

ESRC SDAI Application - Understanding domestic abuse using Big Data

1 Objectives

List the main objectives of the proposed research [up to 4000 chars]

Who are the people most vulnerable to becoming victims of domestic abuse? To what extent do neighbourhood characteristics predict the prevalence of domestic abuse? What predicts serious harm and victims' decision to finally report the abuse? What is the quantifiable, long-term impact of domestic abuse victimisation, or witnessing domestic abuse as a child on socio-economic outcomes in later life? How do changes in alcohol consumption and financial stability affect the prevalence of domestic abuse? In this research project, we will use a wide range of quantitative approaches, and various data sources to answer these questions.

We have 3 core objectives.

1) To conduct the first large-scale, quantitative exploration of the individual- and neighbourhood-level risk factors of domestic abuse victimisation in England and Wales. Through the rigorous validation of insights from existing, mostly quantitative investigations using an UK-wide dataset, we will provide a deeper understanding of the environments perpetuating domestic abuse in England and Wales. While we will only use UK-specific data, insights from these analyses will likely to be applicable to non-UK contexts.

2) To improve our understanding of the costs of domestic abuse, by quantifying the causal effect of victimisation on a variety of socio-economic outcomes. Current cost estimates by the government do not take into account how educational attainment, income and employment status of victims are affected by victimisation and witnessing abuse as a child (Oliver, Alexander, Roe, & Wlasny, 2019). We will improve the precision of this calculation with the first, comprehensive UK-based exploration of the long-term effects of domestic abuse victimisation.

3) To translate our research into impact by delivering applicable insights for the relevant agencies, including the police and policy-makers. Our research will provide the police with important information to help the optimal geographical and temporal allocation of resources and improving recording practices. In addition, these insights will also help the government to design more effective intervention campaigns, and will be of interest to a wide range of academics.

4) To utilise the rich information contained in the Crime Survey for England and Wales (CSEW) to explore the predictors and consequences of domestic abuse victimisation. In spite of the detailed information contained in the CSEW about respondents, we are not aware of any non-exploratory study using the CSEW to explore the predictors and consequences of domestic abuse victimisation in England and Wales. We aim to take full advantage of the wealth of information in the CSEW in understanding domestic abuse.

2 Summary

Describe the proposed research in simple terms in a way that could be publicised to a general audience [up to 4000 chars]

Concern about domestic abuse is widespread, and it is rightly identified as a serious societal issue affecting the lives of people from all walks of life. However, the true extent of the problem is still often underestimated, and hard to comprehend: 2 million adults in England and Wales (7.9% of women and 4.2% of men) reported to have experienced some form of domestic abuse in the year ending 2018 March (Office for National Statistics, 2018), and 41% of all women murdered in England and Wales in the same period were victims of domestic homicide. The long-lasting, damaging effects of domestic abuse are not

limited to the direct target of abuse, but also has serious developmental implications for children witnessing the abuse. Illustrating the extent of the societal harm caused by domestic abuse, the economic cost of domestic abuse in England and Wales between April, 2016 and March, 2017 was estimated to be as high as £66 billion, which primarily reflects the cost of missed work days, health costs, and the reduced quality of life for survivors (Oliver et al., 2019).

Despite the extent and severity of the problem, there is relatively little academic research focusing on domestic abuse in the context of the UK, perhaps due to the lack of reliable data sources. Using police data to understand domestic abuse is problematic due to the vast levels of underreporting, while insights from qualitative approaches are hard to generalise. In the UK, the most reliable source of data on domestic abuse is the Crime Survey for England and Wales (CSEW), an annual, cross-sectional representative survey collecting information on socio-economic characteristics as well as experiences of domestic abuse (Office for National Statistics, 2019). While the Office for National Statistics (ONS) regularly publishes findings from the CSEW, these are mostly exploratory and descriptive in nature. In spite of the rich information provided by this survey, only a limited number of studies have utilised the CSEW to explore the predictors of domestic abuse victimisation in England and Wales (e.g., Khalifeh, Hargreaves, Howard, & Birdthistle, 2013).

Our project fills this gap in our current understanding of domestic abuse by taking advantage of the wealth of information contained in the CSEW, and drawing on other data sources to complement the findings. Applying sophisticated statistical techniques tailored to each analysis (including regression, random forest, propensity score matching), we will identify the individual and neighbourhood-level predictors of domestic abuse victimisation, and the factors affecting victims' willingness to contact the police. We will also explore whether police mis-recording of domestic abuse-related crimes (Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services, 2019) disproportionately affects certain victim groups. Furthermore, we will quantify the short- and long-term causal effects of witnessing domestic abuse on behavioural outcomes in young adulthood (with particular focus on the propensity to engage in violent criminal behaviours) and socio-economic and health-related outcomes in later life. Finally, we will explore how alcohol consumption, spending on gambling, and changes in benefit receipts affect the prevalence of domestic abuse.

Our work will primarily have implications for the police and policy-makers. For example, insights about the predictors of serious harm can inform the police protocol aiming to prevent domestic homicides, while understanding the extent to which crime mis-recording depends on victim characteristics will help the police understanding the causes of mis-recording and improve their practices. Policy-makers will be able to design more effective awareness campaigns using information on the geographical and temporal characteristics of domestic abuse victimisation, reporting behaviour, the extent to which gambling and alcohol spending affects it, and better understand its far-reaching societal implications, with particular focus on the effect of domestic abuse victimisation on propensity to violence in young adulthood and socio-economic outcomes in later life.

3 Academic Beneficiaries

Describe who will benefit from the research [up to 4000 chars].

Owing to the variety of questions we aim to answer the diverse methodological approaches we will employ in addressing these questions, our research will deliver insights relevant to researchers across various social science disciplines, including psychology, behavioural scientists, criminology and health economics.

Psychologists working on understanding the risk factors of domestic abuse victimisation will benefit from the first quantitative, comprehensive, UK-based exploration of the risk factors of domestic abuse victimisation. Previous investigations focusing on domestic abuse in the context of the UK have either exclusively relied on police records or used a small-sample, qualitative approach. By drawing on multiple data sources, including police crime data and the CSEW, we can combine their strengths to validate previous findings and deliver new insights.

Behavioural researchers will benefit from our work exploring how exogenous, time-varying factors affect the willingness to report, and the causal effect of alcohol consumption and financial shocks on the

prevalence of domestic abuse. These insights will be particularly important for behavioural researchers working for Behavioural Insights Teams and the UK government, owing to their policy-relevant nature.

Criminologists working on exploring the experiences of domestic abuse survivors in the Criminal Justice System will benefit from our research examining whether police mis-recording disproportionately affects certain victim groups.

Health economists will be interested in our work on how direct or indirect domestic abuse victimisation affects socio-economic outcomes and physical and mental well-being in later life. These estimates will help us improve the precision of the estimated cost of domestic abuse in the UK.

4 Staff Duties

As PI, Mullett will be responsible for coordinating the research. He will also act as the data controller for this project. Mullett has attained level three vetting with West Midlands Police, allowing him more comprehensive access to original police records, and he has the appropriate experience coordinating large datasets within projects. He will act as supervisor to the early career researcher Anna Trendl, ensuring that she can continue to build upon the impressive research capabilities she has already developed during her PhD. As a member of the Centre for Operational Policing Research (COPR), he will, in tandem with Prof Neil Stewart, liaise with West Midlands Police to ensure that the results are communicated back in the most effective and interpretable manner. This will maximise the impact that this research produces.

As Co-I, Stewart's responsibilities will be to aid in coordinating the research program. He will also meet regularly with the early career researcher Anna Trendl, providing insights and support. A major role will also be to coordinate the communication of the results within the broader context of the Centre for Operational Policing Research (COPR) activities. This coordination, and the possibility for links and collaboration with other COPR members or projects will provide unique added value to the research.

As Post-Doctoral researcher, Trendl will be responsible for performing the analyses upon the data, and leading the writing of the resulting papers. She will also be deeply involved with impact related activity. As an early career researcher, it is crucial that she be given the opportunity to expand her network, and attain these new skills. The demands of this project mean it is essential that this is a postdoctoral role, and that the individual has a strong track record in statistical analysis, with datasets such as the CSEW and WMP records.

Summarise the roles and responsibilities of each post for which funding is sought [up to 2000 characters]

5 Impact Summary

(please refer to the help for guidance on what to consider when completing this section) [up to 4000 chars]

1) characteristics of victims and understanding predictors of serious harm - police can use insights to prevent serious harm, characteristics of victims - expand on previous qualitative research (academics) and help policy-makers better target campaigns

2) reporting behaviour and police mis-recording - police can improve recording practices, understanding reporting behaviour can benefit behavioural scientists who work for the government

3) consequences - helps the government and academics by advancing our knowledge on the consequences of domestic abuse victimisation by improving the methodology of

6 Ethical Information

The primary ethical concerns in this project centre around data privacy and data security. In particular the data held in the West Midlands Police dataset is highly sensitive, and if it were to end up in the wrong hands could be particularly damaging for the individuals present in the data, as well as for the WMP force, and even the researchers. For this reason we have developed our data security approach in tandem with WMP to ensure that data is only ever held and transported securely, and that researchers hold only the

minimum amount of information in order to perform the research. We will never link individuals across datasets, and our lab data plan is fully compliant with GDPR.

As this research only involves secondary data analysis, concerns about possible harms during data collection are not relevant. However, in presenting the results, care will be taken to respect individuals who have been victims.

One potential concern is the possibility of consuming police resources that are needed elsewhere. This is an ever present consideration within the Centre for Operational Policing Research. WMP have already outputted their data, and we have applied data cleaning to it ourselves. Therefore, we will make very minimal requests on police resources. Our primary cost upon staff time will be during feeding back our results to influence policy. There are structures within the police force specifically designed for this, so by presenting our findings to those, we will actually increase WMP efficiency.

Approval for this secondary data analysis will be attained from the University of Warwick's Humanities and Social Science Research Ethics Committee (HSSREC), as it has been for our previous work using WMP and other large datasets.

Please explain what, if any, ethical issues you believe are relevant to the proposed research project, and which ethical approvals have been obtained, or will be sought if the project is funded? If you believe that an ethics review is not necessary, please explain your view (available: 4000 characters)

7 Attachments

Instructions for attachments

- * Case for support (6 page limit, 11 points, A4, 1" margins)
- * References
- * Pathways to Impact (2 sides of A4)
- * Justification of Resources (2 sides of A4)
- * Letter of support from WMP
- * Data management plan (modify from lab plan)
- * Accumulating to choose progress report
- * NIBS2 progress report

References

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- Khalifeh, H., Hargreaves, J., Howard, L. M., & Birdthistle, I. (2013). Intimate partner violence and socioeconomic deprivation in England: Findings from a national cross-sectional survey. *American Journal of Public Health, 103*(3), 462–472.
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