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Emergency Calls Reveal the Importance of Arrests in Reducing Repeat Domestic Violence*

KEY MESSAGES

- Domestic violence is a pervasive threat to women's well-being worldwide and many victims are repeatedly abused by their partners
- One possible but controversial police measure to deal with this problem is to arrest suspects immediately on the spot
- Geo-coded 999 emergency call data can be used not only to identify victims and repeat offenders, but also to monitor the impact of officers' actions at the scene
- Recent research shows that arresting the marginal suspect is effective and reduces the number of repeat assaults by about 50 percent in the following year
- Arrests contribute to a cooling-off period in the short term, in addition to deterring abuse in the long term

Domestic violence (DV) is a serious human rights violation affecting roughly one-third of women worldwide (WHO 2021). In addition to the severe humanitarian consequences, there is also a significant economic impact not only for the individual, but also for society and the economy as a whole. Physical and psychological injuries that can lead to missed work days, reduced productivity, and, in some cases, even job loss are but some of the major consequences. Also, institutions such as the police, specialized services,

* This column is based on our research (Amaral et al. 2023), which uses data generously provided by the West Midlands Police. This article draws upon the summary of our work appearing in a Vox-EU column.



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the health and legal sector, and the allocation of their resources are affected. Therefore, it is one of the costliest crime types (Bindler et al. 2020; Chalfin 2015). The European Institute for Gender Equality (2014) estimates that the implied costs of gender-based violence (GBV) in an average European country amounts to EUR 4.5 billion per year. Against this background, it is important to investigate how to prevent DV cases.

A HIGHLY CONTROVERSIAL POLICE RESPONSE

Domestic violence primarily affects women, who often find themselves trapped in a cycle of abuse perpetrated by the same partner (Tjaden and Thoennes 2000; Aizer and Dal Bo 2009). One of the central questions surrounding this problem is how law enforcement should respond to it effectively. In particular, the controversial strategy of making provisional arrests on the spot has stirred debate within both academic and political circles.

Proponents of the arrest approach argue that it serves a dual purpose. First, it temporarily incapacitates the offender, ensuring the immediate safety of the victim. Second, it sends a strong signal that repeat incidents will come at a high cost, potentially deterring future offenses (Berk 1993). Critics of arrest, however, fear repercussions. They worry that while an arrest may provide immediate relief, it could lead to an escalation of violence over the long term (Schmidt and Sherman 1993; Goodmark 2018). It has also been argued that arrest might affect victims' willingness to report future incidents of domestic violence. Some argue that it encourages women to do so, and others believe that it prevents future calls to the police because women fear the reaction of their partners.

It has proven difficult to empirically assess the impact of arrest on repeat victimization. The cornerstone of the existing evidence comes from the "Minneapolis Domestic Violence Experiment" of 1981 (Sherman and Berk 1984), as well as similar studies conducted in other US cities and counties. In these experiments, patrol officers encountering violent situations were instructed to randomly implement one of three responses: arrest, separate the victim and offender, or provide advice. While innovative at the time, these studies faced several obstacles. They

produced inconsistent results, struggled with small sample sizes, and often encountered noncompliance in treatment assignment – meaning that patrol officers frequently deviated from the randomly assigned response. Related work has looked at the impact of various other law enforcement policies and strategies on revictimization. This includes investigations into the effects of “no drop” policies (Aizer and Dal Bo 2009), specialized domestic violence courts (Golestani et al. 2021), and the use of criminal charges (Black et al. 2023).

USING EMERGENCY CALLS TO OVERCOME ESTIMATION CHALLENGES

Estimating the consequences of an arrest on subsequent victimization poses a dual challenge. First, the scarcity of large datasets simultaneously encompassing details on domestic violence incidents, police responses, and recurring victimization complicates the analysis. Second, arrests are not random actions taken by police officers; they are more likely in cases with a high probability of repeat victimization, potentially leading to an underestimation of any deterrent impact.

In a recent study (Amaral et al. 2023), we tackle both challenges using data on emergency calls in the United Kingdom. Our data dataset spans a whole decade (2010–2019) and covers all emergency calls received by the police in West Midlands, the second most populous county in England. Initially, we compile a dataset that records emergency calls and officer involvement, including details on officers, case IDs, and timestamps for call placement, dispatch, arrival on scene, and departure. This is then merged with call-handler data, specifying how the call was categorized and providing incident geo-coordinates. Given the high priority of domestic violence in the UK, it is singled out by call handlers as a distinct crime category. In the next step, we link this data with information on the on-site actions of first-response officers, including whether a suspected offender is arrested. Finally, we merge the dataset with a database detailing whether a criminal investigation is initiated later and, if so, whether offenders are charged with a crime. This approach results in

631,834 officer-case level observations of domestic violence cases as identified by call handlers.

Measurement of Repeat Victimization

In many datasets, identifying domestic violence directly as a crime category is not possible; it must be inferred from incident characteristics. Furthermore, researchers typically observe cases where criminal charges are filed, but in domestic situations, victims often avoid pressing charges. Additionally, establishing a link between repeat victimization and a prior incident is challenging; datasets that track victim identities usually record them only in the presence of documented criminal charges. To classify cases as domestic violence, we leverage call-handler information. To create a linked panel of domestic violence incidents over time, we match cases through the precise geo-location at which they occurred. This approach offers the key advantage of being able to track repeat domestic violence even without a formal criminal charge. Consequently, our analysis captures a significantly higher fraction of repeat cases compared to other datasets based on criminal charges.

Addressing Endogeneity

Arrests are not random events, but are more likely in situations where the likelihood of repeat victimization is high. To address this, we leverage the extensive officer-level police database and capitalize on two aspects of our settings. First, given the unpredictable nature of when and where demands for police intervention will arise, the availability of police officers that can be dispatched to an incident is random once we account for observable case characteristics (time, location, and priority assigned by call handlers). Second, police officers exhibit different propensities to make arrests. We calculate the average arrest propensity in other cases handled by police officers during the ten-year observational period and employ this as an instrumental variable for predicting whether an arrest will occur in the current case. As multiple police officers can respond to an incident, we use the weighted average arrest rate of all dispatched police officers. The rationale for the instrumental variable is that of-



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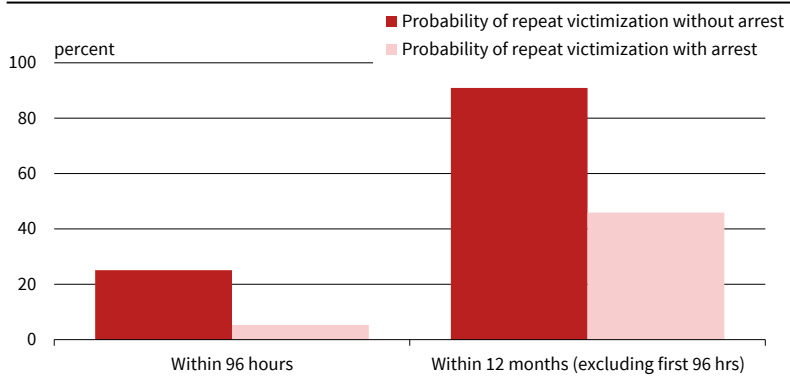
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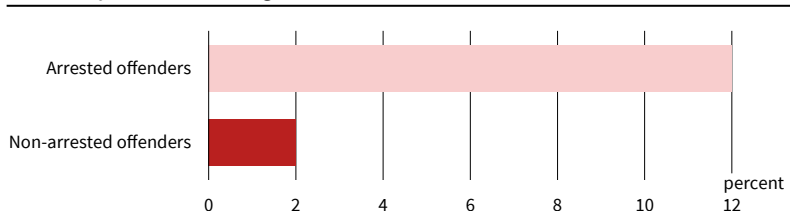
Figure 1
The Effect of Arrest on Repeat Victimization



Source: Authors' calculations.

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Figure 2
Probability of Criminal Charge



Source: Authors' calculations.

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Officers with a higher arrest propensity in other cases are more likely to make an arrest in the current case. However, since officers are randomly assigned to cases, a higher arrest propensity should not be linked to the characteristics of the current case. We show that the instrumental variable indeed strongly predicts whether there will be an arrest in the current case but exhibits no correlation with observable case characteristics.

A REDUCTION IN DOMESTIC VIOLENCE CALLS

Our primary finding underscores the significant impact of arrest in the context of domestic violence. After an arrest, the likelihood that domestic violence will occur again in the following 12 months drops significantly by 49 percentage points. This translates to a substantial 51 percent drop in repeat offenses. We also examine the timing of this decline. In the absence of an arrest, one-quarter of perpetrators tend to engage in violent behavior once again within just 96 hours. However, when an arrest is made, it acts as a strong deterrent and prevents almost all these immediate recurrences. Beyond this short-term effect, we also observe a sustained reduction in repeat offenses over the course of the following year, indicating a lasting impact (Figure 1).

A CHANGE IN ABUSE OR A CHANGE IN REPORTING BEHAVIOR?

Whether the decline in the frequency of recurrent domestic-violence-related 999 calls after an arrest is a

positive or negative development depends on whether it represents a true decline in abuse or merely a shift in victims' reporting behavior. To distinguish between these two possible explanations, we construct a simple reporting model based on a threshold concept. In this model, victims who face adverse consequences after an arrest may choose to endure a higher level of abuse before feeling compelled to report it in the future. Conversely, victims who draw strength from the deterrent effect of an arrest may choose to report future abuse at a lower threshold.

Using a measure for the severity of repeat emergency calls, we observe an average reduction in reporting thresholds following an arrest. Specifically, there is a notable decline in severe domestic violence calls and an increase in less severe domestic violence calls. This shift in composition is statistically significant. When viewed through the lens of our threshold reporting model, it implies that the decrease in domestic-violence emergency calls can be attributed not to changes in reporting behavior but rather to a reduction in the incidence of violence.

As a second test, we examine the differences between calls initiated by victims themselves and calls initiated by third parties, such as neighbors. The rationale behind this comparison is that victims may be more reluctant to report repeat offenses for fear of retaliation, while third parties may be less concerned. However, we find an opposite trend: a larger (though not statistically significant) decrease in reports made by third parties compared to those made by victims. This observation is consistent with a decrease in actual abuse.

POSSIBLE MECHANISMS

Our analysis addresses several mechanisms that could explain the decline in repeat victimization. The significant decrease in domestic violence cases in the first four days after an arrest indicates a cooling off period – a time when the perpetrator is temporarily incarcerated and removed from the scene. However, the persistent reductions observed over the subsequent year also point to a more enduring deterrent effect. Consistent with a deterrent effect, we show that an arrest significantly increases the likelihood that the offender will be formally prosecuted. Among those who are not arrested, only 2 percent are formally charged with a crime. In stark contrast, this likelihood increases to 12 percent for those who have been arrested (Figure 2). These results refute the claim that arrests have weak consequences and are therefore ineffective in addressing domestic violence.

POLICY CONCLUSION

Our study offers evidence supporting the role of arrests in disrupting the repetitive pattern of domestic violence. These findings counter recent propos-

als advocating for the complete decriminalization of domestic violence. Instead they propose that, in our context, an effective police response involves lowering the threshold for arrests and taking resolute measures against perpetrators. It is important to note, however, that our results should not be extrapolated to imply that arrests should be the default response in every case and every setting. For instance, in countries with high arrest rates, the balance may have shifted excessively in the other direction.

REFERENCES

- Aizer, A. and P. Dal Bo (2009), "Love, Hate, and Murder: Commitment Devices in Violent Relationships", *Journal of Public Economics* 93, 412–428.
- Amaral, S., G. B. Dahl, V. Endl-Geyer, T. Hener and H. Rainer (2023), "Deterrence or Backlash? Arrests and the Dynamics of Domestic Violence", *NBER Working Paper* 30855.
- Berk, R. A. (1993), "What the Scientific Evidence Shows: On average, We Can Do No Better Than Arrest", in R. J. Gelles and D. R. Loseke, eds., *Current Controversies on Family Violence*, Sage Publications, Thousand Oaks, CA, 323–336.
- Bhalotra, S. R., D. Britto, P. Pinotti and B. Sampaio (2021), "Job Displacement, Unemployment Benefits, and Domestic Violence", *CEPR Discussion Paper* DP16350.
- Bhuller, M., G. B. Dahl, K. V. Løken and M. Mogstad (2020), "Incarceration, Recidivism, and Employment", *Journal of Political Economy* 128, 1269–1324.
- Bindler, A., N. Ketel and R. Hjalmarsson (2020), "Costs of Victimization", in K. F. Zimmermann, ed., *Handbook of Labor, Human Resources and Population Economics*, Springer Nature, Berlin, 1–31.
- Black, D. A., J. Grogger, K. Sanders and T. Kirchmaier (2023), "Criminal Charges, Risk Assessment, and Violent Recidivism in Cases of Domestic Abuse", *NBER Working Paper* 30884.
- Chalfin, A. (2015), "Economic Costs of Crime", in *The Encyclopedia of Crime and Punishment*, Wiley, Hoboken, NJ, 1–12.
- European Institute for Gender Equality (2014), *Estimating the Costs of Gender-Based Violence in the European Union: Report*, <https://eige.europa.eu/publications-resources/publications/estimating-costs-gender-based-violence-european-union-report>.
- Golestani, A., E. Owens and K. Raissian (2021), *Specialization in Criminal Courts: Decision Making, Recidivism, and Re-victimization in Domestic Violence Courts in Tennessee*, Mimeo.
- Goodmark, L. (2018), *Decriminalizing Domestic Violence*, University of California Press, Berkeley, CA.
- HM Inspectorate of Constabulary (2014), *Everyone's Business: Improving the Police Response to Domestic Abuse*, <https://www.justiceinspectors.gov.uk/hmicfrs/wp-content/uploads/2014/04/improving-the-police-response-to-domestic-abuse.pdf>.
- Schmidt, J. D. and L. W. Sherman (1993), "Does Arrest Deter Domestic Violence?", *American Behavioral Scientist* 36, 601–609.
- Sherman, L. W. and R. A. Berk (1984), "The Specific Deterrent Effects of Arrest for Domestic Assault", *American Sociological Review* 49, 261–272.
- Tjaden, P. G. and N. Thoennes (2000), *Full Report of the Prevalence, Incidence, and Consequences of Violence against Women: Findings from the National Violence Against Women Survey*, US Department of Justice, Office of Justice Programs, National Institute of Justice, Washington DC.
- WHO (2021), *Violence against Women Prevalence Estimates 2018*, <https://www.who.int/publications/i/item/9789240022256>.