Under the Radar: Estimating Underreporting of Gender-Based Violence to the Police*

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Abstract

Gender-based violence (GBV) is chronically underreported to law enforcement. Existing research emphasizes individual-level factors, but overlooks how broader police behavior shapes reporting. We argue that police violence has a dual effect by (1) discouraging reporting GBV to the police, while (2) shifting reporting towards third-party channels, when available. We link police records with anonymous call logs to an independent hotline to estimate the relationship between police violence and GBV reporting in Rio de Janeiro, Brazil. Our analyses demonstrate that exposure to police violence is associated with a relative decline in reporting to the police vis-a-vis the hotline. We then estimate the causal effect of an exogenous decrease in access to the anonymous hotline. GBV reports to the hotline fell by 45%, but fewer than half of these estimated callers filed a police report instead. The areas where women were least likely to call the police in the absence of the hotline were those with high police violence. Together these findings demonstrate that police violence incentivizes women to report to alternative channels or, in their absence, to stay silent.

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1 Introduction

Why do many survivors of gender-based violence (GBV) choose not to report to the police? A wave of influential studies emphasizes the barriers related to survivors themselves, such as shame or dependence on the perpetrator (Palermo et al. 2014; Wieberneit et al. 2024) and barriers related to their relationship with frontline officers, such as fear of mistreatment (Córdova and Kras 2020, 2022; Jassal 2020; Weitzman et al. 2024).

We approach this question from a fresh perspective, shifting the focus from individual-level incentives to the broader institutional variables that shape reporting. We argue that exposure to police violence discourages the reporting of GBV to the police. In contexts where law enforcement uses violence against the population, GBV survivors[1] face a dilemma, and must decide if they can trust agents of the state who have abused others in their community to process a GBV claim. We contend that when police kill with impunity, GBV survivors believe that the police will be unlikely to protect them in cases of gendered violence. Our argument extends prior work on GBV reporting (Murphy-Oikonen, McQueen, et al. 2022) by emphasizing that survivors not only consider the likelihood that their GBV-specific complaint will be processed, they also make assessments of law enforcement trustworthiness to handle a complaint based on the agency's broader behavior.

If it is true that police violence discourages women from reporting GBV to law enforcement, then where do they go instead? The second part of our argument is that police violence leads survivors to report to non-state actors they perceive as safer, in lieu of reporting to the state. We argue that women may turn to third-party channels, such as NGOs or community activist organizations, when they perceive the state as dangerous. Where such channels are absent, as documented in the literature, survivors

1. We use the term survivor rather than victim to refer to individuals who have experienced gender-based violence to underscore agency and resilience rather than passivity or victimhood.

often remain silent (Palermo et al. 2014; Women 2024). Together, we claim that police violence shifts GBV reporting away from the police and toward third party organizations.

Rio de Janeiro, Brazil provides an ideal context for examining GBV reporting patterns given the extent and variation in GBV and police violence. This project leverages high-frequency, data from two sources from 2008-2022 in order to precisely estimate these discrepancies in GBV reporting. We combine detailed police records, detailing both police violence incidents and GBV incidents, with records from *Disque Denúncia*, an anonymous helpline operated by a NGO. From *Disque Denúncia*, we obtained approximately 40,000 GBV-related call logs across the state of Rio de Janeiro, Brazil, which we merge with detailed police records, allowing us to compare GBV reporting to the state and a third-party channel for the same territorial unit and time period. To substantiate these quantitative insights, we draw on qualitative evidence from interviews conducted in Rio de Janeiro and São Paulo.

Using two-way fixed effects models, we show that higher levels of police violence are associated with a greater likelihood of reporting to *Disque Denúncia* vis-a-vis to the police. This substitution effect supports our theoretical claim that state violence erodes women's trust in the police and pushes survivors toward third-party channels when they are available. Estimating underreporting is a difficult measurement problem. We run a range of robustness checks and incorporate a novel measure of the *reporting gap* – the geometric distance between police and *Disque Denúncia* reporting of non-GBV crimes – which absorbs unobserved time-varying differences in reporting practices in each police precinct. Our findings are robust to several alternative explanations, including the possibility that higher levels of criminal violence drive both police use of force and GBV incidence, and that women's police stations facilitate reporting, counteracting the proposed effect of police violence.

We then leverage an exogenous shock – the 2016 reduction in *Disque Denúncia's* operating hours – to examine GBV reporting to the police when third-party channels become less viable. We demonstrate that most women did not substitute *Disque*

Denúncia by reporting to the police, highlighting the durability of the lack in trust mechanism, as well as the limitations of third-party alternatives as viable alternatives to the state. We find that the reduced-hour operations led to a decrease of 45% in GBV reporting relative to baseline levels, or roughly 197 missing reports in a single month across Rio de Janeiro. Back of the envelope calculations suggest that fewer than half of these "missing" reports to *Disque Denúncia* were then filed with the police, suggesting that most of the missing reports went permanently unreported.

This paper makes three main contributions. First, it builds on a rich literature of the consequences of police violence. It has been well documented that police violence can rupture state-society relations (see, for instance G. A. Flores-Macías and Zarkin 2019; González 2020; Magaloni, Franco-Vivanco, et al. 2020; Tiscornia 2019). Yet we know little about how such violence affects GBV, both in terms of its underlying incidence and reporting patterns. Our paper directly builds on studies that demonstrate how exposure to abusive policing erodes citizens' trust in the state and reshapes patterns of political and civic engagement (Jose Miguel Cruz 2009; G. Flores-Macías and Zarkin 2022; Urbina and Sgorlon 2024). By linking exposure to police violence to GBV through the trust in police channel, our study brings the literatures on GBV reporting and police use of force closer together.

Second, our findings advance the study of GBV by situating underreporting within a wider political and institutional framework. We engage with classic theories of political science about institutional trust that demonstrate how trust in one domain of the state can shape trust in another (Hetherington 1998; Levi and Stoker 2000; Putnam et al. 1994). Upon applying this argument to trust in the police, writ large, to the more specific instance of trust in the police to process a GBV claim, this study speaks to broader debates about how violence and state behavior shape citizen trust.

Third, this paper represents an innovation in our approach to analyzing hard-to-measure concepts of GBV and GBV reporting. While recent studies have emphasized that women in marginalized communities may be less likely to report victimization (e.g., Palermo et al. 2014), few have quantified these disparities or identified the specific

conditions exacerbating underreporting. We leverage rich police precinct-level panel data across multiple sources to estimate trends in reporting to the police vis-a-vis third party channels and to identify possible causes of these trends. When combined with estimation exercise that measures the reporting gap and the causal study, this paper demonstrates how the use of multiple high-frequency sources of GBV reporting can shed light on the unobserved incidence of GBV.

2 Individual Determinants of GBV Reporting

Cross-national surveys show that the underreporting of gender-based violence (GBV) is widespread (Palermo et al. 2014; Women 2024; FBSP 2025; Organization 2021). Studies suggest that underreporting persists because of three sets of reasons: 1) feelings about one's self, 2) the relationship with the perpetrator, and 3) perceptions of the state, including beliefs about whether protection will be provided after a report is made. First, a large share of studies show how self-directed emotions such as shame, guilt, and social stigma contribute to survivors' decisions not to report (Gracia and Herrero 2007; Wieberneit et al. 2024). In many cases, women fear social rejection after leaving the abuser, the breakdown of family ties, or even reputational consequences in their communities. These internalized barriers are durable and difficult to shift (Lonsway and Fitzgerald 1994; Reich et al. 2022).

Second, a complementary reason why survivors of GBV do not report to authorities is because of their relationship with the abuser, particularly when the perpetrator is a current or former partner. Here, studies emphasize fear of retaliation or escalation of violence, dependence on the partner for economic or social support, and even a desire to protect the abuser (Felson et al. 2002; Heron and Eisma 2021). These dynamics further entrench underreporting, particularly in contexts where intimate partner violence accounts for the majority of GBV incidents (FBSP 2025; Women 2024; Organization 2021).

A third family of explanations concerns victims' perceptions of how the state will

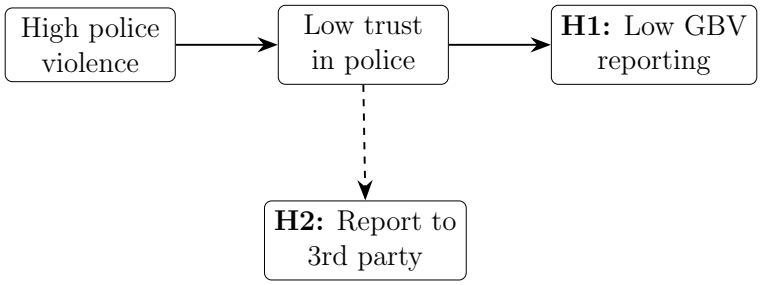
process their claim. The literature documents discriminatory treatment by authorities, including gendered and intersectional biases (Córdova and Kras 2020; Murphy-Oikonen, McQueen, et al. 2022), the risk of not being taken seriously (Ricciardelli et al. 2021), the practical challenge of proving abuse in the absence of evidence (Murphy-Oikonen, Chambers, et al. 2022; Higa et al. 2008), direct abuse or harassment by police officers themselves (Jassal 2020), and a generalized lack of trust in the state's ability to protect victims against retaliation. Much of this work focuses on discrete state institutions—police, health systems, or courts—and explains women's reluctance to engage with them in the context of GBV. Furthermore, most of this evidence assesses women's perceptions of how GBV-specific claims will be processed, rather than women's perceptions of state capacity and behavior more broadly.

Our argument extends the logic in this third family of explanations. We argue that an underexplored but equally important reason why women choose not to report GBV to the police is because of their broader trust in the police as an institution.

3 How Police Violence Affects GBV Reporting

We build our theory in three parts, illustrated in Figure 1. First, we document the existing literature that establishes how police violence leads to low trust in the police, in general. Second, we argue that low trust in the police is likely to drive women away from reporting GBV to the police. Third, we offer an explanation for how women seek support amid high police violence. We argue that women substitute reporting to the police for reporting to non-state third party channels, when available. Low trust in the police drives them away from the state, pushing them to report to non-state authorities. Throughout this section, and the rest of the paper, when we use the term *GBV reporting* we clearly specify whether the target of the report is the police or a non-state third party.

Figure 1: Mechanism Linking Police Violence to GBV Reporting



First, high levels of police violence can erode the population's trust in the police. A dismal reality in Latin America today is the extent and brutality of police violence across the region (Bergman 2018; Jose Miguel Cruz 2009; Owens 2024; Trudeau 2022).[2] Some studies attribute high levels of police violence as a reaction to escalating societal violence among drug cartels, paramilitary groups, and other non-state specialists in violence (Lessing 2017; Magaloni, Franco-Vivanco, et al. 2020; Zaluar and Barcellos 2013). A different vein of the literature documents the escalation of police violence in Latin America that ostensibly is aimed at controlling crime, but has grown increasingly authoritarian or punitive in nature, or worse, has been documented increasing crime instead (Blair et al. 2025; Flores-Macías 2018; G. A. Flores-Macías and Zarkin 2019; Rios 2013).

Studies have shown how police violence generates fear, undermines trust, and deters civic engagement (González 2020; González and Mayka 2023; Magaloni, Franco-Vivanco, et al. 2020; Magaloni, Robles, et al. 2020; Mummolo 2017; Tiscornia 2019). In our geographic area of focus, Rio de Janeiro's police carried out 283 tactical raids in urban neighborhoods between 2016 and 2023 that resulted in 1,137 civilian deaths, an average of three police massacres per month. The deadliest episode left 27 residents dead. In one neighborhood alone, 14 such raids killed 66 people over seven years[3]. These routine large-scale raids spark terror, fear of death, and mistrust in the police, particularly those living in these areas (Maré 2023).

2. We use a broad definition of police violence, including acts of coercion, abuse, or extrajudicial force against the population carried out by the police, military or other state law enforcement and security actors.

3. Fogo Cruzado 2023

The second step in our argument links low trust in the police to low GBV reporting. We argue that police violence generates low baseline levels of trust, which compels women to doubt that the police will adequately process a GBV police report. Classic theories in political science show that perceptions of state performance in one domain can spill over into others, affecting citizens' trust and engagement across multiple areas (Hetherington 1998; Levi and Stoker 2000; Putnam et al. 1994). Recent work on police violence and corruption makes this link explicit: exposure to abusive policing erodes citizens' beliefs in the legitimacy of state institutions more broadly, with consequences for democratic trust and participation (Bruin et al. 2025; Gingerich 2019; Lerman and Weaver 2014; Urbina and Sgorlon 2024) Similarly, empirical research shows that negative personal experiences with law enforcement and aggressive policing are associated with lowered confidence in police (José Miguel Cruz 2010; Owens and Ba 2021). Following this line of reasoning, we expect women to make similar inferences: if the police use violence with impunity, they will be unlikely to take GBV claims seriously or to protect survivors from retaliation.

One way in which low trust in the police can discourage GBV reporting is by raising doubts about police resources. In areas with high levels of police violence, officers are likely busier, have more and higher-stakes demands on their time, and resources may be spread thin. Bergman (2018, Ch. 7) substantiates this claim with cross-national evidence showing that basic policing performance indicators declined in high-violence areas in the Americas. In such contexts, police may become less responsive to crimes not deemed a priority, which can erode civilian trust. In our geographic area of study, during the 2010 security crisis in Rio de Janeiro, the state mobilized an unprecedented number of personnel to confront organized crime in the city's favelas. More than 21,000 military police officers were deployed across the metropolitan region,[4] with officers recalled from vacation and some retirees volunteering to return to duty. Accounts from this time period describe the police as having limited, if any, personnel and financial resources for routine policing, which includes responding to GBV. Even under less

4. O Globo 2011.

extreme conditions, we expect police precincts with higher resource constraints to be less able to process GBV complaints.

Another way that low trust in the police discourages GBV reporting is by raising doubts about the institution's commitment to protecting women. Studies have documented cases in which police officers themselves have perpetrated harassment, assault, and sexual violence (Kraska and Kappeler 1995; Stinson et al. 2020) In the U.S., both activists and scholars have repeatedly denounced incidents of sexual abuse committed by officers, including against women already in vulnerable positions such as detainees or residents of marginalized communities (Alang et al. 2023). More broadly, research shows that police frequently dehumanize poor, Black, and marginalized populations, treating them as enemies rather than citizens (Caldeira and Holston 1999; Holston 2008; Magaloni, Franco-Vivanco, et al. 2020). For women in these communities, police are perceived not as protectors but as potential predators, further reducing the likelihood that they will come forward with GBV complaints.

The third and final step in our argument is that low trust in the police increases reporting to third-party channels as an alternative to the police. Third-party channels are independent organizations not run by the state, such as NGOs that provide services for survivors of GBV. While they may collaborate with the state under certain conditions or receive public funding, they are definitively not an arm of the state. Often, third-party channels that deal with GBV provide an alternative avenue for victims to disclose abuse outside of formal state institutions. We argue that where third-party channels exist, they become more salient under conditions of high police violence, largely because they offer a safer alternative to seek help than interacting with the police. Our argument suggest that this is the case even for women who are not direct targets of police abuse. While it is possible that third party channels are appealing as a reporting channel for any GBV survivor, we expect them to be relatively more likely to be used vis-a-vis the police by callers who mistrust the police.

Together, these expectations yield a set of testable predictions, shown in Figure 1. First, we expect higher levels of police violence to be associated with lower GBV

reporting to the police (H_1). Second, we expect to find evidence of a substitution effect, where higher levels of police violence are associated with higher levels of GBV reporting to third-party channels, when they are available (H_2). We argue that both operate through a *trust in police* channel.

4 Context: Reporting GBV in Rio de Janeiro

Brazil is a dangerous place for women. In 2022, Brazil recorded 1,410 femicides, averaging one woman murdered every six hours—the highest rate in recent years (Rogero 2024). Most of these killings (81.7%) were committed by intimate partners or ex-partners, and 65.6% occurred in the home. Black and brown women were disproportionately affected, accounting for 62% of femicide victims. Reported cases of rape have also been rising. In 2023, there were 83,988 rape reports, meaning that every six minutes, a woman is raped in Brazil (FBSP 2023). The majority of survivors were children aged 13 or younger (61.6%), and most assaults (84.7%) were committed by family members or acquaintances.

Some parts of Brazil are more perilous for women than others, and Rio de Janeiro is one such place. Survey evidence indicates that 40% of women from Rio de Janeiro reported some form of GBV in 2022, a rate above the national average of 33% (FBSP 2023). This violence, however, exists in the broader context of chronic criminal and police violence, who frequently engage with each other and with the police in violent territorial disputes. Often, this violence unfolds inside *favelas*, densely populated informal settlements where a large share of the urban poor live (Holston 2008; Perlman 2010). High crime and violence are features of favela residents' everyday lives: 37% (ca. 1.6 million people) reported being caught in the crossfire between police and criminal groups (FBSP 2023).

Police violence is exceptionally high in Rio: police operations regularly produce dozens of deaths, with more than 1,800 killings attributed to law enforcement in 2019 alone, a rate of five people murdered by the police per day (News 2020). However, this

violence is unequally distributed across the state, and is largely concentrated in *favelas* or similar marginalized zones (Magaloni, Franco-Vivanco, et al. 2020).

There is widespread evidence that persistent police violence in Rio de Janeiro has eroded the population's trust in police. A 2018 survey found that 70% of Rio residents feared being harmed by the police and 92% feared being wounded or killed by stray bullets in their neighborhoods[5]. This is particularly pronounced among residents of *favelas*, where longstanding patterns of police repression and collusion with criminal groups have entrenched the perception of law enforcement as instruments of violence rather than protection (International 2015).

In line with our theory, lack of trust in the police is pervasive among GBV survivors. A 2025 report shows that, although 37.5% of women reported experiencing violence in 2024, only a minority sought formal help: 14% went to a women's police station, 10% to a general precinct, and just 2% called the Military Police (190). Among those who did not report, 14% explicitly cited distrust in the police as a reason, alongside fear of retaliation and anticipated impunity (FBSP 2025).

4.1 GBV Reporting Pathways in Rio de Janeiro

In Rio de Janeiro, there are dozens of ways to seek help after being victimized, many of which directly or indirectly require reporting to the police.[6] We provide details about the range of reporting channels in the Appendix and summarize key takeaways below.

First, despite the wide array of reporting channels, the filing of a police report remains the necessary entry point for most longer-term protections, particularly those granted by the courts or enforced by law enforcement. A police report, *Boletim de Ocorrência* (B.O.), is the formal document issued by police when a crime is reported, either in person at a precinct or through online systems. Once filed, the B.O. is entered

5. See Fórum Brasileiro de Segurança Pública, *Rio sob Intervenção: A visão dos moradores da cidade do Rio de Janeiro*, 2018. Available at: https://forumseguranca.org.br/wp-content/uploads/2018/04/FBSP_Rio_sob_Intervencao_2018_relatorio.pdf.

6. Despite these varied pathways, the modal response is to not report at all. 45% of women who experienced GBV did nothing following the incident, not even confiding in friends or family, even though a large share of them report having a witness present at the time of violence (FBSP 2025).

into the state's integrated police registry, where it becomes a logged incident that can trigger investigative procedures and, in cases of GBV, access to protective measures under the *Lei Maria da Penha*.[7] Table A1 shows the numerous ways to report GBV in Rio de Janeiro.

Survivors who distrust the police must grapple with the fact that filing a police report is the gateway to accessing justice in the future. GBV survivors must have a record of filing a B.O. in order to access most legal, physical, or financial protections offered by the state. Survivors can only access the following policy instruments after presenting a B.O. as supporting documentation: (1) requesting an urgent restraining order from the court; (2) follow-up visits or monitoring by specialized GBV units to ensure compliance with restraining orders, with mandatory arrest of the perpetrator in cases of violation; (3) initiation of criminal proceedings against the perpetrator, including both investigation and eventual prosecution; and (4) documentation required for family court proceedings such as divorce, alimony, or child custody arrangements.

Second, this centrality of the B.O. is widely recognized by other state institutions, which frequently instruct survivors to return only after filing a police report. Table A1 details instances of public health agencies, the courts, and social services redirecting survivors to the police to obtain a B.O. first in order to assist them. That interacting with the police is a mandatory first step in obtaining assistance reinforces the police as the gatekeepers of protection. The one exception is if a hospital or clinic finds evidence of sexual abuse (Higa et al. 2008). If this is the case, health professionals must register the case in the national health database and they will file a police report on the survivor's behalf.

Third, survivors may contact a range of third party organizations. Rio de Janeiro has a robust civil society, and many organizations offer services to survivors, including legal and financial aid, such as food, cash, shelter, or in-kind legal fees. When survivors report to these organizations, these third parties can prepare or accompany women

7. The *Lei Maria da Penha* (Law 11.340/2006) is Brazil's landmark legal framework to prevent and combat domestic and gender-based violence. It increases the severity of penalties, the coverage for crimes that can be prosecuted, and provides additional legal and support resources for survivors.

to report to the police (if they ultimately seek a B.O.) or, occasionally, pass along anonymous or aggregated data to state channels (such as the police or the courts) about GBV if the survivors are not ready to disclose their identities.

5 Research Design

5.1 Measuring GBV and Police Violence

We measure crime using two sources of data: (1) police reports, and (2) reports from *Disque Denúncia*, a third-party anonymous hotline. The unit of analysis is the police-precinct-month level, spanning from 2008 to 2022 for the entire state of Rio de Janeiro.

First, we draw from police reports obtained at the event-level from the Institute of Public Safety (ISP, *Instituto de Segurança Pública*). These records include all registered crime reports from each of the state's police precincts. Each observation contains detailed metadata about the crime record extracted from the B.O., including the type and subtype of crime, day and time of the incident, the police precinct of registration, victim-level data on age, gender, race, and relationship to the perpetrator, and if the crime is subject to a particular piece of national legislation, such as anti-discrimination or child protection laws.

We construct one outcome variable to measure police-reported **physical violence against women** (VAW).[8] We focus our analysis on physical violence for two primary reasons: first, by isolating physical violence, we focus on the most common non-sexual form of violence where a direct interaction with, and a formal report to, the police remains the mandatory first step for a survivor to access legal protection and state assistance. Second, while studying sexual violence is important, it is a noisy measure of police-reported GBV. Sexual violence in Brazil can be reported through health clinics

8. According to the *Lei Maria da Penha*, GBV encompasses five recognized types: *physical*, *sexual*, *psychological*, *moral*, and *patrimonial* (financial/property). *Physical* violence is the most frequently registered form of GBV in police records. Furthermore, service providers interviewed for this project stated that physical and sexual violence are both more visible and have higher levels of awareness, leading to them being the most commonly reported forms of GBV.

and hospitals, which are legally mandated to notify law enforcement (as detailed in Section 4.1). This divergence makes the reporting of sexual violence less dependent on a survivor's direct willingness to seek out the police.

We calculate the precinct-monthly sum of crime records containing the following metadata: (1) physical injury (*lesão corporal*) that is protected by *Lei Maria da Penha*, (2) physical injury that is sub-classified as domestic violence, and (3) femicide. These three records are a parsimonious set of crimes that could be considered VAW, reflecting the basic offenses mentioned in the *Lei Maria da Penha*.[9]

Our main independent variable to measure police violence is the number of reported police killings at the precinct-month level, also reported in the ISP data. Although police killings underestimate the true level of police violence, it is the most reliable indicator of police violence available. Police killings are reported to the investigative police and national mortality databases and are less subject to measurement error than a hypothetical non-lethal police violence might be. We consider other police-reported crimes in our secondary analyses, including homicide levels.

The second source of data draws from *Disque Denúncia* call logs, also obtained at the event-level. *Disque Denúncia* (DD) is a third-party channel, independent from the police and other public agencies. Their primary mandate is to receive and process anonymous calls for help, via their 24-hour hotline, and to forward life-threatening emergencies to law enforcement while safeguarding callers' identities. Unlike emergency calls to the police, callers to DD may choose to stay anonymous. Each call log contains the location of the incident, date and time, primary and secondary topic, according to DD's classification system, and a summary of the problem, written by the call center worker. DD does not use the police's classification system because people often call about non-crime nuisances, problems with service provision, or to complain about the state and public servants (including the police).

To measure VAW using the *Disque Denúncia* data, we use DD's pre-defined "Vi-

9. Though there is substantial overlap in the ISP records between categories (1) and (2) and categories (1) and (3), it is not perfect, so we use these three filters to include all relevant acts of VAW.

olence against Women" topic category. We geolocate approximately 40,000 calls for the same time period where "Violence against Women" is specified as the primary or secondary topic of the call, and aggregate reports to the precinct-month level to match the structure of the police report data. We construct a third outcome measure, VAW_{Diff} that represents the difference between VAW_{Police} and VAW_{DD} for each precinct-month. VAW_{Diff} is positive when there are more reports to the police, and negative when there are more reports to DD.

5.2 Measuring Underreporting to the Police

Section 3 suggests that police reports may not accurately represent the true, unobserved level of GBV. We attempt to minimize this unobserved error by creating a reporting gap variable that estimates the difference between reports to the police and reports to *Disque Denúncia* for other crimes that appear in both datasets. Conceptually, the reporting gap variable reflects precinct-level differences in the frequency with which the population calls the police versus DD. A larger reporting gap where DD calls outpace calls to the police suggests systematic underreporting to the police. In contrast, a smaller gap indicates closer alignment between police records and DD complaints, implying greater reliability of police data in that jurisdiction and period.

To measure the reporting gap, we calculate the Mahalanobis distance, a common form of multivariate matching (Cochran and Rubin 1973). One advantage of this metric is that it is rescaled and measured in multivariate standard deviations, so that common crimes that appear in each datasets (e.g., car theft) are comparable with less common crimes (e.g., attempted homicide). We calculate the multivariate distance between crimes reported to the police (i) and crimes reported to DD (j) for each precinct-month period:

$$\phi = D(X_i, X_j) = \sqrt{(X_i - X_j)S^{-1}(X_i - X_j)}$$

We calculate three versions of the reporting gap measure: $\phi_{Violent}$, $\phi_{Property}$, and ϕ_{All}.

If there is systematic underreporting of violent crimes to the police in a particular precinct, one might also expect there to be systematic underreporting of GBV. $\phi_{Violent}$ calculates the multivariate distance between ISP and DD reports for (1) extortion, (2) attempted homicide, (3) armed robbery, (4) threat, and (5) physical injury, for each precinct-month. As an alternative measure, we calculate $\phi_{Property}$ to account for the possibility that GBV reporting to the police is subject to different trends than more visible forms of violent crime. This measure calculates the multivariate distance between (1) robbery/theft from pedestrians, (2) robbery/theft of residences, (3) robbery/theft of businesses, (4) robbery of automobiles, (5) theft of automobiles, and (6) cargo robbery. ϕ_{All} includes the multivariate distance between both property and violent crimes.

We use this variable to minimize unobserved variation in reporting of GBV to the police, interpreting a larger gap as an indicator of a greater chance of distortions in reporting GBV to the police. To our knowledge, this is the first attempt to estimate underreporting to the police in this way.

5.3 Empirical Specification

We estimate a set of two-way fixed effects (TWFE) models of the following baseline form, where i and t correspond to the police precinct and month:

$$VAW_{it} = \beta_1 Police\_Violence_{it} + \phi_{it} + \rho_i + \gamma_t + \epsilon_{it} \quad (1)$$

VAW_{it} corresponds to one of three outcomes: police reports of VAW, reported VAW to *Disque Denúncia*, or the difference between the two. β_1 is the coefficient of interest, representing the relationship between police killings in a particular precinct and reported VAW. We control for the reporting gap between sources (ϕ_{it}), focusing on the violent crime reporting gap for our main specification, and include police-precinct (ρ_i) and monthly (γ_t) fixed effects. Robust standard errors are clustered at the precinct-

level.

The TWFE specification helps to address endogeneity concerns by controlling for unobserved, time-invariant precinct characteristics and unobserved, time-specific shocks affecting all precincts. This approach reduces omitted variable bias by accounting for factors that might be correlated with both the independent variable (police violence) and the dependent variables. In particular, precinct fixed effects minimize concerns that key differences within the precincts – such as police resources – drive the observed relationship between police violence and GBV. These unit and monthly fixed effects enable us to hold constant precinct and temporal characteristics and examine the and examine the effect of the key independent variable, police violence, on GBV within a single unit over time.

6 Police Violence Discourages GBV Reporting to the Police

The main results in Table 1 provide strong supporting evidence that police violence discourages reporting VAW to the police. All models use the TWFE specification controlling for police precinct and month-year; odd-numbered models use the number of police killings per precinct-month as the main predictor, and even-numbered models include the additional time-varying predictor $\phi_{Violent}$, the estimate of the precinct-month gap between violent crimes reported to the police and to *Disque Denúncia*. The outcomes for Models 1 and 2 and Models 3 and 4 are the counts of reported VAW incidents per precinct-month according to the police and *Disque Denúncia*, respectively, and the outcome for Models 5 and 6 is the difference between the two.

First, we find that police violence is not associated with greater reporting of VAW to the police. Though there is a positive relationship between police violence and reported VAW, the estimated coefficients are small (0.44 and 0.38) and statistically indistinguishable from zero. In contrast, Models 3 and 4 demonstrate that police

Table 1: The Relationship between Police Violence and GBV Reporting

	VAW (Police)		**VAW (DD)**		**VAW (Diff)**	
	(1)	(2)	(3)	(4)	(5)	(6)
Police Violence	0.442	0.380	1.372***	1.371***	−0.988***	−0.991***
	(0.277)	(0.278)	(0.316)	(0.315)	(0.263)	(0.263)
Reporting Gap		0.069		0.025		0.043
		(0.065)		(0.060)		(0.106)
Num.Obs.	24 462	21 581	21 581	21 581	21 581	21 581
D.V. Mean	13.975	13.975	1.851	1.851	13.615	13.615
R2	0.831	0.826	0.512	0.512	0.752	0.752
R2 Adj.	0.829	0.823	0.505	0.505	0.749	0.749

* p <0.05, ** p <0.01, *** p <0.001

violence is strongly and positively associated with VAW reports to *Disque Denúncia*. A one-standard-deviation increase in the residualized *Police Violence* variable (SD = 0.48) corresponds to an increase in VAW reports to *Disque Denúncia* within any precinct per month of 0.65.[10] This represents a 35% predicted increase over the mean level of VAW reports per precinct-month to DD.

Models 5 and 6 show that precincts where police violence is high experience a significant decline in levels of reported VAW to the police vis-a-vis to *Disque Denúncia*. Since the outcome variable VAW_{Diff} takes on a positive value when there are more police reports in an area and a negative one when there are more from *Disque Denúncia*, we interpret the large, negative coefficient as supporting evidence that individuals direct reports of VAW away from the police and towards third party channels when police violence is high. A one-standard-deviation increase in residualized *Police Violence* variable corresponds to a 3.4% shift in the volume of VAW reports away from the police and towards *Disque Denúncia*, a change in reported VAW incidents per precinct-month of -0.475.

10. We residualize the treatment with respect to unit and time fixed effects before calculating its standard deviation to provide a plausible counterfactual increase in the treatment variable, using the methods described in Mummolo and Peterson (2018).

Together, these findings suggests that, when exposed to police violence, women shift GBV reporting away from police authorities and toward *Disque Denúncia* – even though police remain the dominant authority to whom most cases are reported in the aggregate. That the mean level of VAW reports to the police (13.975) is orders of magnitude higher than that of VAW reports to *Disque Denúncia* (1.851) substantiates this point. On average, women are more likely to call the police to report VAW, but amid high levels of police violence, we document a net increase in reported VAW to *Disque Denúncia* and a relative decline of reporting to the police compared to *Disque Denúncia*.

Our interview evidence suggests that trust in police is related to both outcomes. As one favela resident explained when asked about police presence in her community: "The police only come here to mistreat us (*maltratar*) and beat us. Why would I want them here?"[11] Similarly, one (woman) military police officer in Rio emphasized the importance of alternative channels: "sometimes women are not ready to report... or sometimes they will never be able to come to the police, but these alternative resources [like DD] are crucial for them to receive some kind of support." When asked why these channels remain popular, she said: "it is not uncommon to hear that police will send survivors somewhere else (*bicar*) to lower crime rates in their precincts; that doesn't help [police's reputation among citizens]."[12]

The even-numbered models in Table 1 also include the estimated reporting gap for violent crime, included to absorb other unobserved time-varying factors related to crime reporting within precincts. We find that the reporting gap coefficients are small and not statistically significant, suggesting that, conditional on fixed effects, differences in reporting of violent crimes to the police and to *Disque Denúncia* do not substantially change the relationship between police violence and GBV reporting.

We conduct several robustness checks to probe the sensitivity of these results. First, we construct alternative measures of our independent variable, first lagging it (Table

11. Author's interview. 12/9/2024 in São Paulo. All interviews translated and lightly edited for clarity.
12. Author's interview. 09/23/2025.

A2) and then constructing a smooth measure of police violence that averages the precinct-monthly level for the past three months (Table A3). In both cases, the findings mirror the main specification: high levels of police violence in the preceding month are followed by higher reporting to *Disque Denúncia* and lower relative reporting to the police, while the moving average predictor shows that cumulative exposure to police violence produces even larger shifts away from police reporting. Next, we consider alternatives to the reporting gap measure, including a table with the main results and $\phi_{Property}$ and ϕ_{All} in Table A4. The former compares reporting of property crimes across the police and *Disque Denúncia*, while the latter aggregates all crime types. The substantive results are unchanged.

6.1 Alternative Explanations

We address two important alternative explanations that could be driving GBV reporting instead of police violence. The first, and perhaps most obvious alternative, is that heightened levels of police violence and GBV reporting are symptoms of the underlying level of crime and violence. This is particularly salient in a case like Rio de Janeiro where organized criminal control and criminal violence are high (Arias 2017; Barnes 2022; Lessing 2017). Studies of gender and conflict have documented that violence and insecurity enable higher levels of GBV (Cohen 2016; Hernández Gress et al. 2023; Hume 2004; Massa Roldan et al. 2021; Wood 2014; Weitzman et al. 2024; UNODC 2023). Separately, studies of police use of force have documented that police violence is more likely in violent areas (G. Flores-Macías and Zarkin 2022; González and Zarkin 2024). High levels of underlying violence may plausibly drive *both* police use of force and GBV. To assess the possibility of this explanation, we examine the association between violent crime, measured as the number of reported homicides to the police per precinct-month, and GBV reporting to various reporting channels.

Table 2 re-estimates Equation 1 by interacting *Police Violence* with reported *Homicide* to the police, measured first on the extensive margin as a binary variable if was at least one homicide per precinct-month (odd-numbered models), and second on the

Table 2: Police Violence, Homicides, and GBV Reporting

	VAW (Police)		**VAW (DD)**		**VAW (Diff)**	
	(1)	(2)	(3)	(4)	(5)	(6)
Police Violence × Homicide (B)	−0.096		1.569***		−1.664***	
	(0.457)		(0.340)		(0.410)	
Police Violence × Homicide (C)		−0.057		0.063*		−0.120*
		(0.050)		(0.027)		(0.058)
Police Violence	0.456	0.326	−0.133	0.595*	0.590	−0.269
	(0.313)	(0.355)	(0.226)	(0.252)	(0.312)	(0.426)
Homicide (B)	0.418		0.250**		0.168	
	(0.267)		(0.081)		(0.248)	
Homicide (C)		0.436***		0.299***		0.136
		(0.100)		(0.061)		(0.105)
Reporting Gap	0.061	−0.033	0.018	−0.059	0.044	0.026
	(0.065)	(0.077)	(0.060)	(0.061)	(0.105)	(0.118)
Num.Obs.	21 581	21 581	21 581	21 581	21 581	21 581
D.V. Mean	13.975	13.975	1.851	1.851	12.124	12.124
R2	0.826	0.828	0.514	0.532	0.753	0.753
Adj. R2	0.824	0.826	0.507	0.525	0.749	0.749

Note: (B) and (C) refers to the Binary or Count *Homicide* variable, respectively. * p <0.05, ** p <0.01, *** p <0.001

intensive margin as a count of homicides (even-numbered models). The dependent variables remain the same as in our main results. Model 1 shows that there remains no significant relationship between reported VAW to the police and police violence even when interacting with precinct-months where homicides occured. When homicides are measures as a count variable (Model 2), we find some supporting evidence for the broader literature on GBV and conflict, and find that VAW reports to the police are positively associated with homicides, but we find no significant difference in those precinct-months where higher levels of police violence occurred.

Models 3 and 4 present the findings for VAW reporting to *Disque Denúncia* as an outcome, suggesting that VAW reports to *Disque Denúncia* are positively associated

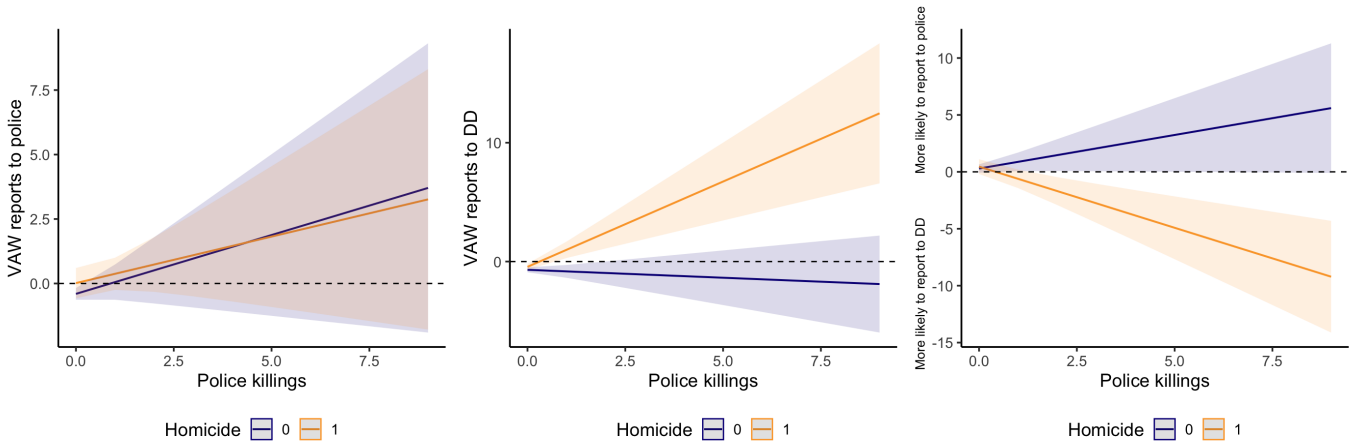
with both homicides and police violence. In these models, homicides are consistently associated with higher levels of VAW reporting to *Disque Denúncia*, with the presence of at least one homicide corresponding to a 14% increase in reports and each additional homicide associated with a 16% increase relative to the mean. Unlike our findings for police reported VAW, the *Disque Denúncia* results suggest that reported VAW to third party channels is highest when police killings and homicides coincide. In the binary specification, the interaction coefficient is large and highly significant (1.57, $p < 0.001$), meaning that a one-standard-deviation increase in the residualized treatment (the interaction term) corresponds to a predicted increase in 0.74 VAW reports to *Disque Denúncia*, a 40% increase relative to the outcome's mean, for any precinct-month.[13] Similarly, an increase of one standard deviation in the continuous treatment corresponds to a predicted increase of 0.27 VAW reports to *Disque Denúncia*. These findings suggest that higher levels of local violence are associated with an increase in reported cases to both channels.

Finally, Models 5 and 6 reconcile existing theories about GBV and conflict with our own. We find that compound exposure to police violence and violent crime leads survivors to redirect their reports away from the police and toward *Disque Denúncia*. There is a significant decline in reporting to the police vis-a-vis *Disque Denúncia* across both the extensive and intensive margins. A one standard deviation increase in the treatment correspond to a shift of 0.78 and 0.53 fewer reported incidents to the police vis-a-vis *Disque Denúncia*, respectively, representing a shift of 4.2 - 6.4% vis-a-vis the outcome's mean.

We further contextualize these results by plotting the marginal effects of the interaction terms for the odd-numbered models, shown in Figure 2. Panel (a) demonstrates that VAW reports to the police are not statistically distinguishable from zero, even at high levels of police violence (> 7.5 police killings per precinct-month), and there is

13. As in Section 6, we use the methods described in Mummolo and Peterson (2018) to residualize treatment variables and estimate plausible counterfactual shifts in our treatment variables. The standard deviations of the residualized interaction $PoliceViolence \times Homicide$ are SD = 0.54 and SD = 4.97 for the binary and continuous specification, respectively.

Figure 2: Predicted shift in VAW reporting across channels, precinct-month



Note: Plots show the interaction between police killings and the binary homicide indicator by precinct-month. Estimates correspond to Columns 1, 3, and 5 of Table 2. In Column 3, negative values indicate a relative shift toward reporting to *Disque Denúncia*, while positive values indicate a shift toward reporting to the police.

no discernable difference in reporting patterns in violent versus not violent precincts. Panel (b) shows that higher levels of police killings do not appear to be related to VAW reporting in non-violent precincts, but the compound exposure to homicides and police killings is strongly correlated with increased GBV reports to *Disque Denúncia*. Third, we find that compound exposure to homicides and police killings shifts reporting away from the police and towards *Disque Denúncia*.

There are two key takeaways from these results. First, it is possible that higher levels of violence may be generating more GBV (and hence, more GBV reports) mechanically. This is consistent with the broader literature on GBV and conflict, and is supported by Models 2-4 which document a strong positive relationship between homicides and reported GBV across both channels. The second important takeaway adds nuance to this finding, suggesting that when violence, in general, is paired with police violence, this deters survivors from approaching the police and pushes them toward alternative channels, such as *Disque Denúncia*.

The second alternative explanation we consider is that women's police stations – often targeted to specific areas – facilitate GBV reporting. A rich literature explains

Table 3: GBV Reporting at Women's Police Stations (DEAMs)

	VAW (Police) (Reported at a DEAM)	**VAW (DD)** (Reported to DD)	**VAW (Diff)**
Police Violence	0.562*	1.348***	−0.786**
	(0.245)	(0.314)	(0.282)
Reporting Gap	0.145	0.025	0.120
	(0.186)	(0.060)	(0.237)
Num.Obs.	21 256	21 256	21 256
R2	0.802	0.515	0.713
R2 Adj.	0.799	0.508	0.709

Note: This analysis restricts the sample to only those precincts with the option to report at a women's police station (DEAMs). * p <0.05, ** p <0.01, *** p <0.001

whether women's police stations encourage GBV reporting (Córdova and Kras 2020, 2022; Jassal 2020; Perova and Reynolds 2017). While these specialized units may lower barriers to reporting in some contexts, their effectiveness should be evaluated alongside other policing practices within the precinct. Using location information from police metadata, we classify each reported incident of VAW according to whether it was filed at a women's police station (DEAM, *Delegacia Especializada de Atendimento à Mulher*) or elsewhere, and we reconstruct the VAW_{Diff} variable by subtracting VAW_{DD} from the subset of police reported VAW that were made at a women's police station. We restrict the analysis to precincts that have a DEAM, which represents 97% of precincts across the state of Rio de Janeiro.[14]

Table 3 presents three models. The first shows the number of VAW incidents reported to the police at a women's police station. The coefficient on police violence is positive and statistically significant (0.562, $p < 0.05$), indicating that higher levels of police violence are associated with an increase in reports filed at women's police stations. This supports the findings from the broader literature on women's police stations, especially compared to Models 1 and 2 of Table 1, which show that reported

14. Only four precincts lack a DEAM in our time-series: 104, 107, 138, 139.

VAW to the police is statistically indistinguishable from zero. We interpret these findings as evidence in support of the argument that women's police stations facilitating reporting, even amid high police violence.

Model 2 of Table 3 demonstrates that, even among precincts with an available women's police station, police killings are associated with a large and highly significant increase in reported VAW to *Disque Denúncia*. Finally, Model 3 shows that, among these precincts with a DEAM, we find that women are around 3% more likely to report to *Disque Denúncia* than to the police. We note that the magnitude of the coefficient is smaller than those reported in Models 5-6 of Table 1, suggesting that fewer women are substituting *Disque Denúncia* for the police when considering the subset of precincts that have ready access to a women's police station. These findings support and add nuance to existing arguments about the importance of women's police stations in facilitating reporting. However, we show that the promise of women's police stations may be overshadowed by police violence, which continues to push women to substitute third party channels for the police.

Together, our findings suggest that police killings predict an increase in reported GBV to *Disque Denúncia*, at the expense of reports to the police. These findings are robust to various sensitivity tests and are valid alongside several alternative explanations, including level of violent crime and the existence of a women's police station. In contexts with high police violence, such as Rio de Janeiro, these results demonstrate the importance of non-state channels for women to safely report GBV and seek help. However, care should be taken in interpreting *Disque Denúncia* and other non-state actors as a pure substitute for the police. The following section explores the limitations of third party reporting channels.

7 Reduced Access to Third Party Channels Does Not Increase GBV Reporting to the Police

Through much of 2015 and the first quarter of 2016, *Disque Denúncia* experienced budgetary shortfalls and was forced to scale back their operations.[15] In May 2016, the *Disque Denúncia* call center quietly ceased 24-hour operations and longer accepted calls between 11pm and 6am. Although callers had the option to leave a voicemail, a vast majority did not. This change in operating hours was implemented uniformly across the state, but was not publicized, likely because the *Disque Denúncia* leadership was hoping that the pause in 24-hour service would be brief and funding would be restored. We leverage this exogenous change in *Disque Denúncia* operating hours to estimate its effect on VAW reporting to the police. We conduct an interrupted time series of the following format:

$$VAW_{it} = \beta_1 Shock_t + f(days_t) + \lambda_d + \pi_i + u_{it} \tag{2}$$

where VAW_{it} is the reported count of VAW incidents reported (1) to *Disque Denúncia* during working hours and (2) to the police. We examine several other crimes reported to both channels as outcomes, to aid in interpretation and benchmark the effect of the closure on VAW reporting. β_1 is the coefficient of interest, and the indicator $Shock_t$ takes a value of 1 on the day *Disque Denúncia* ceased 24-hour operations (May 15, 2016) and every day after. The function $f(days_t)$ models time trends using linear, quadratic, and cubic polynomial functions, in days, which is the running variable. We further include daily (λ_d) and precinct (π_i) fixed effects. Standard errors are clustered at the precinct level.

Table 4 presents the main results. All models use the baseline specification with a linear polynomial trend and a 30-day bandwidth before and after the shock. Model 1 shows that VAW calls to *Disque Denúncia* plummeted after 24-hour operations ceased.

15. As an independent organization, DD depends on federal grants and philanthropic donations to survive.

Table 4: DD Night-time Closure on Reporting Volume

	***Disque Denúncia* Reports**				**Police Reports**	
	VAW	All	Drugs	Weapons	VAW	VAW (night)
Shock	-0.059^{***}	-0.229	-0.046	-0.018	0.051	0.023^{*}
	(0.013)	(0.161)	(0.047)	(0.034)	(0.031)	(0.010)
Days (linear)	0.000	0.020^{***}	0.004^{***}	0.003^{**}	-0.003^{**}	-0.001^{**}
	(0.000)	(0.005)	(0.001)	(0.001)	(0.001)	(0.000)
Num. Obs	8357	8357	8357	8357	8357	8357
Precint-level FEs	✓	✓	✓	✓	✓	✓
Weekday FEs	✓	✓	✓	✓	✓	✓

* p <0.05, ** p <0.01, *** p <0.001

In the 30 days before the closure, each police precinct received on average 0.107 VAW reports per day to DD. Model 1 predicts, on average, a decline of 0.059 reports per precinct-day, a 45% reduction relative to baseline reporting. Across the entire state, this corresponds to approximately 197 missing reports during the 30-day period. We view this finding as more than just a manipulation check that *Disque Denúncia* limited their operating hours. Rather, this suggests that women neither left a message nor waited until morning when the hotline re-opened to try again.

Did *Disque Denúncia*'s restricted hours lead to a drop call volume for all topics? Model 2 suggests that their total call volume experienced minor decreases following the change in hours, but this effect size is not statistically distinguishable from zero. Models 3 and 4 considers as dependent variables the call volume to *Disque Denúncia* about the two most frequent categories, drug trafficking and illicit firearm possession, respectively. As with the total call volume, the minor decline in calls is imperceptible for both of these categories. These patterns suggest that GBV calls to *Disque Denúncia* experienced a precipitous decline, both relative to their previous levels and relative to other common categories of calls.

Models 5 and 6 consider whether the reduction in *Disque Denúncia*'s operating hours prompted women to report to the police. We find no evidence that this was the

Table 5: DD Night-time Closure on Reporting Volume (violent police precincts)

	***Disque Denúncia* Reports**				**Police Reports**	
	VAW	All	Drugs	Weapons	VAW	VAW (night)
Post-shock	−0.098*	−0.265	−0.026	−0.088	0.128	0.077*
	(0.042)	(0.682)	(0.200)	(0.143)	(0.114)	(0.031)
Days since (linear)	0.001	0.045*	0.008+	0.009*	−0.006	−0.002+
	(0.001)	(0.018)	(0.004)	(0.003)	(0.004)	(0.001)
Num. Obs	1464	1464	1464	1464	1464	1464
Precint-level FEs	✓	✓	✓	✓	✓	✓
Weekday FEs	✓	✓	✓	✓	✓	✓

* p <0.05, ** p <0.01, *** p <0.001; + p <0.1

case. Model 5 shows that there were no significant changes in VAW reports to the police following the shock to *Disque Denúncia*'s operating hours, but there was a small and marginally significant increase during night hours when *Disque Denúncia* was no longer available (Model 6). Police reports at night increased by 0.023 per precinct-day (approximately 95 reports, or 21% of baseline, on average). Our back-of-the-envelope calculations suggest that this does not even offset half of the decline in reported VAW to *Disque Denúncia*, which seemingly went unreported.

Table 5 presents results for Equation 2 for the precincts with the highest levels of police violence.[16] The patterns are consistent with those in the full sample. Model 1 shows that VAW-related calls to *Disque Denúncia* experience a sharp and statistically significant decline, despite there being no significant change in aggregate call volume to *Disque Denúncia* (Model 2), drug trafficking (Model 3), or illicit firearm possession (Model 4). These precincts suffering from acute police violence comprise a disproportionate share of lost VAW reports to *Disque Denúncia*. Roughly 100 "missing" reports of VAW come from these 24 specific precincts, and the estimated post-shock decline of 0.098 reports per precinct-day corresponds to a 49% reduction relative to baseline,

16. We select the top 25% police precincts with the highest average level of police killings for the entire time series.

greater in magnitude than that of the entire sample. We again find evidence that "missing" reports to *Disque Denúncia* were unreported to the police as well. The sample of precincts with high police violence also experienced a slight increase in reported VAW to the police during the night, corresponding to an additional 0.077 reports per precinct-day, still smaller than the estimated decline in DD calls.

We present results for alternative functional forms in the Appendix. Table A6 uses the algorithmically-defined optimal bandwidth (Calonico et al. 2014) in lieu of the 30-day bandwidth. Rather than a +/- 30 day bandwidth, the optimal bandwidths range from 10-13 days on either side of the shock to *Disque Denúncia* operating hours, a significant reduction in sample size. Though the p-value is no longer less than 0.05, the predicted sign for the decrease in VAW reports to *Disque Denúncia* is still negative and slightly smaller than our main estimate. Table A5 shows that the decrease in VAW reports to *Disque Denúncia* is robust to quadratic and cubic specifications, and the cubic specification implies an even larger decline, equivalent to a 77% drop relative to baseline. The coefficients for VAW calls to the police at night are small and not statistically significant, casting doubt on whether or not there was indeed an increase in calls to the police at all. Back of the envelope calculations suggest that 197 or 102 cases went unreported during the 30-day period, according to the quadradic and cubic specification, respectively.

8 Conclusion

Why do many survivors of gender-based violence (GBV) choose not to report to the police? This paper demonstrates that the answer lies not only in survivors' individual circumstances or their direct encounters with frontline officers, but also within the broader institutional constraints of their environment. We focus specifically on how law enforcement institutions and their use of violence shapes survivors' trust in the police. We show that in Rio de Janeiro, Brazil, greater exposure to police violence is systematically correlated with higher levels of GBV reporting to a third-party at the

expense of reporting to the police. Where police killings are more frequent, women are less likely to report to law enforcement and more likely to turn to third-party channels like *Disque Denúncia*. Even when the third party becomes less available, only a small number of survivors are likely to report to the police. These findings support this paper's core theoretical claim: when the police use lethal force against the population, it discouraged women – even those who might not have personal experiences with police violence – to report gendered violence to them.

The relationship between the police, GBV, and GBV reporting is complex and has varying theoretical and policy consequences for understanding GBV. This paper advances the literature about GBV reporting in three ways. First, by establishing the relationship between police violence and GBV underreporting, we explain how unrelated actions by the police – the very organization tasked with handling GBV complaints – can frustrate their efforts to measure and adequately process GBV cases. In doing so, we bring the literatures on police use of force and GBV reporting closer together. Second, we extend classic theories of political trust to a new case and explain how trust in the police, in general, can affect perceptions of the police when handling GBV complaints. We add a new case to the growing chorus of recent literature that examines the negative externalities of low trust in the police (Bruin et al. 2025; Gingerich 2019; Lerman and Weaver 2014; Urbina and Sgorlon 2024). Third, our treatment of the police and *Disque Denúncia* data demonstrates how to bound the unobserved incidence of GBV, even when reporting error and noise are present.

There are several future directions that could stem from this work. Future research should unpack the mechanisms underpinning choice of GBV reporting to one actor or another, including reporting to the constellation of health and social service actors listed in Table A1. A clearer understanding of the consequences and tradeoffs of reporting to one versus another will help understand why women choose not to report, and will help policymakers design clearer policies that deliver resources and aid to the appropriate channels. Relatedly, more work is needed to examine the conditions under which survivors regain trust in state institutions.

Our findings underscore that efforts to improve GBV reporting cannot be divorced from broader reforms of public security. Building trust in the state requires not only specialized women's police stations or outreach campaigns aimed at combating GBV, but also curbing police violence and societal violence, more broadly. While the main theoretical contribution of this paper is to demonstrate the relationship between police violence and diverted GBV reports to third-party channels, another key finding is that third-party channels are most used by survivors in conditions of compound exposure to police *and* civilian violence. High police violence discourages survivors to report to the police, but high civilian violence obstructs delivery of services and other vital community resources. In the absence of such public security reforms, survivors will continue to view the state as a source of danger or neglect rather than protection, with profound consequences for both justice and public safety.

Rio de Janeiro provides an ideal context for examining GBV reporting patterns given the extent and variation in violence against women, particularly in marginalized areas. These neighborhoods often experience overlapping vulnerabilities—poverty, weak state presence, and pervasive criminal governance—creating conditions where women may face heightened barriers to engaging with formal justice mechanisms. But the implications extend beyond Rio de Janeiro, and beyond the Brazilian case. In many cities across the Global South, marginalized communities experience overlapping forms of state violence and exclusion. Our results highlight the importance of treating women's decisions to report GBV as embedded within these political and institutional contexts. More broadly, the findings speak to enduring debates in political science about how violence and coercion shape citizen engagement. When law enforcement perpetrates violence, citizens may disengage from state channels not only in politics but also in their most intimate claims for protection.

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A Appendix

A.1 GBV Reporting channels in Rio de Janeiro

Table A1: Institutional pathways for gender-based violence reporting and support in Rio de Janeiro

Category	Sub-Channel	Action Taken	Outcome
Law Enforcement	In-person visit to general police station (*delegacia comum*)	Survivor files police report (B.O.)	B.O. filed
	In-person visit to women's police station (DEAM)	Survivor files B.O.	B.O. filed
	Police apps and websites (e.g., delegacia online, Maria da Penha Virtual)	Survivor files B.O. digitally	B.O. filed
	Call to police emergency phone line (190)	Patrol dispatched; survivor taken to hospital and/or precinct	B.O. filed
	Call to national women's hotline (180)	Case forwarded to state-level police	Re-directed to police
	In-person visit or call to Guarda Municipal	Case forwarded to police	Re-directed to police
Health System	SUS hospitals/clinics	Survivor receives care	B.O. filed*
Judiciary	Public Prosecutor's Office (MP)	Survivor or third party petitions directly	Re-directed to police; B.O. filed*
Social Services	Call to (national human rights hotline) Disque 100	Case forwarded to police/social services	Re-directed to police
	Call to (municipal citizen hotline) Disque 1746	Case forwarded to police/social services	Re-directed to police
	Social assistance centers (CEAMs, CRAS/CREAS, Casa da Mulher Carioca)	Survivor receives psychosocial/legal support	Re-directed to police
Third-Parties	Anonymous call to Disque Denúncia	Operators log complaint	No further action

* B.O. is filed only if the survivor consents.

The first and most direct way to report GBV is through law enforcement. Survivors can file a *Boletim de Ocorrência* in person at either a general police station or a Women's Police Station (DEAM), digitally via online portals and apps, or indirectly through emergency calls and hotlines. In practice, however, these routes often converge on the same outcome: a police report is filed and logged in the state system.

A second pathway runs through the health system. Survivors of physical or sexual assault may seek care at public hospitals or clinics, where they can access emergency contraception, prophylaxis, or psychological support, and in some cases undergo forensic exams. These services are legally available regardless of whether a B.O. is filed, but survivors are encouraged to do so. For some, this represents the only point of

contact with the state after violence, as medical professionals focus on care rather than criminal registration (Higa et al. 2008). This makes the health system one of the most common entry points for women seeking help, particularly because hospitals are perceived as less threatening and more accessible than police stations. Women often turn to these services to avoid the negative externalities associated with filing a police report. According to service providers we interviewed, the health system is likely the most common entry point for women victimized by sexual violence to receive prophylactic and other medical care, complicating the relationship between incident and police reported statistics.[17]

Third, women occasionally engage directly with the judiciary, typically the Public Prosecutor's Office or courts, in pursuit of protective measures such as restraining orders. Survivors are typically redirected back to police precincts to file a B.O. before legal proceedings can move forward. The police report thus functions as the gateway to judicial protection.

Fourth, social services and hotlines—such as municipal citizen helplines (*Portal 1746 RJ*), human rights hotlines (*Disque Direitos Humanos*), and local assistance centers like CEAMs or Casas da Mulher Carioca—provide crucial resources like psychosocial counseling, legal advice, and even welfare support. Yet when women request legal protection, these institutions direct them back to the police, reinforcing the primacy of the B.O.

Finally, some survivors bypass the state altogether by turning to third-party organizations like *Disque Denúncia*. Unlike police or health services, DD operates outside the state, offering anonymity and a perceived neutrality that can make it more approachable for women who fear retaliation or mistrust authorities. While this option avoids direct interaction with the police, it also limits access to legal remedies or protective measures, functioning more as symbolic registration than a pathway to protection.

17. Given this evidence, we focus most of our analyses in the body of the paper on physical violence against women (VAW) rather than sexual violence

A.2 Robustness Checks: TWFE Models

Table A2: TWFE: Police Killings (Lagged)

	VAW (Police)	**VAW (DD)**	**VAW (Diff)**
	(1)	(2)	(3)
Police Violence (lagged)	0.456	1.396***	−0.939***
	(0.300)	(0.289)	(0.243)
Reporting Gap	0.067	0.031	0.036
	(0.065)	(0.061)	(0.106)
Num.Obs.	21 462	21 462	21 462
R2	0.826	0.513	0.752
R2 Adj.	0.824	0.506	0.748

* p <0.05, ** p <0.01, *** p <0.001

Table A3: TWFE: Police Killings (3-Month Moving Average)

	VAW (Police)	**VAW (DD)**	**VAW (Diff)**
	(1)	(2)	(3)
Police Violence (3mo)	0.675	2.481***	−1.806***
	(0.498)	(0.579)	(0.429)
Reporting Gap	0.061	0.024	0.037
	(0.064)	(0.060)	(0.105)
Num.Obs.	21 349	21 349	21 349
R2	0.827	0.532	0.753
R2 Adj.	0.824	0.525	0.750

* p <0.05, ** p <0.01, *** p <0.001

Table A4: TWFE: Alternative Reporting Gap Measures

	Property Gap			**All Crimes Gap**		
	VAW (Police)	VAW (DD)	VAW (Diff)	VAW (Police)	VAW (DD)	VAW (Diff)
Police Violence	0.340	1.349***	−1.009***	0.371	1.360***	−0.989***
	(0.277)	(0.313)	(0.267)	(0.279)	(0.314)	(0.264)
Reporting Gap	0.211*	0.110*	0.100	0.064	0.063	0.002
	(0.087)	(0.047)	(0.094)	(0.051)	(0.042)	(0.073)
Num.Obs.	21 581	21 581	21 581	21 581	21 581	21 581
R2	0.826	0.513	0.752	0.826	0.513	0.752
R2 Adj.	0.824	0.506	0.749	0.823	0.505	0.749

* p <0.05, ** p <0.01, *** p <0.001

A.3 Robustness Checks: Interrupted Time-Series with *Disque Denúncia* Closure

Table A5: RDiT Estimates with ±30 Days Bandwidth (Quadratic and Cubic)

	***Disque Denúncia* Reports**				**Police Reports**	
	VAW	All	DT	Weapons	VAW	VAW (night)
Panel A. Quadratic Specification						
Post-shock	−0.059***	−0.253	−0.051	−0.021	0.052	0.023*
	(0.013)	(0.159)	(0.047)	(0.033)	(0.031)	(0.010)
Days	0.000	0.021***	0.004***	0.003**	−0.003**	−0.001**
	(0.000)	(0.005)	(0.001)	(0.001)	(0.001)	(0.000)
$Days^2$	0.000	−0.001***	0.000**	0.000+	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Num. Obs	8357	8357	8357	8357	8357	8357
Precint-level FEs	✓	✓	✓	✓	✓	✓
Weekday FEs	✓	✓	✓	✓	✓	✓
Panel B. Cubic Specification						
Post-shock	−0.082***	−0.421+	−0.068	−0.036	0.082+	0.021
	(0.018)	(0.236)	(0.065)	(0.050)	(0.044)	(0.014)
Days	0.002*	0.033**	0.005+	0.004	−0.006*	−0.001
	(0.001)	(0.012)	(0.003)	(0.003)	(0.002)	(0.001)
$Days^2$	0.000	−0.001***	0.000**	0.000+	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$Days^3$	0.000*	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Precint-level FEs	✓	✓	✓	✓	✓	✓
Weekday FEs	✓	✓	✓	✓	✓	✓

* p <0.05, ** p <0.01, *** p <0.001

Table A6: DD (optimal bandwidth): Post-shock effect on call volume (linear specification)

	VAW	All crimes	Drug trafficking	Weapons
Post-shock	−0.036	0.626	0.165	0.113
	(0.025)	(0.319)	(0.098)	(0.074)
Observations	2877	3425	3425	3699
Precint-level FEs	✓	✓	✓	✓
Weekday FEs	✓	✓	✓	✓

* p <0.05, ** p <0.01, *** p <0.001