma_i + \theta_t + \mu_{i,t} \tag{1.1}$$

Where γ_i is state fixed effects and θ_t year fixed effects. $\mu_{i,t}$ is the error term. Standard errors are clustered at municipality level. Also, I have a model for the state-by-

year fixed effects. Moreover, to test for the heterogeneous effect, we replicate the primary analysis by splitting the sample by having a women's police station or not.

A significant concern in the examination of violence against women lies in sample selection or non-reporting. In Brazil, addressing some of these concerns, hospital examiners are mandated to report all cases of DV, and municipalities are obliged to report hotline calls and homicides. While this helps alleviate worries about underreporting, challenges persist if record-keeping is inconsistent or mandatory reporters fail to comply. Administrative reporting also partially addresses sample selection issues, considering that survivors of DV often refrain from reporting due to fears of reprisal, societal judgment, and other consequences. However, sample selection remains a challenge, particularly since not all victims of DV assaults seek hospital treatment.

As a robustness test, I ran regression only in municipalities with more than 80% percentage of mobile coverage in the municipality (this cut was selected based on Figure 6 – a histogram of the frequency of the % coverage by the municipality). This is important for hotline calls since the municipalities without access could have been driven by my results. I also ran the regressions by region since Brazil is a vast country with substantial unequal access throughout the regions. Also, the capitals could be driven by results in control (i), mentioned above, since they are larger with more resources and all capitals of Brazil had an operating DEAM the whole period. So, to account for that, I ran the results only for municipalities that are not capital cities.

Figure 3 – Frequency of the percentage coverage by municipality
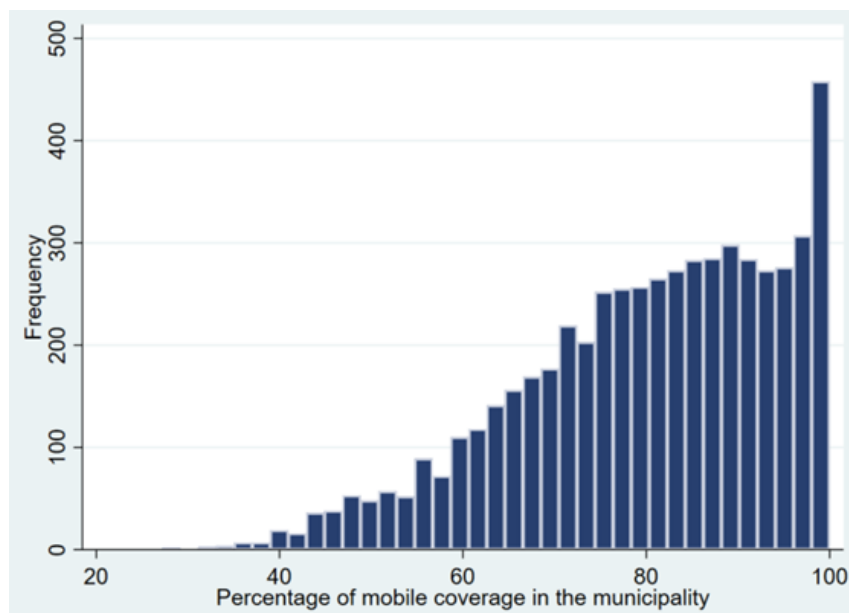
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Figure 4 – Number of municipalities closing a DEAM for each year
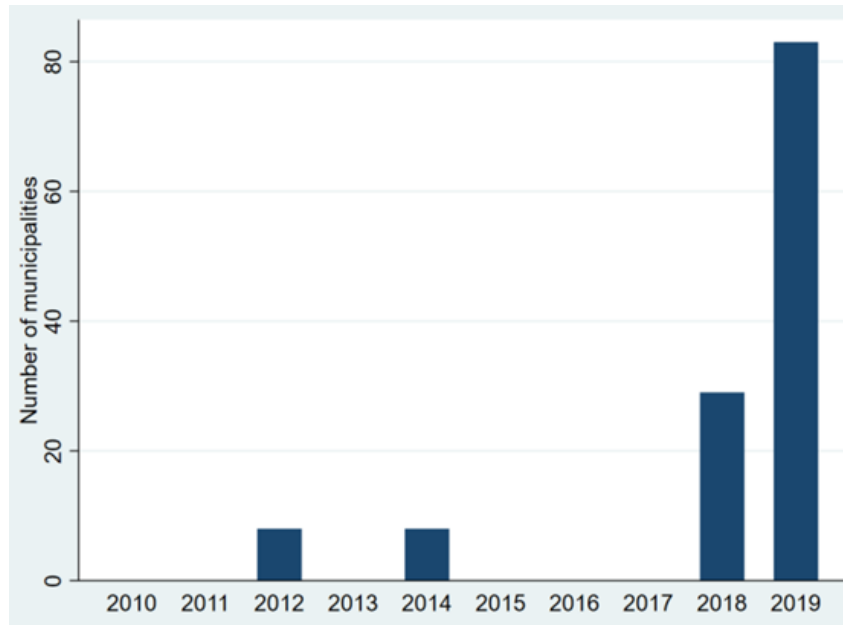
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Figure 5 – Number of municipalities closing a DEAM by region

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1.6   Methodology

I apply a fixed effect approach to identify the effects of closing a DEAM on DV measures. I use two different controls: (i) municipalities that had had an operating DEAM in the whole period (from 2009 to 2019); (ii) municipalities that had never had a DEAM in the period. Control (i) tries to capture the po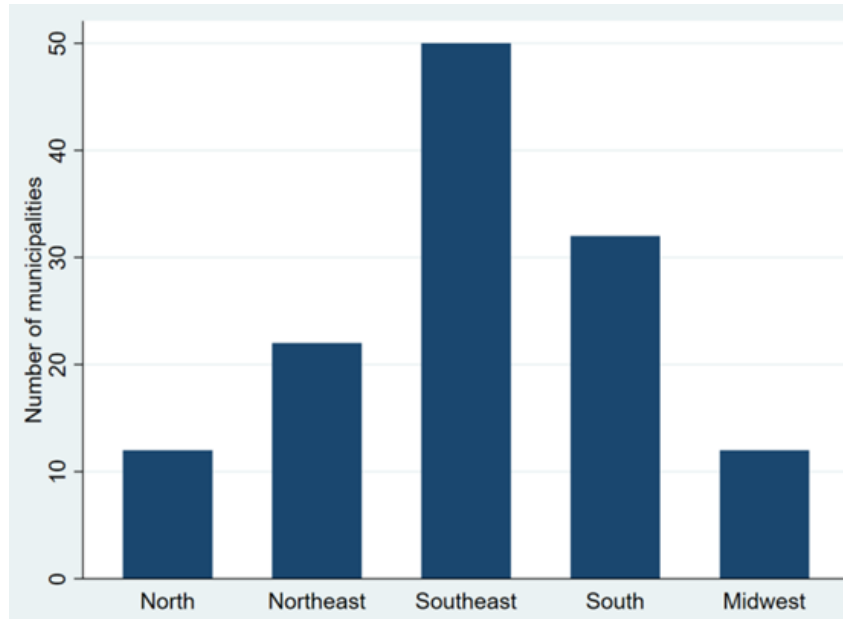ssible effect of increasing the distance to nearby stations and overloading them. So, access of citizens to DEAM is reduced, and, police officers would need to travel long distances to attend a case, for example. Moreover, control (ii) tries to see if shutting down one DEAM could lead to aggressors engaging more with violence since they could find it less costly to engage as station closures likely lead to lower presence of police forces, meaning they could feel less threatened to be punished.

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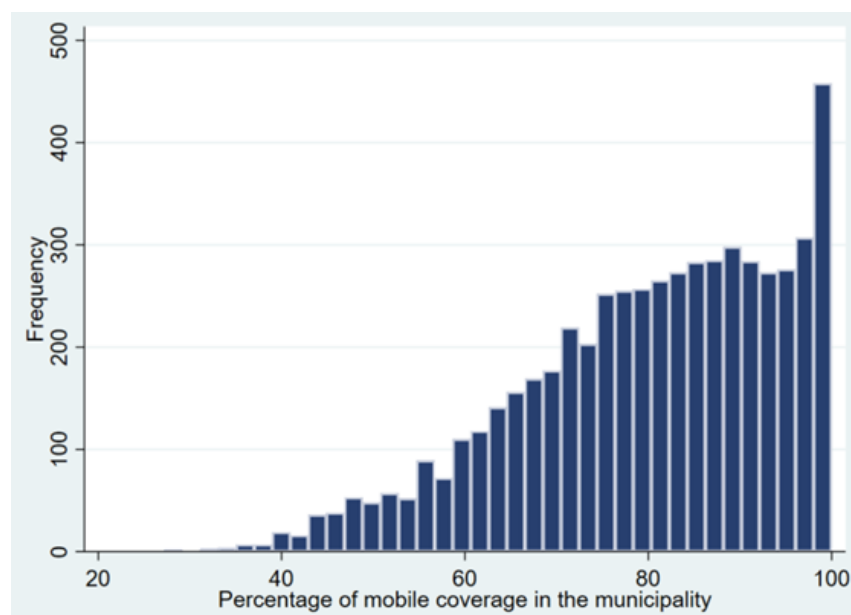
Source: Prepared by the author

1.7   Conclusion

This study thoroughly explores the ramifications of closing Women's Police Stations (DEAMs) on diverse domestic violence indicators. Analyzing data from 2010 to 2019, the research assesses the impact of DEAM closures on hospital reports, hotline calls, and homicides related to DV. The findings shed light on critical aspects of the effectiveness and implications of these specialized police stations. A noteworthy contribution to existing literature, this research delves into the aftermath of closing DEAMs, a perspective often overlooked in prior studies. While numerous studies have concentrated on the effects of implementing protective measures, this research fills a significant gap by exploring the repercussions of shutting down women's police stations. This is particularly relevant in light of potential closures in municipalities facing budget constraints, emphasizing the need to understand the externalities for areas that still operate DEAMs.

The results reveal that the closure of DEAMs is linked to a noteworthy increase in hospital reports and a decrease in hotline calls. This shift in reporting behavior suggests that women may turn to healthcare institutions for assistance when law enforcement mechanisms like DEAMs are no longer available. Additionally, the study considers regional variations, demonstrating nuanced effects in different Brazilian regions. The findings underscore the importance of preserving and enhancing DEAMs despite challenges such as understaffing and limited operating hours. DEAMs remain a crucial government program, as highlighted by the majority of both men and women who perceive them as the most effective mechanism to address domestic violence in Brazil.

This research provides valuable insights into the dynamic relationship between the existence of Women's Police Stations and domestic violence indicators. The results stress the significance of preserving and fortifying these specialized police stations as integral components of comprehensive strategies to combat domestic violence against women in Brazil.

1.8   Appendix

Table 3 – Models with only municipalities with more than 80% percentage of mobile coverage in the municipality (Control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.546**	86.84***	2.416	0.630***	79.14***	1.476	0.687***	78.78***	1.878
	(0.229)	(19.00)	(2.061)	(0.223)	(17.76)	(2.069)	(0.223)	(17.40)	(2.021)
Observations	25,676	25,676	15,441	25,676	25,676	15,441	25,667	25,667	15,436
R-squared	0.002	0.066	0.049	0.021	0.208	0.088	0.031	0.250	0.100
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.735	62.79	26.35	1.735	62.79	26.35	1.735	62.79	26.36

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 4 – Results for North region (control i)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.156	-10.13	-19.75**	0.648	-3.821	-15.52	0.283	0.606	-15.69
	(0.789)	(66.44)	(7.761)	(0.868)	(63.29)	(9.416)	(1.017)	(56.47)	(11.64)
Observations	352	352	215	352	352	215	342	342	209
R-squared	0.035	0.158	0.280	0.088	0.316	0.327	0.153	0.414	0.399
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	3.594	112.3	31.14	3.594	112.3	31.14	3.576	111.1	31.20

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 5 – Results for Northeast region (control i)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	-1.186**	-68.68**	-12.39***	-0.922*	-58.68**	-7.045	-0.599	-58.24*	-8.832*
	(0.453)	(27.36)	(4.563)	(0.472)	(25.30)	(5.014)	(0.474)	(31.01)	(4.776)
Observations	552	552	340	552	552	340	552	552	340
R-squared	0.026	0.107	0.306	0.139	0.367	0.481	0.266	0.414	0.534
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	3.253	79.78	42.65	3.253	79.78	42.65	3.253	79.78	42.65

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 6 – Results for Southeast region (control i)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.146	65.37**	-11.92***	0.198	64.67**	-14.32***	0.181	66.04**	-12.90***
	(0.270)	(27.14)	(2.974)	(0.276)	(27.04)	(2.752)	(0.272)	(27.71)	(2.625)
Observations	1,620	1,620	990	1,620	1,620	990	1,620	1,620	990
R-squared	0.006	0.129	0.177	0.134	0.146	0.392	0.158	0.162	0.429
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.660	112.7	35.02	1.660	112.7	35.02	1.660	112.7	35.02

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 7 – Results for South region (control i)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	-0.783**	-48.82	-17.91***	-0.852***	-47.69	-18.55***	-0.795**	-49.82	-18.00***
	(0.314)	(44.48)	(6.374)	(0.309)	(44.81)	(6.284)	(0.303)	(46.39)	(6.009)
Observations	552	552	339	552	552	339	552	552	339
R-squared	0.041	0.150	0.197	0.100	0.159	0.243	0.137	0.173	0.250
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	2.238	164.9	35.09	2.238	164.9	35.09	2.238	164.9	35.09

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 8 – Results for Midwest region (control i)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.547	-79.84	-22.18*	0.215	-42.59	-19.06*	0.200	-31.24	-19.58*
	(1.234)	(54.29)	(11.39)	(1.279)	(38.03)	(10.91)	(1.316)	(32.11)	(10.77)
Observations	262	262	162	262	262	162	252	252	156
R-squared	0.030	0.112	0.252	0.109	0.360	0.320	0.151	0.377	0.299
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	3.154	113.4	54.43	3.154	113.4	54.43	3.208	114.6	53.05

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 9 – Results for North region (control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	1.580**	113.0*	1.793	1.654**	102.7*	1.142	2.218***	100.3*	4.732
	(0.683)	(57.80)	(6.990)	(0.767)	(57.99)	(8.714)	(0.591)	(53.67)	(7.777)
Observations	3,962	3,962	2,381	3,962	3,962	2,381	3,962	3,962	2,381
R-squared	0.001	0.061	0.051	0.005	0.144	0.097	0.022	0.178	0.114
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.991	31.29	14.42	1.991	31.29	14.42	1.991	31.29	14.42

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 10 – Results for Northeast region (control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.0711	43.19**	7.413**	0.238	44.77**	8.532**	0.311	46.06***	7.937**
	(0.416)	(18.83)	(3.301)	(0.422)	(18.28)	(3.366)	(0.412)	(17.85)	(3.263)
Observations	17,052	17,052	10,240	17,052	17,052	10,240	17,052	17,052	10,240
R-squared	0.002	0.044	0.074	0.010	0.068	0.112	0.017	0.088	0.127
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.693	14.26	21.02	1.693	14.26	21.02	1.693	14.26	21.02

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 11 – Results for Southeast region (control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.538**	59.28**	-4.481*	0.566**	74.95***	-4.457*	0.629**	83.78***	-3.538
	(0.264)	(25.86)	(2.669)	(0.265)	(25.06)	(2.419)	(0.263)	(24.89)	(2.265)
Observations	14,440	14,440	8,682	14,440	14,440	8,682	14,440	14,440	8,682
R-squared	0.001	0.113	0.047	0.006	0.177	0.057	0.007	0.208	0.062
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.203	114.1	30.49	1.203	114.1	30.49	1.203	114.1	30.49

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 12 – Results for South region (control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	-0.292	83.96**	0.558	-0.269	85.14**	0.814	-0.259	87.95**	0.409
	(0.303)	(40.52)	(3.043)	(0.299)	(39.91)	(2.976)	(0.298)	(39.61)	(2.995)
Observations	10,882	10,882	6,537	10,882	10,882	6,537	10,882	10,882	6,537
R-squared	0.001	0.104	0.046	0.002	0.117	0.052	0.003	0.126	0.056
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	1.533	67.59	21.68	1.533	67.59	21.68	1.533	67.59	21.68

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

Table 13 – Results for Midwest region (control ii)

Variables	(1) Homicide	(2) Hospital	(3) Hotline	(4) Homicide	(5) Hospital	(6) Hotline	(7) Homicide	(8) Hospital	(9) Hotline
Close a DEAM	0.904	52.76	13.71	0.882	51.83*	12.90	0.866	51.36*	12.76
	(1.193)	(32.48)	(9.110)	(1.199)	(29.76)	(8.946)	(1.224)	(28.10)	(9.019)
Observations	4,162	4,162	2,502	4,162	4,162	2,502	4,162	4,162	2,502
R-squared	0.004	0.049	0.069	0.004	0.102	0.109	0.006	0.111	0.118
Year FE	X	X	X	X	X	X	-	-	-
State FE	-	-	-	X	X	X	-	-	-
State X Year FE	-	-	-	-	-	-	X	X	X
Outcome mean	2.600	35.87	24.25	2.600	35.87	24.25	2.600	35.87	24.25

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions have standard errors clustered by municipality level

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