Victim-police engagement in domestic violence cases: RCT evidence from a UK intervention*

Martin Foureaux Koppensteiner[†] Jesse Matheson[‡]

Réka Plugor§

January 2017

Preliminary and incomplete. Please do not cite or circulate.

Abstract

In developed countries, domestic violence constitutes a significant proportion of all crimes and a considerable portion of public spending. Approximately 20% of all incidences of domestic violence in the UK can be attributed to a relatively small number of households. We evaluate the use of a victim engagement intervention targeting UK households that experience repeat incidences of domestic violence. The intervention was implemented as a randomized control trial over 6 months with more than 1,000 households entering the subject pool. Victims in "treatment group" cases are contacted within 24-hours by a victim engagement worker who: a) has access to police information on victims and perpetrators; b) has in-depth knowledge of local domestic violence services and how to access them; c) actively engages victims and offers assistance in the aftermath of an incident of domestic violence in a large UK police force area. Standard protocol, provided to both the treatment group and the control group, is to provide information documents about local services available to households and individuals who have experienced domestic violence. Using an exceptionally rich set of survey data and administrative data we estimate the causal effect that this programme had on victim engagement with police and other support services and on future violence in these households.

Keywords: Domestic violence, randomized control trial, access to public services

JEL: I10, I18, J12, H75

^{*}We thank Eliot Button, Corinne Crosbourne, Pooja Pattni, and Chloe Rawson for excellent research assistance. We also would like to thank Leicestershire Police, the Office of the Leicestershire Police and Crime Commissioner, Leicester City Council, Leicestershire and Rutland County Councils for enabling the evaluation as randomized control trial and for data access. We also would like to gratefully acknowledge funding received from the Ministry of Justice PCC Fund for running Project 360 and for the data collection.

[†] Division of Economics in the School of Business, University of Leicester (mk332@le.ac.uk)

[‡] Division of Economics in the School of Business, University of Leicester (<u>im464@le.ac.uk</u>)

[§] Division of Work and Employment in the School of Business, University of Leicester (rp234@le.ac.uk)

1. Introduction

In many developed countries domestic violence constitutes one of most common crimes and accounts for a considerable portion of public spending. In the UK in 2008 an estimated 3.9 billion dollars in public funds was allocated to dealing with domestic violence (Walby, 2009). This does not account for significant costs in terms of emotional and developmental damage done to household members. It is further estimated that approximately 32 percent of all domestic incident police reports involve a repeat victim.¹

We analyse an intervention, known as Project 360, for which one of the key objectives is engaging with victims early and assisting them in making police statements. The intervention is trailed by means of randomized control. The subject pool for this study consists of households that experience repeated police call-outs for domestic violence². Victims in the treatment group are assigned to a case worker, who works within the police and has a specialized knowledge of support services available in the local area. The case worker: a) makes contact within 24 hours of the initial police report, b) informs them of local social services available to them, and c) provides assist and referrals to access services. There are two key differences between the Project 360 case workers and case workers available through services external to the police. The first is that the Project 360 case-workers have access to all police-information. The second is that, because they of their access to police data, Project 360 case workers can actively engage victims. External service workers must passively wait for victims to contact them.

This programme also addresses an important policy issue for policing in the UK. In 2014 Her Majesty's Inspectorate of Constabulary (HMIC) published a major review of police procedures in dealing with victims of domestic abuse entitled "Everyone's business: Improving the police response to domestic abuse" (HMIC, 2014). This report came to the blunt conclusion that, in the UK, "The overall police response to victims of domestic abuse is not good enough." In particular, the report concludes that many police officers lack the skills and knowledge to engage with domestic abuse victims. A common criticism of police and other public services in dealing with domestic violence is that there is little follow-up after an initial police visit. Victims report a desire to engage with services to assist them in changing their situation, but find accessing such services, and even understanding which services are available, confusing.

_

¹ This is based on Police Force data for the UK make available by the HMIC at https://www.justiceinspectorates.gov.uk/hmic/data/domestic-abuse-data/.

² Specifically, between 3 and 6 police callouts over the previous 365 day period.

The intervention that we examine in this study is specifically designed to address some of the concerns noted in the HMIC report.

We analyse the intervention along three margins that capture the broad objectives of the intervention. First, did the intervention improve victim's perception of and willingness to engage with the police? This directly addresses one of the key concerns of the HMIC report. Our main tool for addressing this is the use of victim follow-up surveys conducted one month following the intervention. Second, did the intervention lead to a change the willingness of victims to provide a statement to police? Statements can be seen as the first step towards utilizing the justice system to change the actions of perpetrators. In most circumstances it is significantly more difficult for police to successfully press charges without a victim statement. Therefore, a key objective of Project 360 was to make it easier for victims to provide a police statement. Finally, did the intervention lead to a change in future observed (i.e. police reported) violent behaviour within the household? This final question is addressing the efficacy of the intervention itself in soliciting a behavioural response from the victim/perpetrator relationship. We initially remain agnostic about the observational outcome that may be expected, as it is not theoretically clear what we should expect. The intervention is expected to have a significant impact if the victims we are looking at are repeat victims due to a difficulty in accessing support services.

A difficultly in assessing the effectiveness of such an intervention arises from the difference between what is observed (reported police cases) and the latent outcome of interest (violence in the household). In an attempt to address this we consider a number of outcomes from two sources. The first is a victim follow-up survey, conducted one month following the initial police visit³. This survey provides victim-reported information reflecting perceived safety and well-being, actions taken by the victim and engagement with police services. The second data source is police administrative records. These records provide demographic and historical information for victims, perpetrators and households, as well as information about the status of statements made to police and actions taken by police with respect to the incident. In addition we carefully collect detailed information on repeat police reports for the household over a 12-month period⁴.

We find evidence that victims in the treatment group are more likely, than are victims in the control group, to take steps to change their situation. For example, the intervention lead to

³ Survey response rate is approximately 20%.

⁴ Currently collecting information for a 1-year follow-up.

an estimated 34% decrease in the number of victims who stated they were living with the perpetrator. Further, we find the intervention lead to a significant, positive, change in attitudes towards police and a 42% increase in stated willingness to report future incidents.

However, administrative data suggests that the intervention lead to an unexpected 6.2% decrease in statements made to police. We further analysis shows that this effect arises for statements made after the initial incident, there is not a significant difference between the two groups for statements made on the day of the initial incident, which predates the intervention. This suggests that the intervention itself had the unintended consequence of decreasing, rather than increasing, statements to police. This result can be rationalized with a model of dynamic inconstancy in preferences with respect to decision making. When case-workers set up face-to-face meetings with some of the victims (to happen several days in the future), they also unintentionally move back the planned time for which victims make a statement. This has the consequence of providing a "cooling-off" period. Consequently, at the later date of the face-to-face meeting, some victims choose not to provide a statement.

Finally, we find weak evidence that the intervention led to an increase in the reporting of crime to police. Overall, the treatment group has more reported domestic incidents, and those incidents appear to be less severe (where severity is measured by a risk assessment score and the probability an arrest was made). The treatment group also has more report instances of reported theft and damage, than do the control group, which may be consistent with reporting less severe crimes.

The RCT took place in the Leicestershire Police Force area between November 2014 and April 2015 and resulted in a sample of 1,009 households, making this, to our knowledge, the largest RCT in domestic violence to-date.

The remainder of the paper is structured as follows. In section 2 we discuss some of the previous literature on domestic violence, focusing largely on the contribution economics has made to this topic. In section 3 we provide some details around the institutional setting for the RCT. In section 4 details around the implementation of the RCT and data collection are provided, followed by the main results in section 5. We provide a brief discussion of results and conclusions in sections 6 and 7.

2. Literature

Early qualitative research by Gelles (1976) finds that access to resources is an important factor in whether or not women stay with an abusive spouse. Several recent studies have refined this observation with evidence that suggests that the relative resources specific to women versus

those specific to men are predictive of domestic violence. In Aizer (2010) it is found that an increase in the relative wage of women decreases domestic violence. Anderberg et al. (2015) show that domestic violence in the UK increases with female unemployment rates but decreases with male unemployment rates.

2.1 Victim use of police and support services

Here we discuss some of the relevant literature that addresses why victims might engage (or not engage) with available public support services, including police, following an incident of domestic violence. Several studies have considered that police and support services serve a role of providing an outside threat-point for the victim in an abusive relationship. As such, we often see victims initially engage with such services, but rarely follow through to the final goals of fully separating, and perhaps prosecuting, the perpetrator. Hoyle and Sanders (2000) interview victims who reported abuse to the police and find that many women did not wish for the police to make an arrest but rather wanted them to scare the perpetrator. In this sense they are attempting to make the threat-point more salient.

Anecdotal evidence suggests that many women utilize shelters, and other support services, only to return to the perpetrator a short time later. Farmer and Tiefenthaler (1996) argue that, even in such cases, these services play an instrumental role in deterring domestic violence through their use as a signal. Using a non-cooperative household bargaining model Farmer and Tiefenthaler derive equilibria in which abuse victims utilize support services even though they have no intention of leaving their abuser. This model highlights a potential indirect role for support services in reducing household violence; they provide an instrument through which victims who are unwilling or unable to leave a perpetrator can send a false signal to their abuser about their "type" (that is someone who is actually willing to leave). Upon seeing the signal some perpetrators will to decrease the level of violence for fear of their spouse leaving.

Aizer and Dal Bo (2009) use a model of time-inconsistent preferences to explain the tendency of victims to not commit to leaving or pressing charges against perpetrators. In this preference framework, no-drop policies, in which once charges are filed they cannot be withdrawn, may lead to an increase in the number of women who file charges. This is because the no-drop policy acts as a commitment device, which is desirable to the forward-looking, but time inconsistent, victims. Aizer and Dal Bo support their model with empirical evidence that a no-drop policy leads to a 14% increase in domestic violence reporting; a 24% increase in the number of male arrests for domestic violence, but no change in the number of women hospitalized or murdered due to intimate partner violence. However, they do find a 15–22%

decrease in the number of men murdered by their intimate partner. This suggests that women caught in a cycle of violence may substitute murder, a dynamically creditable action, with pressing charges, dynamically creditable only in a no-drop regime.

There is evidence that victims often find accessing these services confusing and difficult. In a study of 62 women who left their partners due to abuse, Jaffe et al. (2002) find that "women reported feeling let down and confused by the [community and social services support] process." They find that many women removed their application for services out of frustration with the number of barriers.

2.2 Secondary responder interventions

There are a number of previous studies, largely from the criminology literature, that examine secondary response programmes similar to the one studied here. The findings from this literature are mixed. Many of these studies, based on observational data, find strong results suggesting a positive effects of the intervention. Davis, Weisburd and Taylor (2008) provide a systematic review of this literature provided. While there is almost consensus among these studies in finding a positive effect of these programmes, they cannot rule out a potential bias arising from self-selection of victims into secondary support programmes. Here we focus our discussion on previous studies most closely related to the current study; those which exploit experimental and quasi-experimental design to measure causal effects.

Stover, Berkman, Desai and Marans (2010) study a quasi-randomised secondary response programme. Within 2 to 5 days following a police reported incident of domestic abuse, a police officer and social-worker team make a follow-up visit. The programme was implemented across homes in 5 districts of New Haven, Connecticut. Stover at al. use households, in which domestic violence reports where made, from 5 districts not included in the programme as a control group. This identification strategy relies on their not existing systematic differences between the types of households in the treated versus the control neighbourhoods. Victims, surveyed at 1, 6, and 12 months following the intervention, report being more satisfied with the police, are more likely to use court-based services and are more likely to seek mental health treatment for their children. From police records they find that victims are more likely to report future instances and to report less-severe crimes.

Only two studies, to our knowledge, look at RTCs of secondary response programmes. The first programme took place in New York City (Davis and Taylor, 1997) the second programme took place in Redlands, California (Davis, Weisburd and Hamilton, 2007). In New York 436 households where randomly assigned to receive a follow-up home visit, from a

social-worker/police officer team, with the aim of educating both the victim and perpetrator about the criminal nature of domestic violence. Davis and Taylor (1997) find that treatment group households were significantly more likely than control group household to report future incidents of violence to police. However, six months following the intervention they do not find a reduction in household violence. In the Redlands, a victim-targeted intervention randomly assigns victims to a secondary response treatment (or no response control) following an initial incident. Those in the response group are further assigned to a secondary response 24 hours or 7 days after the initial incident. The secondary response was made by a team of officers in which one was a female domestic violence detective. The primary objective was to transmit information on available services and answer any outstanding questions that the victim may have. They find that the programme was ineffective in reducing further abuse in the household, and even may have increased incidence of future abuse.

The RCTs of Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007) are similar in spirit to the current intervention, and both lead to the conclusion that secondary response programmes are, at best, ineffective in reducing household violence. However, in both studies there are reasons to be concerned about our ability to comment generally on the causal effect of a victim-targeted secondary response. First, both of these interventions potentially (or intentionally) involve contact with perpetrators. This could have the unintended consequence of exacerbating tensions in the household, offsetting any potential gains from the interaction with the victim. Davis, Weisburd and Hamilton (2007) find that more than a quarter of victims report their partner as reacting negatively to the home visit. Second, in both experiments police had the power to override treatment assignment. Although this only happened in a small number of cases, it is not possible to assess the potential bias, in the estimated programme effects, that may result from this selected re-assignment.

The current study differs from these previous studies in several important ways. First, and most importantly, the current intervention is set up such as to only engage the victim. Victim contact is made using a safe number provided to the responding officers. Any face-to-face meeting are arranged at a time and place agreeable to the victim. This ensures the safety and security of the victim and mitigates the potential for aggravating household tensions. Second, our study does not allow for "overrides". The process through which treatment assignment is made was completely automated. Secondary responders where only provided with information regarding treatment group cases. Third, our sample size (n=1009) is large relative to the New York (n=436) and the Redlands (n=300) studies. This should allow us to pick up relatively small changes in behavior. Fourth, our focus is on households which

experience repeated incidents of domestic violence. For the households in this study domestic violence would not be considers a rare occurrence. Relative to households which only very periodically report incidents to the police, this should provide additional statistical power.

3. Institutional setting

3.1 Leicester and Leicestershire

The empirical analysis in this paper is based on a randomized control trial run in the Leicestershire Police area (*Leicestershire* hereafter), UK, between November 2014 and April 2015. Leicestershire is located in the East-Midland region of the UK (see Figure 1 for map) and covers a population of approximately one million. Approximately one-third of the population is concentrated in the centrally located city of Leicester, with the remaining population distributed across almost 300 towns and villages. The area is governed by three distinct bodies—Leicester City Council, Leicestershire County Council and Rutland County Council—and policed solely by the Leicestershire Police Force. Standard victim support services, and other domestic violence services, are provided separately by each of the three counties, in a semi-coordinated fashion.

In Figure 2a and Figure 2b, we present the number of subject pool cases per-capita (per 10,000 people) throughout Leicestershire and Rutland and the city of Leicester. These maps can be thought of as reflecting estimates of the relative distribution of reported repeat-domestic violence, as the subject pool approximately captures all repeat domestic violence cases over the trial's 6-month period (see Section 4.1). As the Figure 2a reveals considerable variation in the number of cases per capita, with districts in the north of the county having between 7.7 and 8.1 cases per capita, and districts in the south having between 5.1 and 6 cases per capita. The city of Leicester and Rutland reveal a number of cases per capita that are far above and far below the average over the Leicestershire Police Force Area, respectively.

Notably, the per-capita cases in Leicester city is almost twice as high as the next highest district. When looking at the police-beat level within the city of Leicester (Figure 2b) there is also considerable variation. The highest per-capital cases (New Parks at 35.6) is more than seven times the lowest per-capita cases (Knighton at 4.8). This distribution mirrors income and education distributions. For example, New Parks, Beaumont Leys and Freeman are some of Leicester's least affluent neighbourhoods while Knighton, Stoneygate and Evington are some of Leicester's most affluent. There is also a stark contrast in reported domestic cases according to the ethic distribution of the city. The proportion of "White" residents in New Parks, Beaumont Leys and Freeman is relatively high (82%, 60% and 76%), whereas Spinney Hills,

Latimer and Belgrave, comparable in affluence, have considerably lower "White" proportions (6.9%, 9.3% and 16.3%) as well as lower reported domestic cases⁵.

3.2 Standard police procedure in domestic violence cases

Standard police procedure for domestic violence call-outs are provided all household in this study. As part of these procedures, responding officers will assess the risk level of a victim (standard, medium or high risk) using a tool known as a DASH assessment form (see Appendix B for an example of the DASH assessment form). If a victim receives a DASH score of "medium" or "standard" risk⁶ then officers will leave documentation detailing domestic abuse support services that are locally available (see figures 1a and 1b). After every call-out officers file a report in the police data base (regardless of action taken).

Within the sample we are considering, the arrest of a perpetrator in cases of domestic violence is uncommon. Of reported cases in our sample 74% resulted in no further action being taken beyond the initial home-visit by a responding officer; 21% resulted in a perpetrator being arrested; 4% received a Police Information Notice⁷. Action against the perpetrator in these cases appears to be highly correlated with whether or not the victim provided a statement. In Table 2 we report the actions taken by police according to statement provision. In cases for which no statement was provided, fewer than 10% of cases resulted in police action beyond the initial callout. In cases for which a statement was provided, more than 67% of cases resulted in further police action. Likewise, charges were laid in 3.5% of cases in which no statement was provided, but in more than 38% of cases for which a statement was provided. Of course, we cannot disentangle the causal nature of this relationship, it is possible that the police actions make victims more or less willing to provide a statement. However, this is suggestive that providing a statement is an important step in victim protection.

4. Experimental design and data

4.1 Allocation of cases into subject pool

When Leicestershire police are called out to a domestic incident they record the incident and details of the household on a *Domestic Incident and Vulnerable Child Working Sheet*. The information from this working sheet is recorded into a domestic incident report in the

⁵ Ethnic distribution by ward taken from Table 2 in Hirsch, Padley and Valadez (2014).

⁶ A victim identified as "high risk" will typically be referred to the Domestic Abuse Support Team (DAST). DAST is an integrated team of support workers within the police.

⁷ The Police Information Notice is an informal police warning issued in cases where there are allegations of harassment. Although recorded in police records, they do not constitute a formal legal action (see Strickland 2015).

Leicestershire Police database and assigned a case number. An automated workbook, designed by the us along with the Leicestershire Police IT services team, performs a regularly scheduled search through the recorded incidents and recovers all domestic cases for which the following conditions hold: 1) The report is filed as a "domestic incident"; 2) In the previous 365 days, the victim has shown up in at least three domestic violence reports (including the current one) and fewer than seven domestic violence reports; 3) The victim is not currently in the trial subject pool (as either treatment or control); 4) The victim has a risk assessment score of "medium" or "standard". Cases that meet these criteria are assigned to the subject pool. Subject pool cases are then allocated to either treatment or control, with a 50% probability, through an automated randomization.

4.2 Treatment

Subjects in the treatment group are assigned to a case worker who: a) contacts them, via telephone, within 24 hours of the initial police report; b) describes to them the social services that are available in the area; c) if the victim wishes to access support, case workers provide assistance to them and provide referrals when necessary. With every contacted victim, case workers will offer to schedule a face-to-face meeting to go through the options available. Case workers are trained in working with victims and families affected by domestic violence and have a specialized knowledge of the services available in the local area. *This final step may include making providing a referral and initial contact with the support service, helping to complete any necessary paperwork. Should the victim wish to leave the perpetrator, the case worker will also assist in formalizing an escape plan. This is in direct contrast to unlike case workers available to all victims through the city domestic abuse support groups,

Although the specific content of the intervention can vary case-by-case, important features of the intervention are common to all cases. First, a case worker will make contact with victims within a short time period (24 hours) after the initiating police report and inform them of the available services. Second, case workers have access to all police information about both victim and perpetrators, including historical police records. Third, if victims wish to move forward with any support services, caseworkers will provide them with assistance.

Victim support workers can also be accessed, as part of standard procedures, through local services and NGOs. The key differences between the Project 360 case workers and case workers available through services external to the police is the information to which each has access. Because they of their access to police reports, Project 360 case workers are informed

of cases shortly after they have happened, and can actively engage victims. External services, who do not have access to such information, must passively wait for victims to make contact.

All previously existing support services are also available to the control group, but this group will not receive the intervention from the case worker. Before leaving a call-out for a domestic incident, police officers provide victims with an information flyer documenting the major services available and the number for both a local and national domestic violence help line (see Appendix B for an example of the information flyer).

Cases assigned to the treatment group are randomly allocated to one of three case workers. Engagement workers attempt to contact all victims the day they receive the case. Upon making contact with a victim, the case worker will offer her services in informing the victim about the available services and helping the victim access services. This includes the option to have a face-to-face meeting. Victims who choose to take-up the offer of a face-to-face meeting are visited by a worker at the first available time that is mutually available.

We define a victim as having *engaged* with the intervention if they are contacted by an engagement worker and they accept some form of assistance. This assistance ranges from providing advice via the one-time phone conversation to a face-to-face meeting. While an effort was made to deliver the intervention to all victims assigned to the treatment group, just under 49% of treatment group victims did not engage. Of the victims that did not engage: 57% were contacted by a case worker by phone, but were not interested in phone-based assistance or a face-to-face meeting; 43% where not contacted, as case workers were unable to make contact with victims given the information that was available. Optimistically, among all victims whom the engagement worker was able to contact, the engagement rate was 71%. Considering that engagement workers cold-call the victims, and that victims are often negatively viewed as being uncooperative or unwilling to support police action, this is a notable take-up rate.

Of the 261 victims who did engage, 128, or 49%, had a face-to-face meeting with the case worker. In Table 1 we provide a tabulation of the timing for home visits, relative to the initial incident. Just under 35% of all home visits took place within 24 hours of the initial police visit (the same day that case workers made first contact), with another 20% taking place within three days. 33% of home visits took place after three days but within a week and the remaining 13% took place more than one week after the initial incident.

4.3 Data collection

The primary sources of data for this study comes from the administrative records for Leicestershire Police. These records provided a wealth of information including sociodemographic information about victim and perpetrators, previous police records for victim and perpetrators, and any records present following the initial intervention. Information was collected by research assistants who were blind to the treatment status of individual cases.

The final sample consisted of 1,017 cases (each case referring to a unique victim). Of these two cases are dropped due to restrictions on access to police data.⁸ In 11 instances information on the perpetrator was unavailable. This will be the case if perpetrators are not identified during the initial investigation. The result is 1,004 unique cases for which both victim and perpetrator information is available. Of these 504 cases are treatment and 500 are control.

The second data source is a victim survey designed for this project. The victim surveys were conducted through the Leicestershire Police Information Services Unit by researchers trained in surveying victims of domestic violence. All surveys were completed via telephone using a safe number collected by responding officers at the initial incident. Interviewers conducted the survey blind to the treatment status of the interviewee. Broadly speaking, the survey collects information on a) subjective well-being and safety, b) actions taken by the victim, c) satisfaction with police services and willingness to report in the future. The specific framing of questions is provided in Appendix A.

4.4 Descriptive statistics and treatment/control group balance

In Table 3 we report descriptive statistics for the 1,004 cases in our sample. Characteristics are grouped according to those corresponding to victims, perpetrators and households for treatment group (504 observations) and control group (500 observations) cases. Mean characterises are reported for victims (A), perpetrators (B) and the household overall (C). For each of these groupings, columns 1 and 2 report the mean of the corresponding characteristics for the treatment and control groups, with standard deviation in brackets. Column 3 reports the estimated differences between treatment and control, for each characteristics, with the corresponding standard error in parenthesis.

If assignment to the treatment group is random then the mean characteristics reported in Table 3 should not systematically differ between the two groups. We find that the treatment and control group are well-balanced, with most characteristics not differing significantly between the two groups. A few exceptions should be noted. First, perpetrators in the control group are, on average, 8.1 percentage points more likely to be unemployed than perpetrators in the treatment group. Second, at the time of the initial incident perpetrators in the treatment

11

⁸ This would happen in the case where individuals in the case are under investigation for a serious offence such as prostitution involving minors.

group have 1.16 more registered instances of domestic violence prior to the initial incident. Finally, victims and perpetrators are 6 percentage points more likely to be living together in the treatment group than in the control group. The remaining differences are both statistically insignificant and small in magnitude.

Important characteristics do not appear to have a significant difference between treatment and control. Variables reflecting the severity of the incident and the state of violence in the household, including number of cases over the last year, responding officer's victim risk assessment, whether responding officers made an arrest during the initial incident, do not differ significantly between the treatment and control groups. Further, there is not a significant difference according to intimate partner status of victim and perpetrator or the child status in the household. We interpret Table 1 as evidence that allocation to the treatment or control group was random, and are confident that there are unlikely to be unobservables confounding our ability to infer causal effects from the intervention.

The descriptive statistics for this sample is consistent with our priors. In total, 87% of victims versus 14% of perpetrators are female. On average victim, at 34.5 years, are slightly older than perpetrators, at 33.2 years. Unemployed is high in this sample with 52% of victims and 48% of perpetrators not in work at the initial incident. Finally, 58% of the sample households have children, and these households have, on average, 1.95 children.

5. Results

Here we present the key results on how the intervention impacted victim statement provision to police. We follow this with results from the 1-month follow-up victim survey, and the results for 3-month, 6-month and 12-month follow-up of repeat domestic incidents using police administrative data.

For all outcomes (y_i) we report estimates for the *Intention to Treat* (ITT), denoted by β_1 in the linear regression below.

$$y_i = \beta_0 + \beta_1 treat_i + X_i' \Gamma + e_i,$$

 $treat_i$ is a dummy variable equal to 1 if i was assigned to the treatment group. X_i denotes a vector of variables including victim and perpetrator sex, victim and perpetrator age and an indicator for children being present in the household. e_i denotes all other influences on the respective outcome y_i which are unobserved to the researchers. We assume that e_i and $treat_i$ are uncorrelated, justified by the random assignment of treatment.

Many of the victims assigned to the treatment do not take-up the intervention. Therefore, we also report the *local average treatment effect* (LATE) estimates for selected results⁹, reflecting the average treatment effect for those who take-up the intervention only. Using placement into the treatment group, $treat_i$, as an instrument for programme up-take, denoted by $P360_i$. This estimation strategy is formalized in the two-stage-least-square frame work, where α_1 denotes the LATE effect of interest:

$$P360_i = \gamma_0 + \gamma_1 treat_i + X_i' \Phi + u_i,$$

$$y_i = \alpha_0 + \alpha_1 P360_i + X_i' \Omega + v_i.$$

 u_i and v_i denote the unobservable for each of the respective equations, both assumed to have zero mean conditional on assignment to the treatment group.

5.1 Victim statement provision

Here we examine the effect that the Project 360 intervention had on the propensity for witnesses to provide a statement to police.

The key findings for statement provision is reported in the first row of Table 4. The treatment group is 6.2 percentage points less likely than the control group to provide a witness statement. This intention-to-treat effect is statically significant and represents a 20.7% decrease, relative to control group, in statement provision. Considering that 48% of those in the treatment group did not take-up the treatment, the corresponding local average treatment effect is a decrease of 12.1 percentage points in statement provision.

As a sensitivity test we can compare the effect of the treatment for statements made at the initial police visit (i.e. before treatment) and statements made at least one day following the initial police visit (i.e. after treatment). These results are reported in rows 2 and 3 of Table 4. Of course, we do not expect assignment to the treatment to have an effect on statement making during the initial police visit. The result in row two is consistent with this; we find a negative, but small and statistically insignificant, difference of 0.4 percentage points between treatment and control. In row 3 we report the probability of making a statement after the initial police call-out (conditional on not making a report during); the treatment group is 6.8 percentage points less likely to make a statement than the control group.

The difference over time in propensity to make a statement is depicted in Figure 3. For each day following the initial police call-out, in Figure 3a we plot the probability of a statement being made conditional on having not made a statement in a previous day. In Figure 3b we

⁹ We do not calculate a LATE value for survey estimate or many of the outcomes. This is simply due to the small sample sizes or lack of statistical significant in the ITT.

depict the change in the gap between treatment and control over time. While no gap is observed on the day of the initial police visit, a negative statement gap persists 4 days following the initial call-out. After this time there is no distinguishable difference in statements between the two groups.

Finally, in the fourth row of Table 4 we report the retraction of statements by the treatment and control groups. Although not statistically significant, the difference in statement retraction between the two groups is non-trivial. The treatment group is 5.2 percentage points, or 26%, less likely than the control group to retract their statements. It is also worth noting that the estimated magnitude is very close to the decrease in statements made for those who received the treatment.

We gain additional insight by looking at statements according to the level of engagement for the treatment group. In the rows 5–8 we report the proportion of victims who provide statements in the treatment group according to their level of engagement with the intervention. Those who engage (i.e. the compliers) are considerably more likely to provide a statement than those who do not engage with the intervention. However, of those who engage, those who have a face-to-face meeting are 14.6 percentage points less likely to make a statement than those who engage by phone only. It should be noted that these differences cannot be attributed to the level of engagement, as the level is voluntarily selected. However, it is not a-priori obvious that we should expect the large negative difference between face-to-face engagers and phone-only engagers.

These results suggest that, contrary to one of the key the objectives, the intervention led to a large reduction in police statements by victims. Although we cannot draw conclusions with certainty, the decrease appears to be attributable to those in the treatment group who scheduled face-to-face meetings.

5.2 Victim follow-up survey

The primary purpose of the survey is to provide information that allows us to infer what, if any, short run implications the intervention had on victim behaviour and the victim's sense of well-being. Of course, all results from this section are based on self-reporting, so we are cautious in our interpretation. We cannot rule out, for example, that treatment changes victim reporting without having a meaningful influence on behaviour.

Table 5 divides results from the victim survey into 3 categories reflecting: A. the victim's perceived safety and well-being; B. actions taken by the victim; C. victim engagement with police services. The survey collected information from 214 victims in total, 110 from the

treatment group and 104 from the control. This suggest a 21.6% and 20.6% response rate. The difference between response rates for the two groups is not statistically significant, suggesting that the treatment group was no more likely to respond to the survey than was the control group.

In Panel A of Table 5 we report results reflecting victim's perceived safety and well-being. Few of the differences in survey responses are statistically significant. However, some consistent patterns immerge that are interesting. Questions 11–14, which can be interpreted as reflecting margins of life stress, suggest that victim stress levels are less likely to have improved and more likely to have worsened for the treatment group relative to the control group. On the other hand, victims in the control group are more likely than those in the treatment group to report a worsening of *family life* following the incident. Likewise, victims in the treatment group are more likely to report an improvement in *personal safety*, *family life* and *quality of life overall* relative to victims in the control group. The sign of these effects is consistent with victims in the treatment group taking actions with the intention of changing their living circumstances.

In Panel B of Table 5 we report the results for questions which we classify as reflecting actions taken by the victims. Columns 1 and 2 present the proportion of affirmative responses for each group while column 3 presents the difference (standard error of the difference is reported in parenthesis). The results in this table suggest that the intervention had a positive effect on actions taken by the victims. Victims in the treatment group are 19.9 percentage points less likely to be living with the perpetrator than victims in the control group. Notice that the proportion of victims in the control group who report living with the perpetrator (58.3%) is very close to the cohabitation rates prior to the intervenient (reported in Table 1). Victims in the treatment group are also 12.1 percentage points and 5.0 percentage points more likely to report having visited their General Practitioner and Accidents and Emergency as a result of the incident. There is no reported difference between the two groups in reported confidence in accessing public support services, but victims in the treatment group are 8.7 percentage points more likely to report having accessed services in the last month (although this estimate is not statistically significant).

Finally, in Panel C of Table 5 we report results reflecting satisfaction and engagement with police services. The treatment group is 8.9 percentage points less likely than the control group to report being dissatisfied with police handling of the incident. One of the most prominent results in the survey comes from the treatment group being 15.0 percentage points more likely than the control group to report and increased willingness to report future incidence to the police. This corresponds to a 42% increases.

5.3 Future reporting of domestic violence

We turn attention to changes in repeat police incidents for the treatment and control group. More than 60% of the victims in our sample where involved in a repeat incident in the 12-month period following the intervention.

Our estimates for repeat police domestic abuse call-outs, involving the same victim as the initial incident, are reported in the first two columns of Table 6. For each of the first three months, the three to six month period, the six to twelve month period, and the entire twelve month period, we report the average number of repeat visits per household (row 1) and the proportion of households that experience at least one police visit (row 2). These results suggest that there is not a systematic difference, between the treatment and control group, in the prevalence of reported cases of domestic violence following the intervention. The difference between the two groups suggest that, if anything, the treatment group is more likely to experience a repeat police call-out over the 12 month period. However, this positive effect is small in magnitude, corresponding to a 0.6 percentage point increase (less than a 1% change) in the prevalence of reported domestic violence. However, the treatment group reported 0.191, or a non-trivial 12.2%, more domestic cases than did the control group. Neither of these estimates are statistically significant.

The intervention did not appear to result in a meaningful change in the reported number of domestic incidences. However, it is still possible that the intervention had an impact on future instances. The complication for estimating this effect is that the intervention may work in two, opposing, directions: first, by decreasing actual violence in the household (decreasing reporting); second, by increasing victim willingness to report (increasing reporting). It is possible that these two effects cancel each other out, resulting in the same number of reported incidents. If this is happening, we expect to see a decrease in the severity of the instances reported to police (as violence has declined, but victims are more willing to report less severe violence). To examine this possibility, non-domestic instances (see appendix Table 10), DASH assessments and arrests in domestic instances are examined (see appendix Table 11).

Over the twelve month period, 37.8% more non-domestic incidents are reported in the treatment group than the control group. While the difference is small in terms of the over number of incidents, it is statistically significant. This appears to be largely attributable to a 3.7 percentage point increase in the reporting of incidents categorized as "theft and damages" within the first month of the Project 360 intervention. It is unlikely that the Project 360 intervention had a direct impact on the number of non-domestic incidents. Therefore, this result can be interpreted as consistent with the results from the survey that suggest victims in the

treatment group are more likely to report future incidents. Further, these incidents may be considered less severe (than domestic violence) if we consider a severity framework such as the Cambridge Harm Index (Sherman, Neyroud and Neyroud, 2016).

An increase in victim willingness to report may lead to less severe incidents being reported. An attempt was made to compare the severity of domestic incidents by looking at the number of questions marked in the affirmative on the DASH assessment form by responding officers, and by looking at the proportion of incidents in which an arrest was made. This is reported for each of the first through the sixth callouts following the initial incident. Overall, we find that dash assessments involve 0.4 fewer affirmative responses for the treatment group relative to the control. This represents a 6.8% decrease in the number of "affirmative" categories in the DASH assessment. Although this difference is non-trivial in magnitude, it is not statistically different than zero. A similar pattern is seen for the proportion of arrests made in future incidents. While the proportion for the treatment group is consistently lower than that of the control group, most are not statistically distinguishable from zero.

These results are cautiously interpreted as suggestive that severity of incidents in the treatment group is lower than that of the control group for callouts following the initial incident. This is consistent with the hypothesis that victims more engaged with the police are more willing to report crimes.

6. Discussion

One of the objectives of the Project 360 intervention was to make statement provision easier for victims. The finding that the intervention lead to a decline in the provision of witness statements made by victims was unexpected. This highlights the benefit of the randomized-controlled design, as this result would not have been observed without an experimental analysis. It also highlights some of the complexities in assisting victims of domestic violence. There are two plausible explanations for why the intervention decreased statements. The first is that, during the initial phone contact some victims schedule a face-to-face visit with engagement workers. These face-to-face visits often take place several days following the phone-call (Table 2). Victims may put-off making a statement until the face-to-face meeting (during which engagement workers can assist them). However, the passage of time between the initial phone call and the meeting may decrease their willingness to make a statement. This decline over time in statement making is reflected in Figure 3. The second explanation is that victims substitute between making statements and other actions, such as leaving the perpetrator or seeking help from support services. If this is the case, then making other actions easier for

the victim will also make them less likely to make statements. This is consistent with the finds of a qualitative study by Ford (1983), who finds a significant decrease in victim willingness to make a statement when a "cooling off" period is imposed.

The second explanation is that victims substitute one form of help, making statements, for another, that provided by the intervention.

7. Conclusion

In this study we evaluate the randomized control trial of an intervention to bridge the gap between police services and follow-up social services in cases of domestic violence. The subject pool consists of households which have historically experienced repeat police call-outs for domestic incidents. Victims in the treatment group are assigned to a case worker who: a) makes contacts within 24 hours of the initial police report, b) provides information about local social services, and c) assists victims and provide referrals where necessary.

We analyse this intervention along three margins that capture its broad objectives. 1) Did the intervention improve victim's perception of and willingness to engage with the police? 2) Did the intervention lead to a change the willingness of victims to provide a statement to police? 3) Did the intervention lead to a change in future observed (i.e. police reported) violent behaviour within the household?

The first question was addressed using evidence from a victim survey administered one-month following the intervention. We find evidence that victims in the treatment group are more likely, than are victims in the control group, to take steps to change their situation. Further, we find the intervention lead to a significant, positive, change in attitudes towards police and in willingness to report future incidents. The second and third question are addressed using administrative data from the Leicestershire police force. We find the unexpected result that the intervention lead to a substantial decrease in statements made to police. We further shows that this effect arises for statements made after the initial incident, there is not a significant difference between the two groups for statements made on the day of the initial incident, which predates the intervention. We can rationalize this result with a model of dynamically inconsistent preferences with respect to providing statements.

Finally, we find weak evidence that the intervention may had led to an increase in the reporting of crime to police. Overall, the treatment group has more reported domestic incidents, and those incidents appear to be less severe (where severity is measured by a risk assessment score and the probability an arrest was made). Finally, the treatment group has more report

instances of reported theft and damage, than do the control group, which may be consistent with reporting less severe crimes.

References

- Aizer, A., 2010. "The gender wage gap and domestic violence" *American Economic Review*, 100, 1847–1857.
- Aizer, A., 2010. "Poverty, Violence, and Health: The impact of domestic violence during pregnancy on newborn health" *Journal of Human Resources*, 43(3), 518–538.
- Aizer, A. and P. Dal Bo, 2009. "Love, hate and murder: Commitment devices in violent relationships," *Journal of Public Economics*, 93, 412–428.
- Anderberg, D., and H. Rainer, 2013. "Economic abuse: A theory of intrahousehold sabotage", *Journal of Public Economics*, 97, 282–295.
- Anderberg, D., H. Rainer, J. Wadsworth, and T. Wilson, 2016. "Unemployment and domestic violence: Theory and evidence" *The Economic Journal*, forthcoming.
- Bobonis, G.J., M. González-Brenes,, R. Castro. 2013. "Public Transfers and Domestic Violence: The Roles of Private Information and Spousal Control", *American Economic Journal: Economic Policy*, 5(1), 179–205.
- Casey, R.L., Berkman, M., Stover, C.S., Gill, K., Durso, S., and S. Marans, 2007. "Preliminary results of a police-advocate home-visit intervention project for victims of domestic violence", *Journal of Psychological Trauma*, 6, 39–49.
- Carrell, S., M. Hoekstra, 2010. "Externalities in the classroom: How children exposed to domestic violence affect everyone's kids", *American Economic Journal: Applied Economics*, 2 (1), 211–228.
- Davis, R.C., C. Maxwell, 2003. Preventing repeat instances of family violence: A re-analysis of data from three field tests, Washington, DC: U.S. Department of Justice.
- Davis, R.C., D., Taylor, B., 1997. "A proactive response to family violence: The results of a randomized experiment", *Criminology*, 35, 307–333.
- Davis, R.C. Weisburd, D., Hamilton, E.E., 2007. "Preventing repeat incidents of family violence: A randomized field test of a second responder program in Redlands, CA", *Journal of Experimental Criminology*, 6, 397–418.
- Davis, R.C. Weisburd, D., Taylor, B., 2008. "Effects of second responder programs on repeat incidents of domestic violence: A systematic review", Campbell Collaboration.
- Erten, B., and P. Keskin, 2016. "For better or for worse? Education and the prevalence of domestic violence in Turkey" *AEJ: Applied*, forthcoming.
- Farmer A., and J. Tiefenthaler, 1996. "Domestic violence: The value of services as signals", *American Economic Review*, 86(2), 274–279.
- Ford, D.A., 1983. "Wife battery and criminal justice: A study of victim decision-making", *Family Relations*, 32, 463–475.
- Gelles, R.J., 1976. "Abused wives: Why do they stay", *Journal of Marriage and Family*, 38(4), 659–668.
- Jaffe, P., M. Zerwer, S. Poisson, 2002. "Access denied: The barriers of violence & poverty for abuse women and their children's search for justice and community services after separation," A report prepared for the Atkinson Foundation.
- Hirsch, D., M. Padley, L. Valadez, 2014. "Making ends meet in Leicester", Report published by the Centre for Research in Social Policy, Loughborough University.

- HMIC (Her Majesty's Inspectorate of Constabulary) 2014. "Everyone's business: Improving the police response to domestic abuse"
- Hovell, M.F., Seid, A.G., Liles, S., 2006. "Evaluation of a Police and Social Services Domestic Violence Program", *Violence Against Women*, 12, 137–159.
- Hoyle, C., and A. Sanders, 2000. "Police response to domestic Violence: From victim choice to victim empowerment?". *British Journal of Criminology*, 40, 14–36.
- Imbens, G.W., Wooldridge, J.M., 2009. "Recent developments in the econometrics of program evaluation". *Journal of Economic Literature*, 47, 5–86.
- Luca, D.L., E. Owens, and G. Sharma, 2015. "Can alcohol prohibition reduce violence against women?" *American Economic Review*, 105(5), 625–629.
- Miller, A.R., and C. Segal, 2014. "Do female officers improve law enforcement quality? Effects on crime reporting and domestic violence escalation", working paper.
- Sherman, L., Neyroud, P.W., Neyroud, E., 2016. "The Cambridge Crime Harm Index: Measuring Total Harm from Crime Based on Sentencing Guidelines". *Policing*, 10(3), 171–183.
- Stover, C.S., Berkman, M., Desai, R., Marans, S., 2010. "The efficacy of a police-advocacy intervention for victims of domestic violence: 12-month follow-up data". *Violence Against Women*, 16(4), 410–425.
- Strickland, Pat, 2014. "Harassment: Police Information Notices" House of Commons Library briefing paper number 06411.
- Tickle, L. "How the UK's legal system is failing victims of domestic violence" *The Guardian*, available at http://www.theguardian.com/society/2014/nov/29/how-uk-legal-system-failing-domestic-violence-victims
- Walby, S. 2009. "The Cost of Domestic Violence: Up-date 2009" available at http://www.research.lancs.ac.uk/portal/en/publications/-(7a76ddc4-972d-4b2c-9a29-ef88209a64ac).html

Table 1: Distribution of case worker home visits.

Days since initial	Number of	Proportion of
incident	visits	visits
1	44	34.66
2	13	10.23
3	12	9.45
4 to 7	42	33.08
8 to 21	12	9.45
> 26	4	3.16
Total	127	100

Table 2: Distribution of police action by statement provision

	Witness	statement	Statement pro	
Police action	No	Yes	No	Yes
No further action	90.3	32.72	39.53	26.57
Arrest and charge	3.5	38.6	33.33	43.36
Arrest, no charge	4.58	19.85	13.18	25.87
Community resolution/PIN	1.62	8.82	13.95	4.2
Number of cases	742	272	129	143

Table 3: Descriptive statistics

Α	Victi	m characte	ristics	Perpetr	ator charac	cteristics	В	Househ	old charac	teristics
	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)
	Treatment	Control	$\textit{Difference}~\dagger$	Treatment	Control	${\it Difference}~\dagger$		Treatment	Control	Difference †
Female (proportion)	0.888	0.857	0.031	0.139	0.138	0.001	Same victim and perpetrator	4.760	6.333	-1.573
	[0.014]	[0.016]	(0.021)	[0.359]	[0.426]	(0.022)	(first recorded incident)	[0.807]	[0.833]	(1.394)
Age	33.929	34.984	-1.055	33.028	33.392	-0.364	Arrest made (current incident)	0.248	0.263	-0.016
	[0.538]	[0.548]	(0.768)	[0.511]	[0.541]	(0.744)		[0.020]	[0.019]	(0.027)
White (proportion)	0.844	0.835	0.008	0.803	0.819	-0.016	Intimate partner DV	0.761	0.798	-0.036
	[0.015]	[0.018]	(0.023)	[0.018]	[0.018]	(0.026)		[0.019]	[0.018]	(0.026)
Unemployed (proportion)	0.535	0.511	0.024	0.440	0.520	-0.081	Victim and partner live together	0.532	0.593	-0.060
	[0.022]	[0.024]	(0.032)	[0.025]	[0.028]	(0.037)**		[0.022]	[0.022]	(0.032)*
Domestic cases (365 days)	2.330	2.259	0.071	2.226	2.248	-0.022	Children in the household	0.586	0.570	0.016
	[0.066]	[0.069]	(0.096)	[0.083]	[0.092]	(0.124)		[0.022]	[0.022]	(0.031)
Registered domestic cases	11.720	10.721	0.999	11.891	10.727	1.163	Number of children‡	1.923	1.983	-0.060
-	[0.523]	[0.439]	(0.684)	[0.471]	[0.439]	(0.650)*		[0.056]	[0.059]	(0.082)
Risk assessment score	1.275	1.280	-0.005							
	[0.025]	[0.024]	(0.035)							

Observations: 504 (treatment), 500 (control). †Robust standard error on difference reported in parenthesis. Standard deviation of sample reported in brackets. ‡Number of children subject to having children (297 (treatment), 286 (control)).

Table 4: Statement provision by level of treatment compliance

	Treatment	Control	ITT	LATE
Statement made (%)	0.237	0.299	-0.062	-0.121
Statement made at initial callout (%)	0.133	0.137	(0.028)** -0.004	(0.055)** 0.006
Statement made at michi camout (70)	0.133	0.137	(0.021)	(0.042)
Statement made after initial callout (%)	0.120	0.188	-0.068	-0.138
			(0.024)***	(0.050)***
Statements retracted (%)	0.140	0.192	-0.052	-0.074
			(0.046)	(0.066)
No engagement				
Statement made (%)	0.149			
Engagement by phone				
Statement made (%)	0.398			
Engagement face-to-face				
Statement made (%)	0.242			

Observations: 504 (treatment), 500 (control). Robust standard error on difference reported in parenthesis. .*, **, and *** indicates difference is statistically significant at a 10%, 5% and 1% level of significance.

Table 5: Victim one-month survey

		(1)	(2)			3)
		t (n=105)		(n=109)		rence
A. Safety and wellbeing Q10. Personal safety	Improved 0.590	Worsened 0.086	Improved 0.523	Worsened 0.055	0.068 (0.068)	0.031 (0.035)
Q11. Life control	0.524	0.143	0.578	0.119	-0.054 (0.068)	0.024 (0.046)
Q12. Stress level	0.333	0.286	0.505	0.193	-0.171 *** (0.067)	0.093 (0.058)
Q13. Quality of sleep	0.267	0.276	0.303	0.183	-0.036 (0.062)	0.093 (0.057)
Q14. Mental health	0.286	0.219	0.278	0.222	0.008 (0.062)	-0.003 (0.057)
Q15. Family life	0.471	0.077	0.435	0.204	0.036 (0.069)	-0.127*** (0.047)
Q16. Quality of life overall	0.490	0.154	0.389	0.157	0.101 (0.068)	-0.004 (0.050)
B. Actions taken	Affir	mative	Affin	mative		
Q17. Currently in contact with perpetrator	0.	385	0.583		-0.199 *** (0.068)	
Q20a. Visited GP as a result of incident	0.	408	0.2	287	0.121* (0.065)	
Q20b. Visited A&E as a result of incident	0.	087	0.0	037	0.050 (0.033)	
Q21. Feel confident accessing services [†]	0.	870	0.8	870	0.000 (0.048)	
Q24. Accessed one or more service [†]	0.	687	0.600			087 074)
C. Police satisfaction and engagement Q27. Satisfaction with police handling of case [†]	Satisfied 0.796	Dissatisfied 0.117	Satisfied 0.729	Dissatisfied 0.206	Satisfied 0.067 (0.059)	Dissatisfied -0.089* (0.051)
Q31. My opinion of police has ‡	Improved 0.222	Worsened 0.107	Improved 0.271	Worsened 0.131	Improved -0.049 (0.063)	Worsened -0.024 (0.045)
Q32. My likelihood of reporting a future incident has [‡]	Increased 0.505	Decreased 0.097	Increased 0.355	Decreased 0.150	Increased 0.150** (0.068)	Decreased -0.052 (0.046)

Observations: 105 (treatment), 109 (control). Robust standard error for difference reported in parenthesis.*, **, and *** indicates difference is statistically significant at a 10%, 5% and 1% level of significance. All "Improved" or "Worsened" is relative to before the incident that triggered selection into the study. †Services broadly defined as any services available in Leicestershire to assist victims of domestic violence. ‡Relative to "remained the same".

Table 6: Future reporting to police

		0–3 months	3–6 months	6–12 months	12 month period
Number of repeat	Control	0.588	0.382	0.596	1.566
incidents (domestic)	Treatment	0.645	0.424	0.688	1.757
	ITT	0.057	0.041	0.092	0.191
		(0.062)	(0.047)	(0.075)	(0.130)
At least one repeat	Control	0.360	0.257	0.319	0.612
incident (domestic)	Treatment	0.365	0.298	0.341	0.618
money (domestic)	ITT	0.004	0.041	0.022	0.006
	111	(0.030)	(0.029)	(0.030)	(0.031)
Number of repeat	Control	0.121	0.105	0.218	0.444
incidents (not domestic)	Treatment	0.192	0.127	0.292	0.612
	ITT	0.071	0.023	0.074	0.168
		(0.038)*	(0.039)	(0.046)	(0.084)**
At least one repeat	Control	0.093	0.053	0.109	0.234
incident (assault)	Treatment	0.112	0.065	0.141	0.259
	ITT	0.019	0.011	0.032	0.025
		(0.019)	(0.015)	(0.021)	(0.027)
	Control	0.055	0.038	0.091	0.170
At least one repeat	Treatment	0.092	0.041	0.086	0.186
incident (theft & damages)	ITT	0.037	0.004	-0.005	0.016
		(0.016)**	(0.012)	(0.018)	(0.024)
	N	1004	1004	1004	1004

Robust standard errors reported in parenthesis corresponds. .*, **, and *** indicates difference is statistically significant at a 10%, 5% and 1% level of significance.

Table 7: Severity and actions of repeat incidents

		Average overall	1st	2nd	3rd	4th	5th	6th
DASH assesment	Control	6.039	5.671	6.412	6.671	8.452	8.231	7.952
	Treatment	5.629	5.034	6.348	7.248	6.492	7.513	7.767
	ITT	-0.410	-0.637	-0.065	0.577	-1.960	-0.718	-0.186
		(0.358)	(0.400)	(0.597)	(0.757)	(0.964)**	(1.316)	(1.426)
	N	522	522	312	191	105	65	51
Arrest made	Control	0.457	0.276	0.246	0.275	0.368	0.357	0.296
	Treatment	0.426	0.259	0.230	0.315	0.241	0.333	0.361
	ITT	-0.031	-0.017	-0.016	0.040	-0.127	-0.024	0.065
		(0.039)	(0.035)	(0.043)	(0.060)	(0.076)*	(0.100)	(0.122)
	N	639	639	396	239	147	93	63

Robust standard errors reported in parenthesis corresponds. .*, **, and *** indicates difference is statistically significant at a 10%, 5% and 1% level of significance.



Figure 1: Leicestershire Police Force Area

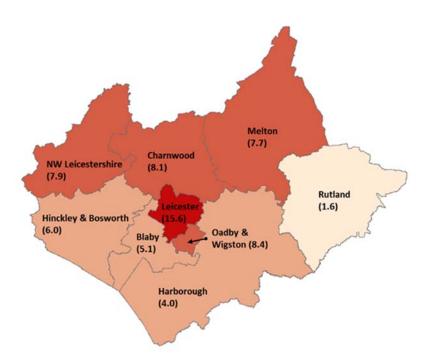


Figure 2a: Study cases per in study 10,000 households, Leicestershire County

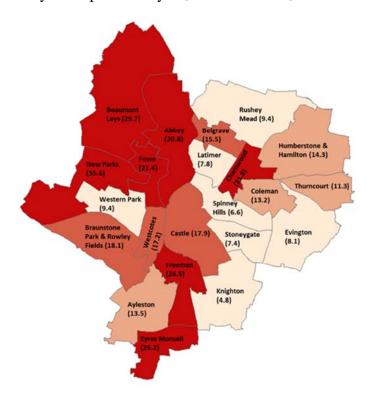
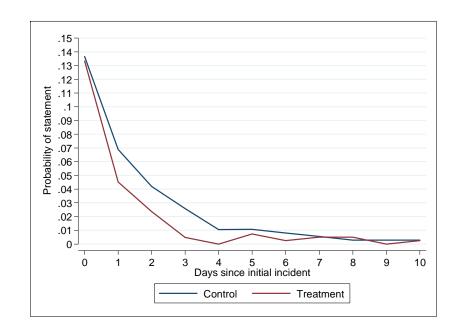


Figure 2b: Study cases per in study 10,000 households, Leicester City

Figure 2: Geographic distribution of cases

Notes: Study cases reflect all cases, over a six-month period, for which the victim was been present in 3-6 previous cases in the previous 365 day period.



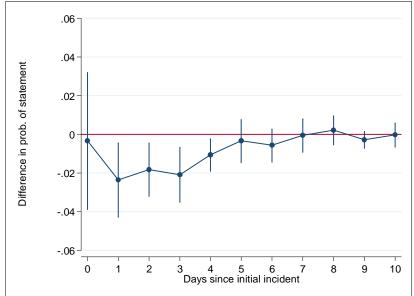


Figure 3a: Probability of statement, conditional on no previous

Figure 3b: Difference (treatment—control)†

Figure 3: Probability of witness statement by days since initial incident and treatment

†Bars show 90% confidence interval on difference.

Appendix A: Details of data collection

Data come two primary sources: police force administrative data and victim surveys.

Administrative data

Administrative data was collected between 1st October 2014 and 30th April 2015. This data collection comprised of searching in the CIS (Crime Information System) database for specific crime numbers, reading the full file for that specific case and recording relevant variables in an excel sheet specifically created for the project. The data were collected in 3 stages.

In the initial data collection stage we gathered the following information:

- socio-demographic data about the victims, perpetrators and the children in the household
- data related to the domestic incident (date, classification)

In the second stage we augmented the exiting data by collecting the following information:

- data related to the domestic incident (action taken by police, DASH risk assessment)
- past history of police incidents for victims and perpetrators, and
- for those who received treatment, details about their engagement in the programme.

In the third stage we collected the following information:

• Whether the victim was involved in a police incident 3, 6 and 12 months after the initial report was filed, the nature of the incident(s), whether it was the same perpetrator who was involved, action taken by the police and DASH risk assessment.

This administrative data was collected from two main sources: CIS and GENIE. Additionally, for those who received treatment, details about their engagement were recorded from the police engagement worker reports. The 3, 6 and 12 months police incidents were recorded from GENIE and NICHE (a police records management system that replaced CIS from end of April 2015). Data collection was done by the primary researcher and interns hired purposefully for this task (whose work was overseen and quality checked by the primary researcher).

Data collection and data merging happened based on the unique crime reference numbers originating from our random sample. After data collection was completed the dataset was anonymised and this number was replaced by a unique ID given by the primary researcher.

The final dataset comprised of 1017 cases (463 control and 554 treatment).

Victim surveys

Data was collected via telephone survey from victims in both the treatment and the control group. The response rate was 21.6% for the treatment and 20.6% for the control group, having received in total 214 responses (20%). The primary researcher compiled a dataset containing victim's contact details and information about the incident for the force's survey team on a monthly basis. The data gathered was around aspects of how the victims' life has been affected (quality of sleep, safety, stress levels, family life, mental health, etc.) by the incident, about their opinion and satisfaction with how the police handled their case, what (if any) agencies were contacted. Sample question frames are provided below. The completed

surveys were sent back to the primary researcher who then merged these responses with the administrative data based on the unique crime reference number.

Sample question frames for victim survey

Table 5A questions are framed as follows:

"Since making this report, my _____ (e.g. control over my life) has:

- 1. Improved a lot
- 2. Improved a little
- 3. Not changed
- 4. Declined a little
- 5. Declined a lot"

For the reporting in Table 5 we aggregate answers into *improved*, *no change* and *worsened*.

Appendix B

Figure B1a: Support services pamphlet (front)



Emergency numbers

999

Police Ambulance Fire

24hour number

0808 2000 247

National Domestic Violence Helpline

Agencies offering specialist services in domestic violence in Leicester

Domestic Violence Integrated Response Project (DVIRP) 0116 255 0004

DV specific agency or post

Client Group and Remit

Women and men aged 16 and over in the city and the county who are affected by domestic violence.

Men who self refer as perpetrators of domestic violence.

Specialist service for members of faith communities aged 16 and over, particularly members of black and minority ethnic communities.

A specific network of workers offering therapeutic support to children and young people who have experienced domestic

Referral Process Self referral

Service Offered

- . Listening Ear
- Safety Planning and Options
- Support Advocacy · Information
- . Contact with religious scholars
- · Face to face support
- · Therapeutic support with young people (individual and group) and with their carer/parent

Women's Aid Leicestershire Ltd Community **Outreach Service** 0116 285 8079

(Voluntary)

DV specific agency or post Agency

Client Group and Remit

A free, and confidential service for women with or without children who have experienced, are experiencing or are at risk of experiencing domestic violence irrespective of their age, cultural backgrounds, race, ability or sexuality. For those living independently or with the perpetrator/s.

Aged 16 and over.

Referral Process

Self referral, referral through any agency, including housing, and also through family and friends.

Service Offered

- · Emotional Support either face-to-face or by telephone
- . Housing related support
- Legal advice
- · Practical (including finance)
- advice & information Advocacy
- · Group work
- Social/cultural events
- Access to safe accommodation

Leicestershire Women's Aid Refuge Service 0116 244 0169

(Voluntary)

DV specific agency or post

Client Group and Remit

who need somewhere safe to stay due to fear of domestic violence.

Aged 16 and over (housing benefit needs to be secured, or alternative finance for rent).

Male children over 14years may not be considered appropriately placed within the refuge.

Referral Process

Self referral, referral through any agency, including housing, and also through family and friends.

Service Offered

- Housing
- · Individual case work support including help with finances, legal matters and re-housing

Suruksha 0116 274 0422 (Voluntary)

Client Group and Remit Supported housing project for asian women who have fled their home due to domestic violence.

Referral Process

Self referral, agency referral

Service Offered . Housing support

Individual casework

Panahghar Shantighar and Shardhgar 0116 270 5320 (Voluntary)

DV specific agency or post

Client Group and Remit

Asian women with or without children who have experienced domestic violence and need somewhere safe to stay.

Referral Process

Self referral, referral through other refuge projects, police referral.

Service Offered

- · Individual case-work support including help with finances, legal matters and re-housing

Panahghar Shantighar **Outreach Support** Service

0116 270 5320 (Voluntary)

DV specific agency or post Agency

Client Group and Remit

Asian Women with or without children who have experienced domestic violence who are living independently and would like

Referral Process

Self referral, referral through other refuge projects

Service Offered

· Individual face to face support

Family Welfare Association FLIP Project 0116 255 3738 (Voluntary)

DV specific agency or post

Client Group and Remit

Men and women who are parents or carers who have experienced domestic abuse (Men will not be able to enter the freedom programme). City residents.

Referral Process Self-referral

Service Offered

- · Agency referral where parent has given consent
- · 12 week 'freedom' programme - group work
- Home visits
- · One to one work

Leicester City Council **Housing Department** DV Unit, Border House 0116 221 1407

Client Group and Remit

Women and children that are survivors of DV. No male children over the age of 11. Extra security measures to protect survivors from abuse and neglect, 24 hour security measures in operation that are linked to Staffing quarters

Referral Process

Self-Referral and any other agencies working with this client group

Service Offered

- · Emergency direct access accommodation and housing
- · Related Support
- · Holistic needs assessment and joint working with partner agencies to meet these needs

Pet retreat 07910 721 797

For people who have experienced domestic violence and need support in looking after their pets while they flee to a place of safety

Probation 0116 262 0400

(Statutory)

DV specific agency or post

Client Group and Remit

Women who have court referred male partners on the perpetrator programme

Referral Process

Referral through probation

Service Offered

- Signposting · Safety planning
- Risk assessment
- · Support (4 session structure)

Police Domestic Violence Officers 0116 222 2222 (Statutory)

DV specific agency or post

Client Group and Remit

Women and men and who have recorded an incident of domestic violence to the police or would like

Referral Process

Self referral, police referral

Service Offered

- . Support in the aftermath of an
- · Liaison and guidance through the legal investigation
- · Referral to other agencies

Additional local agencies that provide workers and volunteers with specific training on domestic violence

Rape Crisis 0116 255 8852 (Voluntary)

Client Group and Remit

Women who have experienced sexual assault

Referral Process Self referral

Service Offered

· Counselling, support, information, training

Juniper Lodge 0116 273 3330

(Statutory Partnership)

Client Group and Remit

Adults who have experienced sexual assault.

Referral Process

Self referral or Police referral.

Service Offered

- . One to one support sessions · Forensic Medical Examination
- · Video recorded interviewing facilities
- · Information

Witness Cocoon 0116 222 9886

(Voluntary)

Client Group and Remit

Adults (aged 16 yrs and over) at risk or affected by crime or antisocial behaviour.

Referral Process

Self referral or referral from any agency

Service Offered

- · Telephone support
- · Allocation of a worker for face to face ongoing support
- · Information and advice, including accompaniment to civil and criminal courts

Victim Support & Witness service

0116 253 0101 (Voluntary)

Client Group and Remit Adults who identify themselves

as the victim of a crime. Support to witnesses called to give evidence at criminal court.

Referral Process

Self referral, Police referral and other agencies.

Service Offered

· Face to face support, information and advice

Bridge House 0116 222 1845 (Voluntary)

Client Group and Remit

24-hour service. Accept women with additional needs such as drugs and alcohol, mental health needs.

Referral Process

Self referral, agency referral

Service Offered

. Safe supported housing

New Futures 0116 255 9696

(Voluntary)

Safe and confidential service to anyone at risk of or currently involved in prostitution.

Youth work project

Referral Process Self referral

Service Offered

- · Outreach and practical on site facilities, including showers, health advice, a place to chill, access to counsellors.
- * This list is not exclusive or exhaustive and is subject to change at any time. It focuses on agencies established to provide a domestic violence service exclusively and those where specialist posts for domestic violence service provision have been established.



Appendix C: DASH risk assessment form

CAADA-DASH Risk Identification Checklist (RIC)ⁱ for MARAC Agencies Aim of the form:

- To help front line practitioners identify high risk cases of domestic abuse, stalking and 'honour'-based violence
- To decide which cases should be referred to MARAC and what other support might be required. A completed form becomes an active record that can be referred to in future for case management.
- To offer a common tool to agencies that are part of the MARAC¹⁴ process and provide a shared understanding of risk in relation to domestic abuse, stalking and 'honour'-based violence.
- To enable agencies to make defensible decisions based on the evidence from extensive research of cases, including domestic homicides and 'near misses', which underpins most recognised models of risk assessment.

How to use the form:

Before completing the form for the first time we recommend that you read the full practice guidance and Frequently Asked Questions and Answers¹⁵. These can be downloaded from http://www.caada.org.uk/marac/RIC for MARAC.html. Risk is dynamic and can change very quickly. It is good practice to review the checklist after a new incident.

Recommended Referral Criteria to MARAC

- 1. Professional judgement: if a professional has serious concerns about a victim's situation, they should refer the case to MARAC. There will be occasions where the particular context of a case gives rise to serious concerns even if the victim has been unable to disclose the information that might highlight their risk more clearly. This could reflect extreme levels of fear, cultural barriers to disclosure, immigration issues or language barriers particularly in cases of 'honour'-based violence. This judgement would be based on the professional's experience and/or the victim's perception of their risk even if they do not meet criteria 2 and/or 3 below.
- 2. 'Visible High Risk': the number of 'ticks' on this checklist. If you have ticked 14 or more 'yes' boxes the case would normally meet the MARAC referral criteria.
- 3. Potential Escalation: the number of police callouts to the victim as a result of domestic violence in the past 12 months. This criterion can be used to identify cases where there is not a positive identification of a majority of the risk factors on the list, but where abuse appears to be escalating and where it is appropriate to assess the situation more fully by sharing information at MARAC. It is common practice to start with 3 or more police callouts in a 12 month period but this will need to be reviewed depending on your local volume and your level of police reporting.

Please pay particular attention to a practitioner's professional judgement in all cases. The results from a checklist are not a definitive assessment of risk. They should provide you with a structure to inform your judgement and act as prompts to further questioning, analysis and risk management whether via a MARAC or in another way.

The responsibility for identifying your local referral threshold rests with your local MARAC.

¹⁴ For further information about MARAC please refer to the 10 Principles of an Effective MARAC: http://www.caada.org.uk/marac/10_Principles_Oct_2011_full.doc

¹⁵ For enquiries about training in the use of the form, please email training@caada.org.uk or call 0117 317 8750.

What this form is not:

This form will provide valuable information about the risks that children are living with but it is not a full risk assessment for children. The presence of children increases the wider risks of domestic violence and step children are particularly at risk. If risk towards children is highlighted you should consider what referral you need to make to obtain a full assessment of the children's situation.

CAADA-DASH Risk Identification Checklist for use by IDVAs and other non-police agencies¹⁶ for identification of risks when domestic abuse, 'honour'-based violence and/or stalking are disclosed

safe Tick the It is	ase explain that the purpose of asking these questions is for the ety and protection of the individual concerned. If the box if the factor is present . Please use the comment box at end of the form to expand on any answer. assumed that your main source of information is the victim. If this of the case please indicate in the right hand column	Yes (tick)	No	Don't Know	State source of info if not the victim e.g. police officer
1.	Has the current incident resulted in injury? (Please state what and whether this is the first injury.)				
2.	Are you very frightened? Comment:				
3.	What are you afraid of? Is it further injury or violence? (Please give an indication of what you think (name of abuser(s)) might do and to whom, including children). Comment:				
4.	Do you feel isolated from family/friends i.e. does (name of abuser(s)) try to stop you from seeing friends/family/doctor or others? Comment:				
5.	Are you feeling depressed or having suicidal thoughts?				
6.	Have you separated or tried to separate from (name of abuser(s)) within the past year?				
7.	Is there conflict over child contact?				
8.	Does () constantly text, call, contact, follow, stalk or harass you? (Please expand to identify what and whether you believe that this is done deliberately to intimidate you? Consider the context and behaviour of what is being done.)				
9.	Are you pregnant or have you recently had a baby (within the last 18 months)?				

 $^{^{16}}$ Note: This checklist is consistent with the ACPO endorsed risk assessment model DASH 2009 for the police service.

10.	. Is the abuse happening more often?				
11.	. Is the abuse getting worse?				
12.	Does () try to control everything you do and/or are they excessively jealous? (In terms of relationships, who you see, being 'policed at home', telling you what to wear for example. Consider 'honour'-based violence and specify behaviour.)				
	k box if factor is present. Please use the comment box at the end of form to expand on any answer.	Yes (tick)	No	Don't Know	State source of info if not the victim
13.	. Has () ever used weapons or objects to hurt you?				
14.	Has () ever threatened to kill you or someone else and you believed them? (If yes, tick who.) You □ Children □ Other (please specify) □				
15.	Has () ever attempted to strangle/choke/suffocate/drown you?				
16.	Does () do or say things of a sexual nature that make you feel bad or that physically hurt you or someone else? (If someone else, specify who.)				
17.	Is there any other person who has threatened you or who you are afraid of? (If yes, please specify whom and why. Consider extended family if HBV.)				
18.	Do you know if () has hurt anyone else? (Please specify whom including the children, siblings or elderly relatives. Consider HBV.) Children □ Another family member □ Someone from a previous relationship □ Other (please specify) □				
19.	. Has () ever mistreated an animal or the family pet?				
20.	Are there any financial issues? For example, are you dependent on () for money/have they recently lost their job/other financial issues?				
21.	Has () had problems in the past year with drugs (prescription or other), alcohol or mental health leading to problems in leading a normal life? (If yes, please specify which and give relevant details if known.) Drugs □ Alcohol □ Mental Health □				

22. Has () ever threatened or attempted suicide?				
23. Has () ever broken bail/an injunction and/or formal	П	П	П	
agreement for when they can see you and/or the children?				
(You may wish to consider this in relation to an ex-partner of				
the perpetrator if relevant.)				
Bail conditions \square Non Molestation/Occupation Order \square				
Child Contact arrangements ☐ Forced Marriage Protection				
Order □ Other □				
24. Do you know if () has ever been in trouble with the		П		
police or has a criminal history? (If yes, please specify.)				
DV \square Sexual violence \square Other violence \square Other \square				
Total 'yes' responses				
For consideration by professional: Is there any other relevant information				
may increase risk levels? Consider victim's situation in relation to disabili				
issues, cultural/language barriers, 'honour'- based systems, geographic is willing to engage with your service? Describe:	olation a	ana mini	misation	i. Are they
		2		
Consider abuser's occupation/interests - could this give them unique acc	ess to we	eapons?	Describe	2:
What are the victim's greatest priorities to address their safety?				
,				
Do you believe that there are reasonable grounds for referring this case	to MAR	AC? Yes	/ No	
If yes, have you made a referral? Yes/No				
Signed:				Date:
Do you believe that there are risks facing the children in the family? Yes	s / No			
If yes, please confirm if you have made a referral to safeguard the children	n: Yes /	No		
Date referral made				

Signed:	Date:
Name:	

¹ This checklist reflects work undertaken by CAADA in partnership with Laura Richards, Consultant Violence Adviser to ACPO. We would like to thank Advance, Blackburn with Darwen Women's Aid and Berkshire East Family Safety Unit and all the partners of the Blackpool MARAC for their contribution in piloting the revised checklist without which we could not have amended the original CAADA risk identification checklist. We are very grateful to Elizabeth Hall of Cafcass and Neil Blacklock of Respect for their advice and encouragement and for the expert input we received from Jan Pickles, Dr Amanda Robinson and Jasvinder Sanghera.