# The behavioural economics of domestic abuse

## Unique and new big-data perspective

We bring a data science approach to the study of domestic abuse data. We use data from West Midlands Police (serving X.X million people), Lloyds Banking Group (the UK’s largest retail bank with 22 million customers), and the Crime survey for England and Wales. Our approach is new and ambitious, yet eminently feasible as we already hold the necessary data. We have support from Deputy Chief constable Louisa Rolfe at West Midlands Police, who is also the National Police Chiefs’ Council lead for domestic abuse. Named postdoc Trendl works as a postdoc here at Warwick and is also an employee of Lloyds Banking Group in their behavioural and data science team. We have director support from Lloyds Banking Group for the project. Applying data at this scale to the study of domestic abuse has never been done before.

No one else has or is currently proposing to take a data science view of domestic abuse. We will be the first to demonstrate how mass administrative data can be used to address domestic abuse. We have a track record in using such data for social science (see

Quispe-Torreblanca, E., & Stewart, N. (2019). Causal peer effects in police misconduct. Nature Human Behaviour. doi: 10.1038/s41562-019-0612-8 Available at https://rdcu.be/bEAue

Adams, P., Guttman-Kenney, B., Hayes, L., Hunt, S., Laibson, D., & Stewart, N. (2018). The semblance of success in nudging consumers to pay down credit card debt. Financial Conduct Authority Occasional Papers in Financial Regulation, 45. https://www.fca.org.uk/publication/occasional-papers/occasional-paper-45.pdf

Muggleton, Parpart, Newall, Leake, Gathergood, Stewart “Gambling-related harm in mass transaction data” Under review at *Nature*.) For example, in the paper on gambling we use Lloyds Banking Group transaction data from millions of invidiuals to demonstrate that gambling is associated with increased financial distress, reduced lifestyle and health outcomes, higher rates of future unemployement and disability, and higher mortality rates. This view is unique and the first ever to demonstate such associations—again complementing the traditional qualitative case-study and small survey based approach. I THINK THE GAMBLING EXAMPLE IS A GOOD EXAMPLE OF WHAT WE WILL DELIVER FOR DOMESTIC ABUSE.)

Our approach contrasts with the qualitative approach using case studies and interviews. Our findings will complement this qualitative literature. It is from this qualitative background that the reviewers appear to have come—no reviewer had expertise in data science or econometrics. Their criticism is focussed on us as new researchers in their domain and on the feasibility of the work. We mitigate the former risk by working with an advisory board and including coauthors from a domestic abuse background. We mitiage the latter risk by already holding or having access to all of the data needed for the project, with necessary data sharing and other legal agreements signed in place.

## There are factual errors in the reviews:

## There are also unreasonable suggestions:

1. Having Lloyds Banking Group as a partner in the research is a huge asset. Lloyds are the largest retail bank with 22 million customers. It is unnecessary to have data from a second retail bank. By using weighted sampling of the 22 million, we can construct any representative sample and still achieve a sample size far in excess of any every used to study domestic abuse.
2. We are aware of the issues when using police data. We are extremely familiar with the West Midlands Police data, and have worked on project is stop and search, domestic abuse, risk assessment in custody, and alcohol and police resources. We are mitigating the issues with police data by working with bank data and with CSEW data.
3. It is not possible to provide a complete review of the literature in a six page proposal. Not is it reasonable to cite studies that are not directly relevant. We are fully aware of the studies XXXXX and the ESRC funded proposal XXXXX.
4. We already have access to all relevant data. Concerns raised by reviews XXXXXX are not relevant. We hold te police data here on servers at Warwick. The CSEW is held by XXXX and academic access is straightforward. The Lloyds data are available as postdoc Trendl works inside and is employed by Lloyds Banking Group as well as Warwick. Approvals and data sharing agreements are already signed. We stated this in the proposal.
5. As the application of very large data to research in domestic abuse is novel, there is no one with a track record in domestic abuse research with the required skills in econometrics and data science to conduct this research. Requiring such a background would make it impossible to complete the research, because there is no one with such a background. See below on advisory panel.

We adopt the following adjustments in response to the reviewers:

We take the semantic point about describing children who witness male to female intimate partner violence as victims of domestic abuse. The user reviewer has made clear their views of the language used to describe such circumstances. The reviewer is clearly reluctant for this component of the research to be completed. We take an empirical perspective: It is an empirical question whether these children are at risk of future XXXXXXX, one which this proposal will answer.

We will establish an advisory board for the project, comprising a senior police officer from West Midlands Police, a senior member of the WMP Police and Crime Commissioner’s Office, an academic with experience in domestic abuse, Prof Vanessa Munro, a lawyer based here at Warwick with extensive experience of domestic abuse, and a member of the charity sector (NAME CHARITY) and a survivor of domestic abuse (NOMINATED BY THE CHARITY).

We are familiar with the Walby papers on the cost of domestic abuse

We have studied the currently funded ESRC project INSERT PROJECT NAME AND PI. Our proposal is quite different and compliments this work without duplication.