

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

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Motivation

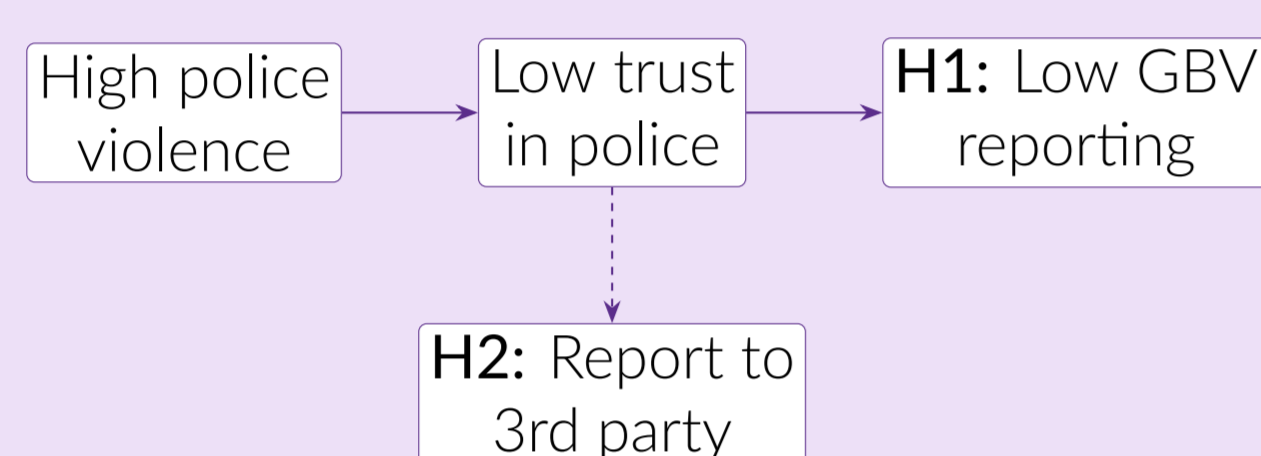
Under what conditions do survivors of gender-based violence (GBV) choose *not* to report to the police?

A wave of influential studies emphasizes **individual-level** barriers:

1. Feelings about one's **self**: shame, guilt, stigma (Gracia and Herrero 2007; Lonsway and Fitzgerald 1994; Palermo et al. 2014)
2. The relationship with the **perpetrator**: fear of retaliation, economic dependence (Felson et al. 2002; Heron and Eisma 2021)
3. Perceptions of how the **state processes GBV**: fear of mistreatment, distrust of officers (Córdova and Kras 2020; Jassal 2020)

We build on the **third family of explanations** — but shift focus from individual officers to the *broader institutional behavior* of policing. We argue that exposure to **police violence** discourages GBV reporting to the police and redirects it toward **third-party channels**.

Theory & Hypotheses



Two channels link *police violence* to low trust in police:

- **Resource channel**: police divert resources to fight criminal violence, reducing capacity for GBV cases
- **Misconduct channel**: police killings signal untrustworthiness, pushing survivors toward 3rd-party channels *vis-à-vis* the police

Compound exposure (police + criminal violence) **amplifies** the substitution.

Context: Rio de Janeiro, Brazil

Brazil remains one of the **most dangerous countries for women**:

- A rape reported every **6 minutes**; a femicide every **6 hours**
- Rio de Janeiro: 283 police raids (2016–2023) → 1,137 civilian deaths
- An average of **3 police massacres per month**; 1.6 million residents exposed to crossfire

This setting provides **high variation** in both GBV incidence and police violence across precincts and over time

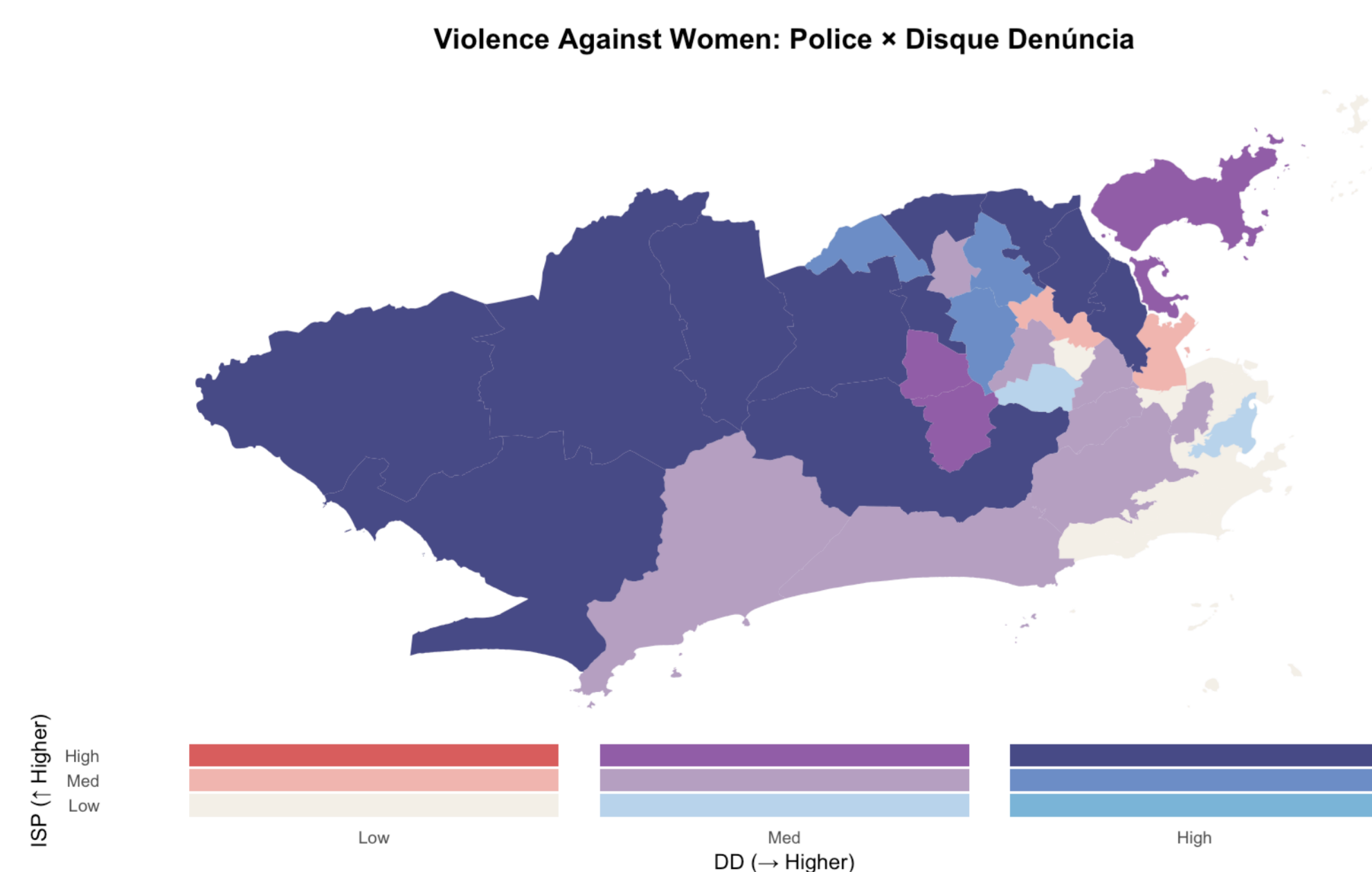


Figure 1. Violence against women (VAW) reporting rates across Rio de Janeiro precincts

Data

We combine **two high-frequency sources** at the police-precinct/month level, 2008–2023:

Police Records (ISP — Institute for Public Safety)

- **Outcomes**: police-reported violence against women (VAW), rape
- **Predictors**: homicides, police killings

Disque Denúncia (DD) — Anonymous NGO Hotline

- **Outcomes**: anonymous VAW and rape complaints

We aggregate **6 million ISP** and **3 million DD** records to the precinct-month level.

Reporting gap: geometric distance between ISP and DD reporting rates for *non-GBV* crimes — absorbs unobserved time-varying differences in reporting practices across precincts.

Two-Way Fixed Effects (TWFE)

$$GBV_{it} = \beta_1 \text{crime}_{it} + \gamma_i + \rho_t + \varepsilon_{it}$$

- **Outcome**: GBV reports at precinct-month level — DD complaints, ISP reports of VAW/rape, or their *difference*
- **Key predictor**: police-reported violence (homicides; police killings)
- **Controls**: precinct FEs (γ_i), year-by-month FEs (ρ_t)
- **Errors**: clustered at the police precinct level
- **Interaction model**: police killings × homicide rate tests compound exposure

Result 1: Substitution Effect

Police killings increase DD reporting but suppress police reporting — a substitution pattern that is **strongest under compound exposure** to both police violence and criminal violence.

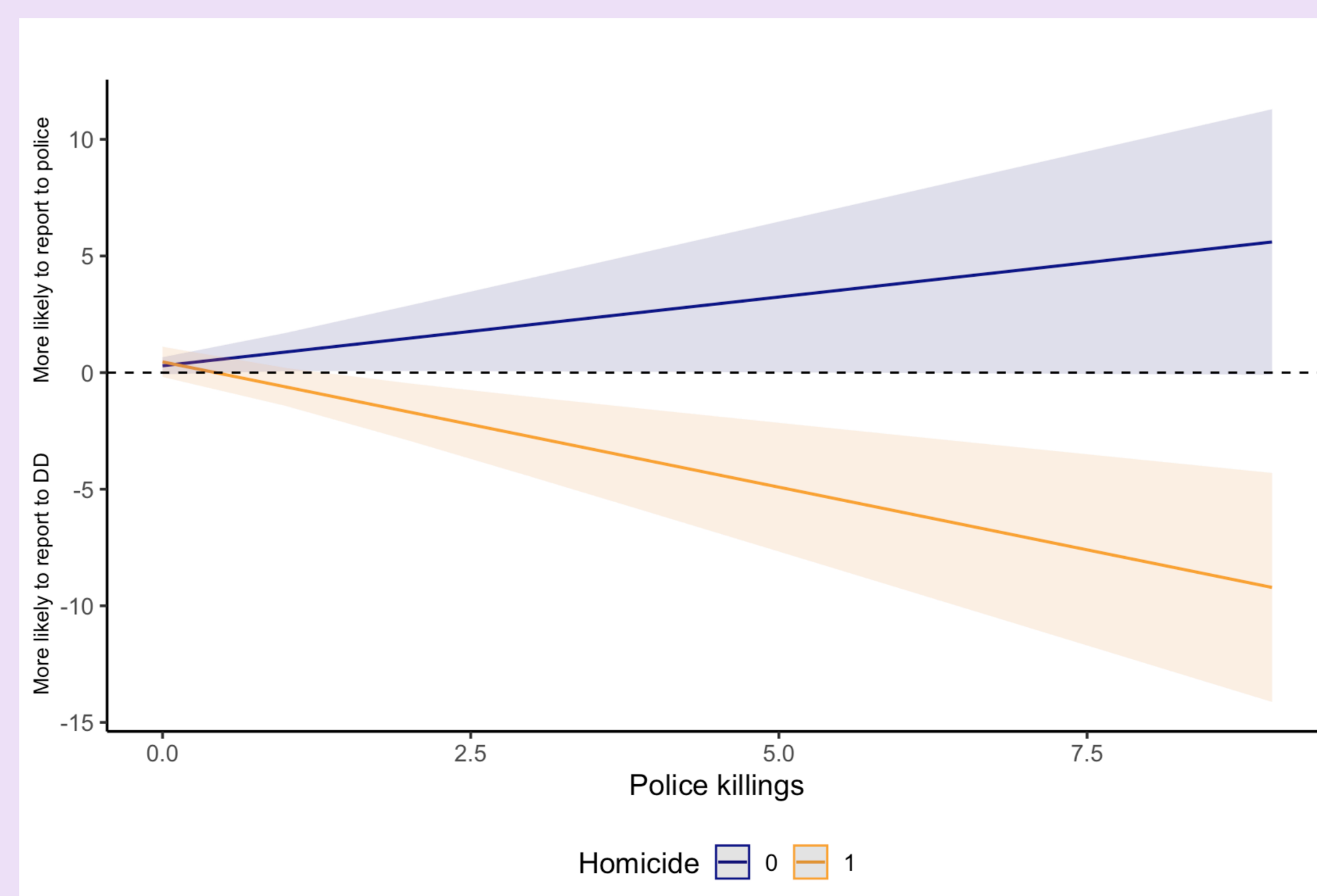


Figure 2. Compound exposure to police and criminal violence leads to substitution. Lines show marginal effect of police killings on reporting channel, by homicide level. Results are **robust** to the inclusion of the reporting gap, alternative crime measures, and controls for women's police stations.

RD in Time (RDIT)

Do GBV survivors engage more with the state when third-party channels become less reliable?

To estimate the **causal effect** of losing access to a third-party channel, we exploit an exogenous shock: in **2016**, DD permanently reduced its operating hours, eliminating *nighttime* service.

- Nighttime closure is **unrelated** to GBV trends or police violence
- RDIT comparing reporting volumes pre- and post-change
- Unit of observation: precinct-day; FEs for precinct and weekday

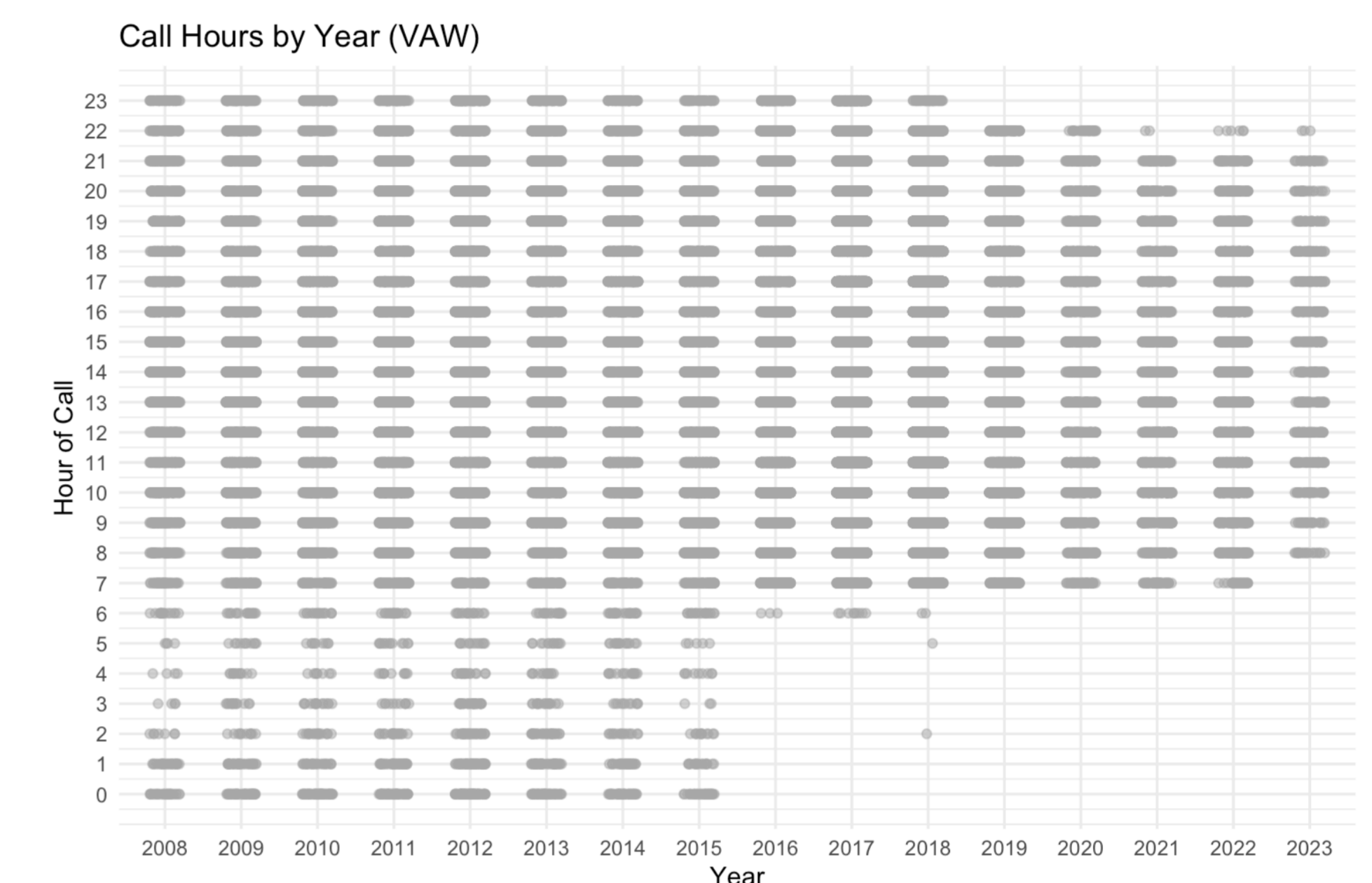


Figure 3. GBV calls to *Disque Denúncia* by hour before and after nighttime closure.

Result 2: When DD Weakens, Women Go Silent

Table: DD Night-time Closure on Reporting Volume

	DD (VAW)	DD (All)	Police (VAW)
Shock	−0.059*** (0.013)	−0.229 (0.161)	0.051 (0.031)
Days (linear)	0.000 (0.000)	0.020*** (0.005)	−0.003** (0.001)
Num. Obs.	8,357	8,357	8,357
Precinct FEs	✓	✓	✓
Weekday FEs	✓	✓	✓

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

- DD VAW reports **fell by 45% ≈ 197 missing reports** in a single month
- **Fewer than half** of the “missing” callers filed a police report instead
- Areas with the **highest police violence** were *least likely* to substitute to the police
- Most of the missing reports went **permanently unreported**
- Effect only holds for VAW and not for other common crimes (drugs, weapons)

Key Takeaways

1. **Police violence shifts GBV reporting** away from the state and toward third-party channels. Compound exposure to police + criminal violence intensifies the effect.
2. **When the NGO hotline weakens, survivors largely go silent.** We observe a “leaky bucket” effect where few calls are redirected to the police.
3. **Policy implication**: Strengthening alternative reporting channels matters critically for GBV survivor welfare; the police cannot effectively serve survivors in high-violence areas.
4. **Broader implication**: Police behavior in one domain (use of force) leads to citizen disengagement in broader areas (GBV processing).