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A descriptive analysis of Multi-Agency Risk Assessment Conferences (MARACs) for reducing the future harm of domestic abuse in Suffolk

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Abstract

MARACs are widely used across England and Wales in response to high-risk domestic abuse. There is a paucity of academic research available around MARAC processes, and the outcomes they achieve for victims of domestic abuse. This study seeks to contribute to the small but growing body of research on this subject, and provide a descriptive analysis of MARACs in Suffolk. The primary research question posed is whether or not MARACs are associated with a reduction in future harm to victims of domestic abuse.

The research design used is a matched cohort design, where a sample of victims referred to MARACs in Suffolk over a two year period were matched with domestic abuse victims not referred to MARACs over the same period across a range of factors. This allowed for before and after analysis of the MARAC referred cases to see what associated changes in crime harm there were in the twelve months following MARAC referral. It also allowed for similar analysis of a matched group of victims, not referred to MARAC, to see what changes in crime harm were associated with not being referred to MARAC. Changes in both groups were compared using difference-of-differences analysis.

The research finds that whilst significant reductions in crime harm are associated with MARAC referral, reductions are also seen in the cases where victims were not referred to MARAC, and suggests a regression toward the mean effect may contribute to the reductions. Further analysis showed that in a subset of the sample, crime harm actually increased post MARAC referral, compared to a reduction in non-MARAC referred cases.

MARAC seems to be producing little reduction in subsequent domestic abuse that would not have happened anyway, and *could* be making things worse for those who enter the program without high levels of harm beforehand. The main implication of these

findings is that more rigorous evaluation of MARACs should be undertaken, potentially in the form of a Randomised Controlled Trial (RCT) to allow for more causal inferences to be drawn.

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Introduction

Domestic Abuse

An inspection carried out by Her Majesty's Inspectorate of Constabularies (HMIC, 2014) describes the police response to domestic abuse as 'not good enough'. Whilst it recognises other agencies share responsibilities for dealing with domestic abuse, police take a leading role. The report highlights the extent of the problem in England and Wales, citing the work of Walby (2009), which estimates a cost to society of £15.7bn per year, and notes that domestic abuse constitutes up to 8% of all recorded crime per year. The definition of domestic abuse used for the purposes of this study is as per the Home Office definition (2013):

"Any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners, or family members, regardless of gender or sexuality"

A full glossary of terms can be found in Appendix 1 to aid understanding of terminology used throughout this thesis.

Multi-Agency Risk Assessment Conferences (MARACs)

A widely used approach to managing high-risk cases of domestic abuse across the UK is Multi-Agency Risk Assessment Conference (MARAC). MARACs are meetings attended by representatives from statutory and voluntary agencies held on a monthly basis, to discuss cases identified as being at high-risk of murder or serious harm. There are four criteria under which high-risk case referrals may be made to MARAC (SafeLives, 2015). These are i) Visible high-risk (defined as 14 or more ticks on the Domestic Abuse, Stalking and Harassment (DASH) Risk Assessment, ii) Potential for escalation (three or

more incidents in 12 months), iii) MARAC Repeat (if there is a further incident within 12 months of the last referral) or iv) Professional judgement.

The outcome of a referral to MARAC is the development of a bespoke action plan to 'increase the safety' of victims (Steel, Blakeborough & Nicholas, 2011). MARACs were first implemented in England and Wales in Cardiff in 2003. Since that time, they have spread across the UK. According to the charity SafeLives (formerly known as CAADA) (2015), 288 MARAC teams operate nationwide, managing 78,114 cases in 2014/15. MARACs operate in a similar fashion across the country, using a framework developed by Safelives. However, it is probable there will be some differences in the way each conference operates at a local level, particularly in terms of how well attended they are, and how effectively each conference operates. The four main aims of MARACs as described by Safelives (2009) are to safeguard adult victims, make links with other public protection arrangements in relation to children, perpetrators and vulnerable adults, safeguard agency staff and address perpetrator behaviour (CAADA, 2009).

Whilst the MARAC model has been adopted across the country, concerns exist around how MARAC is being implemented, how well resourced it is, and how well evaluated it is (Steel et al, 2011, HMIC, 2014, Berry, 2014, McGlaughlin, 2014). A number of gaps have been identified in research into the effectiveness of MARACs, which are detailed in the next section.

Purpose of this study

The purpose of this study is to provide a descriptive analysis of MARACs for reducing future harm of domestic abuse in Suffolk. The research is structured around two main research questions.

1. What victim characteristics are associated with MARAC referral?
2. Is MARAC assignment associated with reduced harm to victims of domestic abuse in the twelve months following referral to MARAC compared to the twelve months

leading up to the referral, and in comparison to a matched sample group of domestic abuse victims who have not been subject of a MARAC referral over a similar time period?

The first research question will provide a common profile of victims referred to MARAC based on an identified cohort of MARAC victims. This may be used by MARAC practitioners to assist in understanding the victim profile.

The second research question is also the primary research question. A widely recognised lack of academic research exists into MARAC interventions, particularly evaluations of outcomes. In Suffolk, there are three MARACs per month, each taking up to a whole day, with representatives from a variety of different agencies. Given the level of resources devoted to this process from both police and partner agencies, the relative lack of research or evidence to suggest MARAC intervention is effective, is astonishing.

The lack of evaluation of MARACs has been identified nationally in an inspection of police forces responses to domestic abuse in England and Wales by HMIC (2014) and in a Home Office commissioned review of MARACs (Steel et al, 2011). Locally, a report commissioned by the Suffolk Police and Crime Commissioner also calls for further review of MARACs in Suffolk (Bond, 2015). Two recent studies (Berry, 2010, McGlaughlin et al, 2014) have also questioned the effectiveness of MARACs in other parts of England and Wales. Consequently, the importance of this research should not be underestimated. MARAC is widely perceived to be the 'flagship' intervention for high-risk cases of domestic abuse in England and Wales, making research into this intervention all the more important.

This research design uses a sample cohort of MARAC victims, and a matched cohort of domestic abuse victims who had not been referred to MARAC; as treatment and comparison groups. A matched cohort design will be employed, with cases matched on a range of factors relating to domestic abuse victims, including age, gender, ethnicity, date of incident, geographic location, and volumes of calls to service in the twelve months prior

to MARAC referral. The primary measure of harm will be the Cambridge Crime Harm Index (CHI), which assigns a harm value to different types of crimes based on the sentencing guidelines for a first-time offender (Sherman et al, 2014). The level of crime harm is a further factor used in case matching.

Once suitable treatment (i.e., MARAC) and comparison groups are identified, pre and post analysis and difference-of-difference analysis will be undertaken in an effort to understand any association between MARAC referral and changes in any of the measures identified.

The thesis will begin with a literature review discussing the scale and extent of domestic abuse, co-ordinated community responses to domestic abuse, the MARAC intervention (and its place in a co-ordinated community response) and the means by which harm may be measured. It will go on to outline research methods for the study, including research setting, research design, data and associated limitations thereof. Next it will detail results of analyses carried out and go on to discuss, what implications they have for policing and future research.

In summary, this research considers the association between MARAC referral and levels of harm experienced by victims of domestic abuse following referral. It represents the first of its kind in England and Wales to use a comparison group, going beyond simple before and after comparisons based on police calls to service. The research uses a CHI as a more sophisticated measure of harm than has been used previously. The use of a matched cohort design provides a more robust assessment of the MARAC intervention, by comparing a group of victims who were referred to MARAC with a matched group of victims who were not. Therefore, this study contributes to filling the gap in the existing research, and paves the way for further research into MARACs.

Literature Review

Domestic abuse has been identified as having one of the furthest advanced applications of problem solving in policing (Sherman & Strang, 1992). Whilst the body of research in this area is undeniably extensive, gaps in available evidence of 'what works' remain in a number of areas. One such gap exists in evidence of what works in partnership approaches to preventing domestic abuse (National Institute for Clinical Excellence, 2013), and more specifically in terms of evidence of outcomes from MARACs (Steel et al, 2011).

This literature review first considers the scale and extent of domestic abuse globally and nationally, and goes on to review the literature in relation to multi-agency interventions to address domestic abuse. This is set in the context of the Coordinated Community Response (CCR) Model, developed as a response to domestic abuse in Duluth, Minnesota in the 1980's. Furthermore, consideration is given to the literature in relation to MARACs.

MARACs are not part of the statutory response to Domestic Abuse in the UK, but are commonly used. They are designed to focus on the highest risk cases of domestic abuse to safeguard victims. However, research and evaluation of MARACs is limited. This chapter will describe what the available research on MARACs tells us, and will highlight gaps in research and evidence.

Finally, with the Cambridge CHI as the proposed instrument for measuring the potential effects of MARAC referral, this chapter will consider the literature on measuring levels of harm associated with crime.

Scale and Extent of Domestic Abuse

The World Health Organisation (WHO, 2013) describes violence against women as a 'global public health problem of epidemic proportions'. It estimates 35% of women

worldwide have suffered physical or sexual violence at the hands of an intimate partner, or suffered non-partner sexual violence. The report estimates as many as 38% of homicides with female victims globally are committed by intimate partners. This section seeks to describe the scale of domestic abuse in the UK and outline the financial, physical and emotional harm caused by it.

According to findings from the Crime Survey for England and Wales (CSEW) 2013/14, 8.5% of female respondents and 4.5% of male respondents reported some form of domestic abuse in the last year. This would equate to 1.4 million female victims and 700,000 male victims in England and Wales (ONS, 2015). The survey also draws upon police data, and states there were 887,253 domestic abuse incidents recorded by police in England and Wales in 2013/14. An advantage of the CSEW is that it captures information on incidents which may not have been reported to police. The underreporting of domestic abuse is widely recognised (ONS, 2015, Walby & Allen, 2004, Tjaden & Thoennes, 2002, Buzawa and Buzawa, 2003, European Union agency for Fundamental Rights, 2014). However, to reduce the potential impact of smaller numbers of victims reporting high volumes of domestic abuse crimes from skewing estimates, the CSEW puts a 'cap' of five offences allowed to be reported in a series of offending. This means that where victims report a series of domestic abuse incidents with the same perpetrator, the survey will only count the first five. Walby et al (2014) are critical of this 'cap', arguing it underrepresents the true scale of domestic abuse incidents.

The cost to society of responding to domestic abuse is high. In 2008, domestic abuse is estimated to have cost the UK £15.7 billion (Walby, 2010). This includes an estimated cost of £3.9 billion to the criminal justice system, healthcare, civil legal costs, housing and refuges. It also includes a cost of £1.9 billion to the economy, which is based on absences from work due to injuries. It estimates a cost of £9.9 billion in human and emotional costs – an abstract measure of how much people would pay to avoid injuries associated with domestic abuse.

The cost to victims, in terms of the impact domestic abuse has on their health can be substantial. In a review of studies into the physical and mental health implications of domestic abuse, Campbell (2002) describes increased health problems including injury, chronic pain, gastrointestinal, and gynaecological signs including sexually-transmitted diseases. The paper also notes depression, and post-traumatic stress disorders are well documented by research into abused women in various settings. In the most extreme cases, domestic abuse results in death of the victim. In 2012/13 seventy seven victims were killed by their partner or ex-partner in the UK (HMIC, 2014).

An inspection carried out by Her Majesty's Inspectorate of Constabularies (2014) highlights that crimes linked to domestic abuse account for 8% of all recorded crimes. It also indicates police receive an emergency call relating to domestic abuse, on average, every thirty seconds. The inspection concludes that the policing response is not good enough, and that action must be taken to improve the service provided to victims of domestic abuse. It highlights examples of effective multi-agency working, but also raises concerns regarding knowledge and understanding of MARAC processes in police forces, and that MARAC caseload is too high in some areas. This chapter will proceed to discuss the available literature around the MARAC model, placing it in the context of the wider Coordinated Community Response (CCR) model.

Coordinated Community Response (CCR)

MARACs are often described as forming part of a wider coordinated community response to domestic abuse. They were rolled out nationally in 2006 as part of the Home Office National Domestic Violence Delivery Plan 2005/06, which recommended the Coordinated Community Response (CCR) as the approach to take in tackling domestic abuse. Other components of the recommended CCR model, introduced alongside MARACs, included Independent Domestic Violence Advocates (IDVAs) and Specialist Domestic Violence Courts (SDVCs) (Steel, Blakeborough & Nicholas, 2011). The SafeLives Charity (formerly known as CAADA) which leads on support and development

for MARACS (and other responses to Domestic Abuse) across the UK puts the CCR model at the centre of their work (New Philanthropy Capital, 2009).

The CCR model is borne of the idea that cases of domestic abuse are often complex and recurring, and therefore some researchers argue that a CCR is required to join up work between criminal justice and community service providers (Spohn, 2008, Visher et al, 2008, Allen, 2005). A number of public agencies have responsibilities for tackling different aspects of domestic abuse, including police and criminal justice, local housing authorities, victim advocates, charities, health and probation. The aim of a CCR model is to improve multi-agency working and to take a more coordinated approach to tackling domestic abuse (Shepard, 1999).

The CCR model was developed by the Duluth Domestic Abuse Intervention Project (DAIP) in Minnesota, USA. In 1978, a female who had been abused by her husband for three years shot and killed him, but a grand jury decided not to indict her for murder. This incident was a catalyst for debate on how public services should identify and intervene in cases of domestic abuse (Pence & McMahon 1997). The Duluth Project introduced “multiple inter-agency agreements which linked all the intervening agencies in a community to a common philosophical approach”. Since then, the CCR approach has spread around the world (Shepard & Pence, 2001).

Evaluations of CCRs have been limited, with many tending to focus on processes rather than outcomes (Klevens et al, 2008). Klevens (2008) also found that evaluation of CCRs has largely been limited to case study research, with little evaluation of outcomes, or experimental research. Most recent evaluations of CCRs have been inconclusive in identifying whether they are effective, and of course, it is problematic to evaluate the effectiveness of such a general concept as that of a CCR. An evaluation by Klevens et al (2008) identified ten jurisdictions using CCRs, along with ten matched jurisdictions (based on rates of domestic abuse, size, racial composition and socioeconomic status) not using the intervention. They found no significant impact in jurisdictions where the CCR model

was implemented, compared to the ten matched jurisdictions. The authors concede that whilst this brings the effectiveness of CCRs into question, it could equally be that CCRs within the study were not doing enough to be effective. CCRs may be managed and implemented differently in different areas, which will have a bearing on how successful they are in preventing and controlling domestic abuse.

Two further evaluations of these processes were undertaken by Post et al (2008) and Visher et al (2008). Neither found significant differences between jurisdictions using a CCR and those that were not, but neither evaluation took the form of a Randomised Controlled Trial (RCT). Both were quasi-experiments based on matching cases or jurisdictions. Maxwell and Garner (2008) urge caution around these findings. Further analysis of the results would be required to understand whether no impact was seen due to the programmes not being effective, or whether the research design was not rigorous enough to pick up on positive effects.

Whilst the evidence of the impact of CCR on domestic abuse appears inconclusive, that is not to say it does not work. Klevens et al (2008) suggest the lack of effectiveness identified in their study could have been due to how the intervention was implemented in the communities they studied. If further research is undertaken, first to determine what services within a CCR are most effective and then to re-evaluate the response, results may change. Stover (2005) highlights that there have been some evaluations of specific interventions within a CCR model which have yielded positive results, whilst also highlighting a number of methodological issues with evaluations to date. This literature review failed to find any examples of RCTs being used to evaluate CCRs.

MARAC and High-Risk Domestic Abuse Cases

MARACs were described by the Home Office (2008) as becoming the 'cornerstone' of an approach to high-risk victims of domestic violence. MARACs are multi-

agency meetings where representatives from both statutory and voluntary agencies convene, usually on a monthly basis, to discuss cases high-risk cases. They were developed in Cardiff in 2003, in response to the belief that there was no systematic approach to domestic abuse risk assessment or management. Agencies attending MARACs usually include Police, Probation, IDVAs (to represent victims), health, housing, children's services, and other local services, such as representatives from local women's shelters. (Steel et al, 2011)

The main aims of MARAC are to safeguard adult victims, make links with other public protection arrangements in relation to children, perpetrators and vulnerable adults, safeguard agency staff and address the behaviour of perpetrators (CAADA, 2009). The outcome of a referral to MARAC is a bespoke action plan tailored to the requirements of each case. A template is provided by Safelives, who stipulate that action plans should identify risks and needs, and include referrals to other multi-agency arrangements where necessary. Actions might include police flagging of addresses, for the housing provider to visit the victim and make repairs to property, or for the victims' (or perpetrators') General Practitioner (GP) to be notified of the risk of domestic abuse.

It is important to discuss how cases are referred into MARACs, and by definition, how they are identified as being at high-risk of murder or serious harm. There are four criteria under which referrals may be made to MARACs (SafeLives, 2015). These are i) Visible high-risk (defined as 14 or more ticks on the Domestic Abuse, Stalking and Harassment (DASH) Risk Assessment, ii) Potential for escalation (three or more incidents in 12 months), iii) MARAC Repeat (if there is a further incident within 12 months of the last referral) or iv) Professional Judgement. Data is not available breaking down total volumes of MARAC referrals by each of these criteria.

The DASH Risk Assessment tool was introduced in 2009, having been developed in association with CAADA and the Association of Chief Police Officers (ACPO) and is endorsed by a number of domestic abuse charities. It is the most widely used domestic

abuse risk assessment tool in the UK, and is described by the HMIC as being an 'established part' of the policing response to domestic abuse (HMIC, 2014). It is a tool which purports to predict risk of death or serious injury in cases of domestic abuse. Referrals to MARAC can come from any of the agencies taking part, and a similar risk assessment tool known as the CAADA-DASH is used by other agencies. On completion of the DASH risk assessment, a risk level is generated of standard, medium or high (Richards, 2009). If the risk assessment is 'high', the case is automatically referred to MARAC.

Recent work from the College of Policing (2014) identifies that DASH has not been evaluated in any published studies, and concludes that the effectiveness of domestic abuse risk assessment in England and Wales is unknown. It questions how the DASH model operates best in practice, how accurate the identification of risk is and what impact it has on victim safety. In an unpublished thesis, Thornton (2011) raised doubts concerning the accuracy of DASH as a predictor of serious domestic assaults or murder. The research found that out of 118 cases of serious domestic assault or murder over a three year period, only five were assessed as high-risk. Over the same period, 1,740 other victims had been assessed as high-risk. This is an issue of some concern given that DASH risk assessment is the main conduit for referral into MARAC and opens up the question of how accurate risk assessment of domestic abuse victims is.

As discussed at the beginning of this chapter, MARACs are used widely across the UK, which makes the scarcity of robust research and evaluation regarding their outcomes all the more surprising. Steel et al (2011) conducted a review of MARACs on behalf of the Home Office based on existing literature and interviews with 13 members of the National MARAC Steering Group (NMSG). They found that MARACs (and IDVAS) have the potential to improve victim safety and reduce re-victimisation and therefore may be a cost-effective measure. However, they also note that the available evidence on MARAC outcomes is "relatively weak", and recommend further research to addresses this

issue. These findings were echoed by Robbins et al (2014) in a scoping review of domestic violence and MARACs, which found little research in either the academic or professional press on MARACs.

The earliest study available is an evaluation of the original Cardiff MARAC which began in April 2003 (Robinson and Tregida, 2005). Whilst the study proves to be a useful assessment of MARAC processes, it highlights the difficulty of defining what constitutes success. The study used a sample of 102 victims referred to MARAC over a four month period (October 2003 to January 2004) in Cardiff, with a twelve month follow up period for each victim after they were included in a MARAC.

Researchers were able to count how many of those 102 victims experienced a repeat incident of violence in the 12 months post their referral to MARAC, and found four in ten victims had no further abuse reported to police in the twelve months following. Researchers also carried out interviews with nine victims, who agreed to share their experiences in the twelve months following MARAC. One key finding from the interviews was that most victims attributed responsibility for 'ending the violence' firstly to themselves, and secondly to multi-agency support they received. The interviews also revealed that a strong family support network played an important role in the victim's ability to leave the offender, leading to a regained sense of freedom and control. The study recognised limitations of these interviews, in terms of a small sample size, and differences in victim perceptions of questions posed.

Whilst the findings relating to recidivism appear promising, the study is limited by not using a comparison group, making any causal inferences largely inappropriate. A comparison group would comprise of people who had not received the 'treatment' but are similar to those that are receiving or have received the 'treatment'. The use of comparison groups assists with assessing whether an intervention is 'making a difference', by comparing results of those that have not received the treatment with those that have.

Further papers by Robinson (2006, 2007), provide useful findings related to MARAC processes, such as highlighting problems some agencies had with allocating resources to monthly meetings, given that it would take two to three days of each participant's time to prepare for and attend. It highlighted inconsistent attendance, where certain agencies sometimes failed to send a representative, which was also identified by Steel et al (2011). However, the research draws upon exactly the same data as was used in the 2005 study for evaluating outcomes of the intervention in terms of recidivism post MARAC referral, and therefore is subject to the same limitations.

In 2010, CAADA (now known as SafeLives) published an analysis of data collected from 200 MARACs across the country, entitled 'Saving Lives, Saving Money (CAADA, 2010). The report highlights that in the six months after a referral to MARAC, up to 60% of victims do not go on to report a further incident of domestic abuse to police. Again, this analysis is limited by not using a comparison group.

No further MARAC outcome evaluation studies were found as part of this literature review. An independent review of violence against women in Wales, (Berry, 2014) concluded that there is no robust evidence supporting the effectiveness of MARACs. It raised concerns that MARACs concentrate on high-risk victims, which may be to the detriment of services to victims assessed at lower levels of risk. In an independent study seeking to assess the effectiveness of the role played by adult social care within MARACs in Manchester, McLaughlin et al (2014) found increasing numbers of referrals were placing MARACs under pressure. The study found poor MARAC attendance rates of agencies, similar to other research presented previously (Robinson et al, 2006 & 2007, Steel et al, 2011), and pointed to the fact that MARACs are non-statutory as a contributory factor (McGlaughlin et al, 2014). Whilst the authors recognise the study was based on just one geographic area, anecdotally they found resonance with their findings in other parts of the UK. They make the case that, given the time and effort contributed by

MARAC attendees, there should be evidence that the process makes a difference to victims' lives.

The review of literature into studies evaluating MARAC, and in particular studies evidencing outcomes for victims arising from MARAC referrals, reiterates the need for a more robust evaluation of MARAC outcomes. This has been recognised both nationally (Steel et al, 2011, Berry, 2014) and locally in Suffolk (HMIC, 2014 and Bond, E., 2015). None of the aforementioned studies of MARAC have used a comparison group, much less random assignment. There is a recognised lack of RCTs in the field of domestic abuse (Chilton, S., 2012), which may in part be due to the challenges of implementing such an experiment. It may also be due to domestic abuse being an emotive topic, with risk issues which would require careful managing.

The present study has been constrained by time and resources, and therefore it was not feasible to develop and implement an RCT. However, it attempts to provide a more sophisticated statistical analysis of outcomes associated with MARAC referral than has been attempted previously. It goes some way to narrowing the gap in evidence relating to MARAC outcomes, and calls for further, more robust evaluation of MARACs in the future.

Measures of Harm

To measure whether MARAC referral is associated with a reduction in future harm to victims of domestic abuse, it is proposed that rather than using a traditional count of crimes alone, an aggregate measure of crime harm is also used. The idea of measuring crime by an assessment of its harm or severity is not a new concept, borne out of the theory that not all crimes are equal. Society would largely share the belief that the level of harm associated with a homicide is (in most cases, at least) greater than that associated to a shoplifting offence, for example.

The work of Sellin and Wolfgang (1964) sought to develop practical processes for putting Beccaria's (1764) notion of scaling crimes from the most serious to the least into practice. They devised an initial methodology whereby 1,000 participants were asked to assign a numeric level of seriousness for 141 offences, based on level of injury and financial value of loss, allowing researchers to develop what they described as 'psychophysical scaling' of the seriousness of crime. This was later replicated on a larger scale (Wolfgang et al, 1985), by interviewing a representative sample of 60,000 households across the United States, this time covering 204 crimes.

In 2009, the Canadian Centre for Justice Statistics introduced a Crime Severity Index (Babayak et al, 2009), based on sentencing data from Canada's court system. It considers the incarceration rate (proportion of persons convicted who are sentenced to time in prison) and the average length of prison sentence in days for each type of crime. This is used to assign a weighting to each type of crime, based on the last five years' worth of data and is updated annually. This approach is limited by the complexity of its application. It is based upon the subjective (within sentencing guideline parameters) opinions of judges, which may differ between jurisdictions, and may be influenced by external factors, such as availability of prison spaces. Therefore it becomes difficult to identify a commonly held view of the harm from each type of crime.

Sherman, Neyroud and Neyroud (2014) sought to address this limitation by developing the Cambridge Crime Harm Index (CHI). The CHI is based on sentencing guidelines, and uses the starting point sentence for the lowest grade within that offence type (in basic terms, offences with no aggravating factors) for a first-time offender, in days. The CHI is a common currency for measuring the harm from crime across the United Kingdom. No subjective opinions, special circumstances or aggravating factors of offences are taken into consideration. Sherman et al argue that use of sentencing guidelines means the CHI is based on what has already been democratically agreed, and widely consulted upon as the level of harm posed by different types of offence. Where the

sentence is non-custodial (fine or community order), the CHI value is derived from the amount of days it would take to pay back the fine based on minimum wage, or the amount of day's work required to meet the requirements of the community order. It is for these reasons that the Cambridge CHI is the chosen method for measuring crime harm in this study.

Conclusion

This chapter highlights the scale and extent of domestic abuse globally, and in the United Kingdom. It impacts across the whole of society, and requires a response from a multitude of public service providers, third sector organisations and charities, not least the police service.

The Coordinated Community Response (CCR) approach to domestic abuse is used in various forms around the world as a way of bringing together those agencies responsible. However, evidence of any evaluation of the outcomes derived from such an approach is at best inconclusive. The chapter discusses the available literature around MARACs, and places them in the context of the CCR approach. It finds that evidence relating to outcomes from this intervention has been recognised both nationally and locally as weak, and a pressing need for further and more robust research on this issue to address current gaps is identified.

Finally, the chapter discusses the background to measurement of harm from crime. It argues the approach taken by Sherman et al in developing the Cambridge CHI is the most appropriate measure to use for the purposes of this research.

There is a plethora of research available around different aspects of domestic abuse, but relatively little on specific interventions for prevention or reduction, and even less evaluating the outcomes of those interventions. MARAC is the primary response (along with IDVAs) to high-risk cases of domestic abuse which should mean there is a strong body of research evidencing the effect it has on domestic abuse cases. But there is

not. This is set in the context that the DASH risk assessment tool may not be an effective tool to identify and predict future risk.

The present study focuses on MARACs in Suffolk. Whilst MARACs follow a standard procedure, a number of studies have highlighted inconsistencies in their implementation across the country in terms of attendance and effectiveness, partially due to the 'voluntary' nature of the process (Robinson et al, 2006 & 2007, Steel et al, 2011, McGlaughlin et al, 2014). The findings from this study will not necessarily be externally valid to other MARACs, due to these inconsistencies. However, this work paves the way for this type of study to be replicated elsewhere in the country in an effort to contribute to the wider understanding of whether MARAC works.

Research methods

This chapter will contextualise the study by describing the background to the work and the research setting. It will go on to describe data and methods used to test the research questions, including methods to identify matched sample cases and analytical procedures used.

Research Questions

Two research questions will be addressed in this study:

1. What victim characteristics are associated with MARAC referral?
2. Is MARAC assignment associated with reduced harm to victims of domestic abuse in the twelve months following referral to MARAC compared to the twelve months leading up to the referral, and in comparison to a matched sample group of domestic abuse victims who have not been subject of a MARAC referral over a similar time period?

Background to research

As discussed in the literature review, there is a notable research gap in the outcomes achieved through sending high-risk cases of domestic abuse to MARAC. For all the resources allocated to running MARAC meetings from police and partner agencies, the question remains – is MARAC assignment associated with a reduction in future crime harm? A report by Steel and Blakeborough (2011) which sought to evaluate MARAC processes highlighted the lack of research examining MARAC outcomes. Furthermore, two recent reports, one by the HMIC (2011) and one by the University College Suffolk (2015) both recognised the potential for MARACs to be an effective tool to safeguard victims of domestic abuse, but also recommended Suffolk undertake further work to find out whether this is the case.

Research Setting

Table 1 displays the demographic profile of Suffolk compared with England and Wales, based on data reported by Suffolk County Council (2015). Suffolk is a largely rural county in the East of England. There are a number of urban areas, the biggest of which are the three main towns of Ipswich, Lowestoft and Bury St Edmunds. Whilst levels of deprivation are generally low across the county, there are some wards, particularly within those main towns which experience higher levels of deprivation. The population of Suffolk is not as diverse as many other parts of the country in terms of ethnicity, with 95.2% of the population being white.

Table 1: Suffolk demographic profile

Statistic		Suffolk	England & Wales
Total Population		735,900	56,948,200
Age Group			
	0-19	19.3%	20.1%
	18-64	52.1%	61.3%
	65+	21.5%	17.4%
Gender			
	Male	49.4%	49.3%
	Female	50.6%	50.7%
Ethnicity			
	White	95.2%	85.9%
	Black or Minority Ethnic	4.8%	14.1%

Figure 1 displays a map of Suffolk, overlaid with the 'catchment' areas for the three MARAC meetings. The meetings themselves take place in the main towns of Bury St Edmunds (West), Ipswich (South) and Lowestoft (East). Each MARAC has a large catchment area from which those cases are taken.

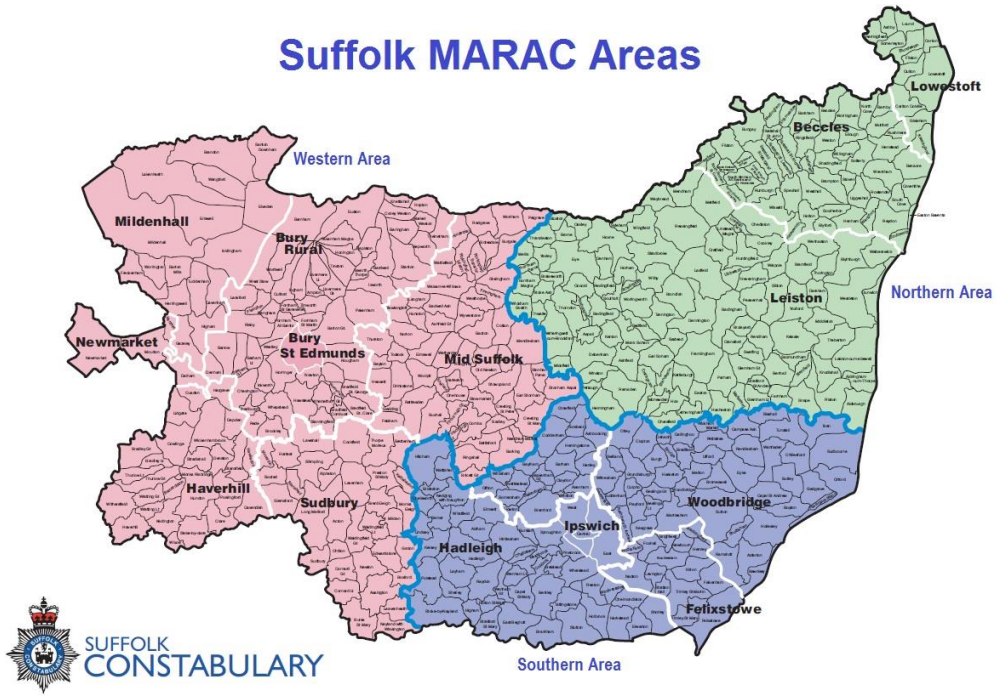

Figure 1: Map of Suffolk MARAC areas

Data Sources

Data for this thesis will come from the Suffolk Crime and Information System (CIS) and from MODUS. MODUS is the Domestic Violence web-based Case Management System used by MARAC co-ordinators to support the management and reporting of MARAC meetings.

Police Data

All calls for service coming into police are managed via the command and control system, whereby call takers answer calls from the public, and deploy officers to attend incidents. Where police attend, if a crime is identified it is recorded on CIS. Where a crime is not identified, the record of the call remains on the command and control system, i.e. a crime is not recorded.

However, in the case of calls relating to domestic abuse, the incident will be recorded on CIS regardless of whether a crime is identified. If, for example, a neighbour calls police to report a domestic argument, officers attend and find there is nothing to

suggest any crime has occurred, the incident will still be recorded on CIS as a 'Domestic Incident – non-crime'. Whilst there is no statutory obligation for police to do this, it is beneficial in the management of domestic abuse cases, as all incidents and crimes are available on one system in the same format.

This research builds upon the CIS dataset produced by Bland (2014), which includes all domestic abuse crimes and incidents in Suffolk between 1st January 2009 and 31st March 2014, for which there were 36,646 individual call and crime records. A review of this data found its format was acceptable to use as a basis for this research. Additional data collection and cleansing was required for a further nine months' worth of data (1st April 2014 to 31st December 2014). The gathering of additional data was important to provide the most up to date picture. I worked with Bland to ensure coding of the additional data adhered to the rules and conventions used in the original data. This comprised of an additional 6,650 records. The data held on CIS is of good quality and largely complete, having been collected for crime reporting purposes. Domestic abuse offences recorded on CIS are reviewed by the crime auditing team to quality assure the classification of offences, and by specialist domestic abuse officers to ensure cases are dealt with appropriately.

Variables included within the CIS data are extensive, including type of offence, location details, date and time and whether the incident was drug or alcohol related. It also includes victim and offender details such as gender, age, ethnicity, and occupation and details of any DASH risk assessments undertaken, although this data is only complete from December 2011 onwards.

A limitation of the CIS dataset identified by Bland (2014) is that the system does not assign a unique reference number (URN) to victims. It is therefore necessary to 'manufacture' a URN for each victim based on first name, last name and date of birth. The methodology used to overcome this issue replicated that used by Bland (2014) to ensure consistency. Appendix 2 is an extract from Bland (2014) describing procedures used.

MODUS

MODUS provides details of all domestic abuses cases which have been referred to MARAC, since its inception in Suffolk in 2007. Initially, there was just one MARAC meeting in Ipswich, and in the following years the process grew to a point where now there are three geographically-defined MARACs across Suffolk, each meeting on a monthly basis (with Ipswich now meeting twice monthly due to the volume of cases).

For this study, MARAC data from 2010 onwards has been used, by which time all three MARACs were operating and their processes had had time to become embedded. It shows that the volume of MARAC referrals has rapidly increased in Suffolk over the five years since its inception in 2010, as shown in Figure 2.

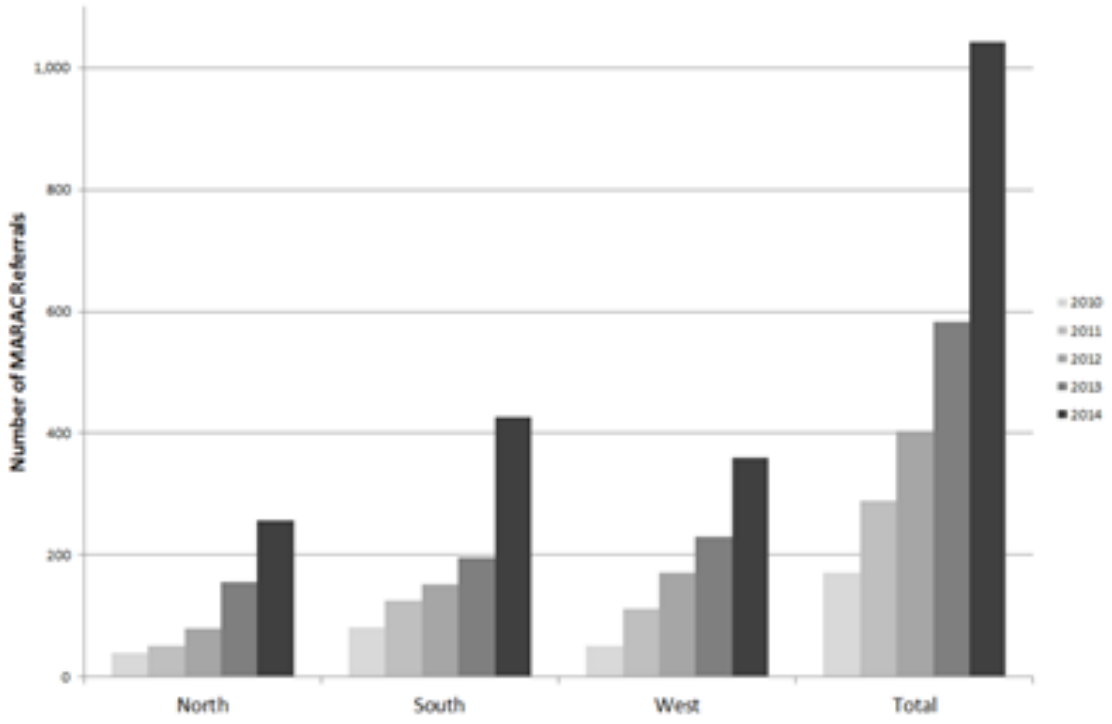

Figure 2: Suffolk MARAC referrals 2010 to 2014

This is not necessarily a bad thing - increasing referrals could be an indication of earlier and more effective risk identification. However, it could also be associated with a dilution of the standards of service able to be given in each case. The HMIC Domestic Abuse inspection in 2014 raised this increase as an area of concern, and it was also

identified as an issue by McLaughlin et al (2014) in a study of the effectiveness of MARACs in Northern England. The Chairman of Safelives (2015) acknowledges that, over the last five years, the number of cases being heard each year at MARACs in the UK has increased from 45,581 to 78,144, a rise of over 70% (Barran, 2015).

In a similar vein to CIS, MODUS does not employ a URN for victims which can be cross referred to data held in other systems. The same procedure used to manufacture a victim URN for victims held in CIS was used for victims held in MODUS. Again, this was to ensure consistency, and to allow for cross reference between victims who had been referred to MARAC and their records of being a victim of crime or domestic abuse incident. The victim URN made it possible to link all domestic abuse crimes and incidents recorded on CIS where the victims had also been referred to MARAC. The ability to link domestic abuse crime and incidents to MARAC referred cases is of paramount importance to this research. It provides the starting point in the case matching process to differentiate victims who had been referred to MARAC from those who had not.

Crime Harm Index

As a measure of harm for each incident of domestic abuse, this research uses the Cambridge Crime Harm Index (CHI), developed by Sherman, Neyroud and Neyroud, (2014) to apply a CHI value to each recorded incident. This method presents a consistent measure of applying a value of crime harm to offences, as discussed in the literature review. The full table of CHI values can be found in Appendix 3, based on that used by Bland (2014), but updated to include new crime types.

Research Design

To address the research questions, it was first necessary to identify a suitable sample cohort of MARAC victims, and a matching cohort of domestic abuse victims who had not been referred to MARAC. These cohorts became the treatment and comparison groups. A retrospective matched cohort design was used, similar to that utilised by Widom

(1989) to compare relationships between child abuse and neglect and later criminal violence. Widom sought to take a sample of validated cases of child abuse and neglect and compare them with a matched group of non-abused children. The children were matched on basic factors such as age, race, sex, school and home address. Researchers achieved matches for 73.7% of the abused and neglected children, where the design assumed the main difference between the groups was the abuse or neglect issue.

More recently, Kelly et al (2013) undertook a matching study in a Home Office evaluation of the impact of Domestic Violence Prevention Orders (DVPOs). This was a 15 month pilot in three force areas, examining the impact of DVPOs on re-victimisation. It compared differences in the numbers of pre and post domestic violence incidents between DVPO cases and matched cases where DVPOs were not used. Cases were matched on a number of key variables thought to be conducive to future re-victimisation, including police force area, date and reason for initial arrest, sex of the perpetrator and whether the victim was pregnant or children were present in the household.

In order to employ such methodology for this study, research concentrated on identifying a sample of MARAC victims meeting criteria to get to the case matching stage, and identifying the pool of domestic abuse cases from which the victim had not been referred to MARAC, as the pool of cases to draw the matches from. This allowed the case matching process to begin. The process is outlined in Figure 3 overleaf.

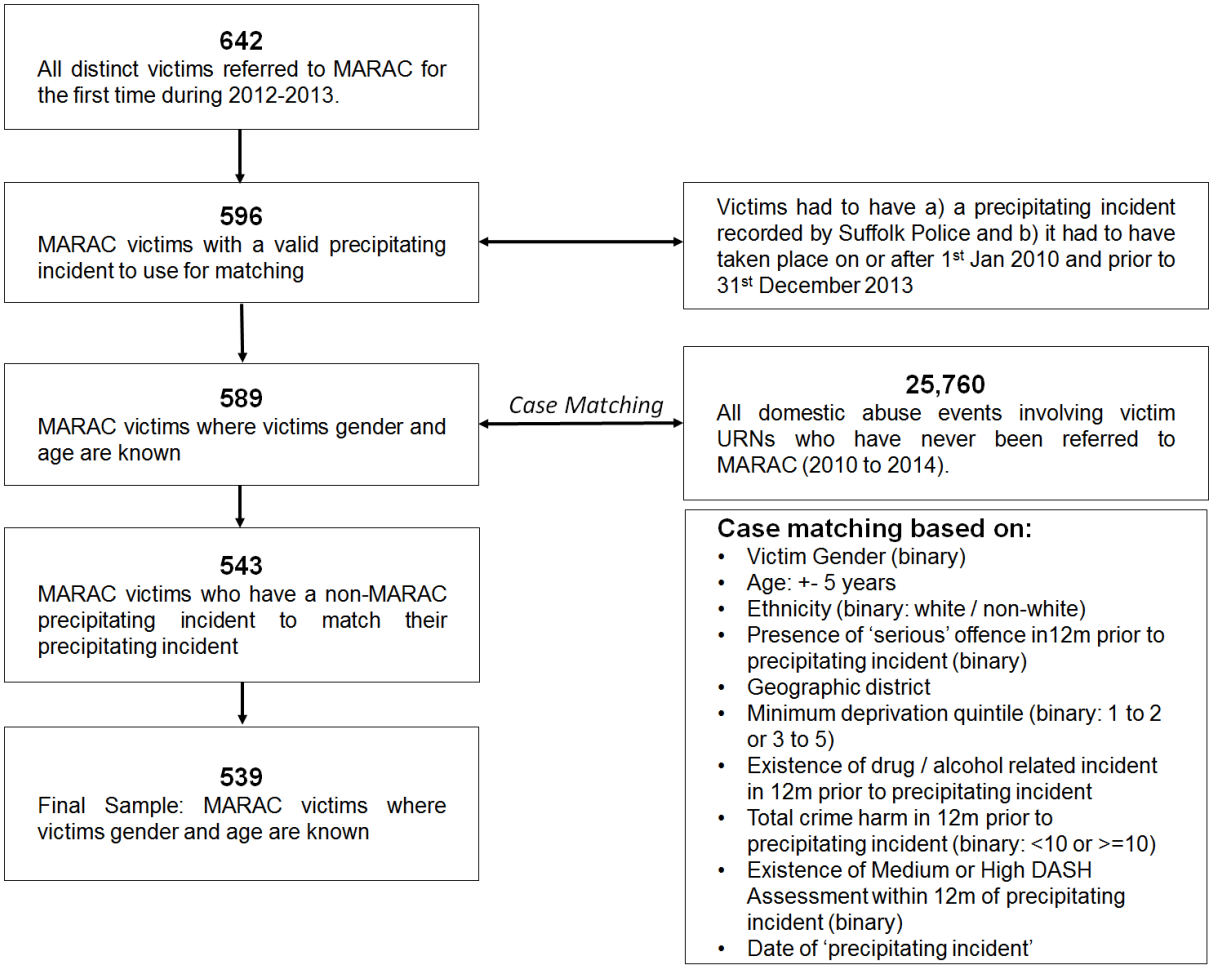

Figure 3: Case matching design

The sample of MARAC victims is comprised of those discussed at MARACs between 1st January 2012 and 31st December 2013. This two-year period allowed for a relatively large sample size, and ensured data was available to capture a full twelve month follow on period within the CIS dataset, which ran to 31st December 2014. This identified an initial sample of 642 unique victims referred to MARAC. For victims who had more than one MARAC referral, their earliest one was used.

MARAC cases had to have had a prior crime (or domestic incident non-crime) recorded on CIS, required for matching purposes. Cases referred to MARAC had a MARAC referral date; however this date could not be used for matching, as cases in the non-MARAC referred group had no such date. Therefore, date matching was based on

the last domestic abuse related crime or incident recorded on CIS prior to MARAC referral for MARAC referred cases. The date of this crime or incident was then used to match against the dates of domestic abuse related crimes or incidents in the non-MARAC group. The pre-requisite of having domestic related crimes or incidents on CIS was also needed to identify levels of harm using the CHI. A number of MARAC victims (39) had no prior domestic incidents recorded with themselves as victims (at least from 2009 onwards), which left 603 victims with some kind of precipitating incident. Where victims had more than one predicting incident, the most recent one was selected to represent the 'precipitating incident' for this analysis.

Not all victims attending MARAC will have any recorded incidents on Suffolk Police systems. The under-reporting of domestic abuse to police has been discussed; and referrals to MARAC can come from agencies other than the police. Agencies come into contact with victims they assess to be at high-risk of domestic abuse, whom may never have reported crimes or incidents to the police. This research measures the impact of MARAC based *only* on domestic abuse crimes and incidents reported to police.

The precipitating crime or incident had to have taken place on or after 1st January 2010, to ensure all cases had 12 months' worth of prior data available for later comparison. This reduced the sample to 596 distinct victims with valid precipitating incidents. A number of cases (7) were identified as having either an unknown age or gender of victim, which reduced the sample to 589 cases with valid precipitating incidents making it through to the case matching stage.

Case Matching

These 589 precipitating incidents were then matched to a much larger pool of incidents (28,670) in which the victim had not been referred to MARAC. It should be noted that the nature of each of these precipitating incidents alone was not a major factor in the

matching process. Instead, the full domestic abuse history of each case over a 12-month period was used.

Each of the factors used in case matching are outlined below, along with a description of how they were matched. A limitation of the matching is that only basic factors were available to match on. A great many factors could influence the level of risk assessment of a domestic abuse case, such as pregnancy, mental health issues or whether or not children are present in the home. Many of these factors are recorded on DASH risk assessments for cases; however this has only been consistently captured on CIS from mid-2013 onwards. Therefore it could not be used in matching cases for the present research. The matching was carried out via an SQL query which ran in a loop across the data seeking to identify the "best match" for each case based on chosen factors.

Victim Gender

A simple binary match, ensuring a female victim was matched to a female victim, and male to male.

Victim Age

Designed to ensure that for a match to occur, the absolute difference in age between the MARAC victim and the comparison victim was within five years (older or younger)

Victim Ethnicity

A binary match to ensure that if the ethnicity of the MARAC victim was white, then the ethnicity of the comparison victim would be white. If the ethnicity of the MARAC victim was non-white, the ethnicity of the comparison victim would be non-white. The large majority of both MARAC and non-MARAC victims were white.

Presence of a ‘serious’ offence

A binary match based on the existence of one or more ‘serious’ offence(s) in the twelve months prior to their precipitating incident. The ‘serious’ classification is based on the Suffolk ‘Serious Violence’ and Serious Sexual Offences classifications, and modified to include crimes recorded as ‘robbery’, and ‘burglary with violence’. The types of offences in the ‘serious’ category included homicide (and attempts), rape (and attempts) and Grievous Bodily Harm (GBH). Please see Appendix 2 for a table of offences and their classifications. MARAC victims with at least one such serious offence had to match to a non-MARAC victim who also suffered at least one serious offence. Those with no serious offences had to match with someone who also had no serious offences.

Geographic District

Each victim was assigned to a geographic district based on where reported offences against them had taken place. Some victims presented with incidents in more than one geographic district, and in these cases, the district within which they had been reported most frequently was used. A MARAC referred victim had to be matched to a non-MARAC referred victim from the same geographic district.

Deprivation Quintile

A binary match based on the minimum deprivation quintile of the location of reported crimes and incidents within the twelve months prior to the ‘precipitating’ incident. The deprivation quintiles run from one (most deprived) to five (least deprived). Any victim whose minimum deprivation quintile was one or two had to match to someone also with a minimum deprivation quintile of one or two. Anyone with a minimum deprivation between three and five had to match with someone whose minimum deprivation was between three and five.

Drug / Alcohol related incidents

A binary match based on whether one or more of the incidents in the twelve months leading up to the date of the precipitating incident were flagged as drug or alcohol related.

Crime Harm

Crime harm was measured based on the total crime harm of all incidents in the 12 months up to and including the precipitating incident. A binary match was undertaken which matched any victims who had experienced a total prior crime harm value of 10 or more only to others who also had a prior crime harm value of 10. The break point of 10 was chosen based on an analysis of how crime harm was distributed within the data. Any with a total prior crime harm value of less than 10 had to be matched to others whose prior crime harm value was also less than 10.

DASH Risk Assessment

A binary match based on the presence of one or more 'medium' or 'high' DASH risk assessments. Any MARAC victim with at least one or more 'medium' or 'high' DASH risk assessment had to match with a non-MARAC victim who also had at least one or more 'medium' or 'high' MARAC risk assessment.

Date of precipitating incident

A challenge posed by attempting to match cases referred to MARAC with similar cases not referred to MARAC is that those cases in the comparison group do not have an equivalent date upon which they went to MARAC. To overcome this, the date of the 'precipitating incident' (or the last incident recorded by police prior to going to MARAC) was identified and used as the principal sorting key for matching. Once all previous criteria had been used to identify a set of possible matches, the match with the smallest difference between the dates of precipitating incidents was selected.

The final criterion for matching to take place was to ensure each victim in the comparison group would only be used to match to one single MARAC victim. Up to this point in the matching process, there were 39 comparison victims who had been used on multiple occasions as matching cases. The problem was that some comparison victims therefore had a greater weight in the matched data. The SQL code was amended to prevent this from happening, which meant a number of MARAC cases were re-assigned with new “next best” matches.

From the sample of 589 MARAC cases which made it through to case matching, 46 failed to match to any comparison cases, and were excluded. Of the remaining 543 cases, four lost their only available matches to other MARAC cases, leaving 539 MARAC cases, matched with a further 539 non-MARAC referred cases. This research is therefore based on 91.5% (539/589) of the available MARAC cases which made it through to the case matching stage, or 84.0% (539/642) of all first-time MARAC referrals in the targeted two calendar years (2012 and 2013). All analysis undertaken within this study is based on the sample of 539 MARAC victims, and their 539 matched comparison victims.

Analytical Procedures

What are the characteristics of victims referred to MARAC?

The research used descriptive analytical techniques across the sample of 539 MARAC victims to provide a profile of the types of victims identified. This included consideration of such issues as age, gender, ethnicity and other demographic factors. The aim of this analysis was to assist those working within MARACs to better understand the profile of victims being referred.

How similar are the MARAC and non-MARAC groups?

The next step was to run a series of matched pair t-tests to compare both the MARAC group and the comparison group across the range of measures used in case matching to provide analyses of how similar the two groups were across the measures upon which

they were matched. This analysis was able to identify any differences, determine whether or not those differences were statistically significant, and if so, whether those differences were also practically significant for the purposes of the study. This sets the scene for the analysis which follows.

Is MARAC assignment associated with reduced harm to victims of domestic abuse in the twelve months following referral to MARAC compared to the twelve months leading up to the referral, and in comparison to a matched sample group of domestic abuse victims who have not been subject of a MARAC referral over a similar time period?

The aim of this analysis was to compare a) what the picture of domestic abuse looked like for victims who were referred to MARAC in the 12 months after MARAC referral, with the 12 months before, and b) how this compared with the comparison group. For victims in the comparison group, (who by default did not have a MARAC referral date), the same MARAC date as that for their matched victim was used.

To measure differences between the two groups, independent t-tests were used to compare the actual difference between the two means in relation to any variations across a number of measures for the 12 months prior to MARAC referral and 12 months post MARAC referral. Measures included crime harm, calls to service, crimes and number of 'serious' incidents. The effect size was then calculated across these measures to understand whether any identified variations were meaningful.

Conclusion

This research will not (and cannot) seek to infer causation, due to limitations in the research design. It will however, provide a descriptive analysis of a profile of MARAC victims compared to matching victims who were not referred to MARAC. It will also provide a descriptive analysis of whether victims referred to MARAC suffered less subsequent reported domestic abuse in the twelve months post MARAC referral compared to the previous twelve months, and compared to matched victims who were not

referred to MARAC. This research provides a basis for making a strong call for future research to develop more robust methods for evaluating the effectiveness of MARACs.

Results

This chapter will begin by addressing the question of what characteristics are associated with MARAC referrals over time, based on the 539 sample cases. It will go on to describe how successful the case matching procedure was, which will contextualise the results of analyses undertaken to address the primary research question of whether or not MARAC referral is associated with a reduction in future crime harm. It concludes with a summary of results.

What characteristics are associated with MARAC referrals over time?

This section sets out to identify the common characteristics associated with referral to MARAC over the two year period from which the sample was drawn. It will consider the profile of victims and referrals made to MARAC to assist those professionals bearing MARAC responsibilities to tailor their response.

Age

Domestic abuse affects victims of all ages. The age range of victims referred to MARACs reflects this, as displayed in figure 4. The youngest victim referred to MARAC was 16.05 years (the minimum age for a victim to be referred to MARAC) and the oldest was 69.95 years. The mean age of victims referred to MARAC is 33.03 years. The distribution of victims referred to MARAC by age is of interest as displayed in figure 4. The most frequent ages at which victims go to MARAC is between 22 and 27 years old, accounting for 28% (149/539) of MARAC referred victims. However, there is also a second identifiable peak (although less pronounced) between 37 and 42 years old accounting for 17% (90 / 539) of victims. The statistical term for this pattern is bi-modal. It has two data peaks around the two age groups identified, and effectively, two different groups of victims.

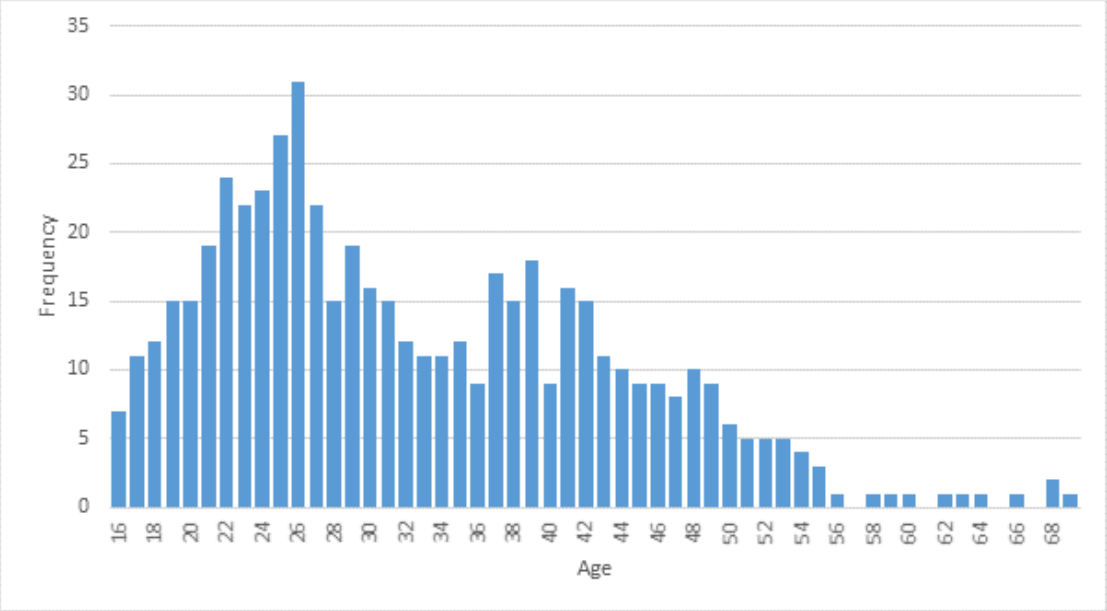

Figure 4: Distribution of ages of victims at MARAC

Gender and Ethnicity

97% (523/539) of victims referred to MARAC are female. Furthermore, and in line with the demographic profile of Suffolk, 97% of victims referred to MARAC are of white ethnicity.

Deprivation

This research shows an association between higher levels of deprivation and reported domestic abuse in Suffolk. The deprivation levels of victims was measured by taking the minimum deprivation quintile of the ward in which the victim was most frequently seen in the 12 months leading up to the precipitating incident, where 1 is the most deprived and 5 is the least deprived. The average level of deprivation for victims referred to MARAC is 1.92 (SD=1.24), compared to an average level for victims of domestic abuse in the comparison group of 1.91 (SD=1.25). 54% (290/539) of MARAC referred victims are from the most deprived areas (quintile 1) and if this is extended to the two highest levels of deprivation, the percentage rises to 75% (403/539). Figure 5 displays wards in Suffolk by deprivation quintile (Suffolk County Council, 2014).

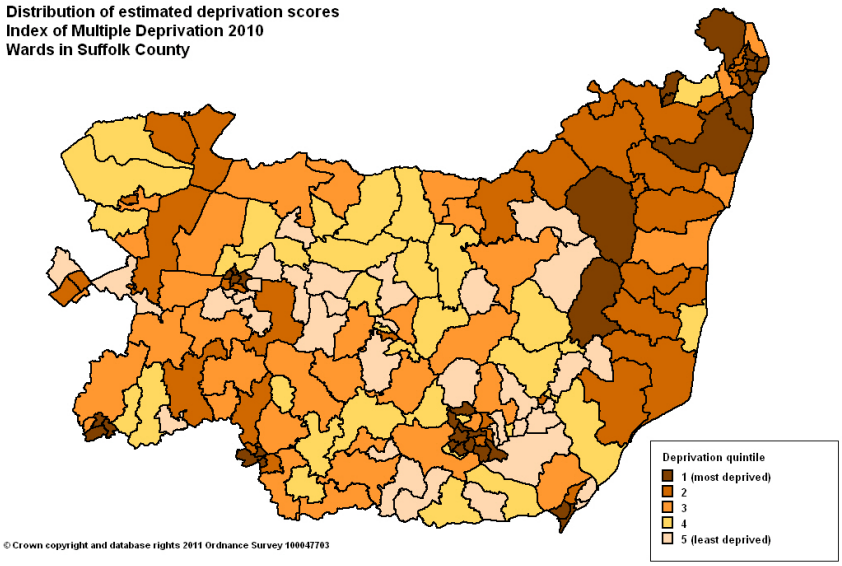

Figure 5: Distribution of estimated deprivation scores in Suffolk (IMD, 2010)

The map in Figure 5 suggests domestic abuse victims are more likely to come from high deprivation than the population of Suffolk as a whole. However, as the map in Figure 6 shows (Suffolk County Council, 2012), those areas seeing higher levels of deprivation in Figure 6 correlate with the areas with greatest population density

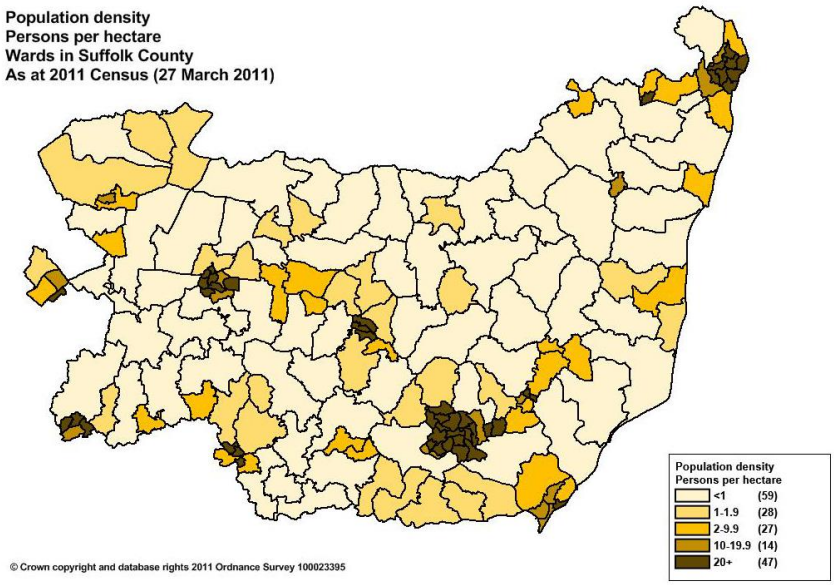

Figure 6: Suffolk population density by ward

District

A break-down of first-time MARAC referred victims between 2012 and 2013 by district indicates most are from the three districts covering the main urban areas in the county – Ipswich (Ipswich District), Bury St Edmunds (St Edmundsbury District) and Lowestoft (Waveney District), as displayed in Figure 7. These three towns are also where the each of the three MARAC meetings take place.

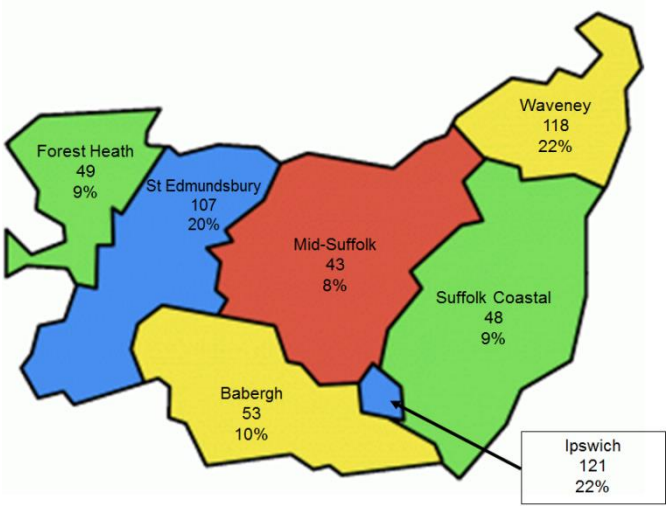

Figure 7: Map of first-time MARAC referrals in Suffolk by district

The three highlighted districts of Ipswich, St Edmundsbury and Waveney not only have the highest levels of MARAC referrals, they are also dis-proportionately high compared to the population distribution in Suffolk, as displayed in table 2.

Table 2: Population profile of Suffolk by district

District	% population
Babergh	12%
Forest Heath	9%
Ipswich	18%
Mid Suffolk	13%
St Edmundsbury	15%
Suffolk Coastal	17%
Waveney	16%

Drug or alcohol related incidents

It should be noted the drug and alcohol related incidents measure is based on a simple flag on CIS, which does not differentiate between whether the alcohol or drugs relates to the offender, the victim or both. Results show that 42% (229/539) of MARAC referred victims have such related domestic incidents in the 12 months prior to their precipitating incident

Crime Harm

Two measures of crime harm were studied in this research – 1) the level of crime associated with the 'precipitating incident' immediately prior to MARAC referral; and 2) total crime harm across all domestic incidents in the 12 months prior to the case going to MARAC. The range of values in this category runs from 0.1 (for a domestic incident non-crime) through to 1,825 (for a rape). It should be noted the severity of crime is one of a number of factors taken into account when risk assessments are made.

The average level of Crime Harm in the precipitating incident for non-MARAC referred victims is 58.35 (SD=12.128). The average level of crime harm experienced by victims referred to MARAC over this period was 89.93 (SD=316.95).

Calls to service, Crimes and non-crimes in the 12 months prior to MARAC

Victims referred to MARAC over this period had an average of 2.12 (SD=1.652) calls to service in the 12 months prior to MARAC. This breaks down to an average of 1.22 crimes and 0.90 non-crimes. Because these values are based only on 539 matched victims who had had prior contact with the police, it excludes 5% of victims who were referred to MARAC, but had no prior contact with the police. This leads the sample to be skewed towards those that had relatively recent contact with the police.

Referring Agency

In this sample of first-time MARAC cases, 67% had been referred by the police. The next highest referring agency was Children and Young Peoples Services (CYPS) with 10%, with the remainder from a mix of agencies including health, domestic abuse support charities, probation and housing.

Comparison of matched groups

The next question to be addressed is how similar are the two matched groups, or in other words, how successful was the case matching? **Error! Reference source not ound.** provides a summary view of the series of matched pair t-tests carried out to compare the mean values of the measures included in case matching procedures.

Table 3: Summary of differences between MARAC and non-MARAC matched cases

	Non MARAC (n = 539)	MARAC (n = 539)	Paired Difference	p-value
Age, years	32.73	33.03	0.304	.016*
Date of incident, days	41237.48	41253.1	15.623	.004**
Instant Crime Harm, n	43.76	61.81	18.046	0.126
Prior Serious Crime, n	0.11	0.12	0.009	0.059
Prior Crime Harm, n	58.35	83.93	25.585	0.06
Min. Deprivation, n	1.91	1.92	0.11	0.701
Prior drug or alcohol, n	0.57	0.76	0.189	.000***
Prior High DASH, n	0.22	0.73	0.505	.000***
Prior Medium DASH, n	0.76	0.59	-0.171	.000***

Data shown is the mean
* Significant at the 0.05 probability level
** Significant at the 0.01 probability level
*** Significant at the 0.001 probability level
Gender is not displayed - each victim was matched with a victim of the same gender
District is not displayed as case from each group had to be from the same district
Ethnicity is not displayed – results of a Chi Square test detailed below

The purpose of the t-test is to assess whether the means of two groups can be assumed to be the same – or at least fundamentally similar – to one another. These tests examine the null hypothesis that the two groups are drawn from the same population. In an RCT, the two groups are unequivocally drawn from the same population. Using this type of observational research design means this idea needs to be tested, and it is

impossible to test on every variable. The ideal result would be that no statistically significant differences were identified across the measures between the two groups. However, as **Error! Reference source not found.** displays, this is not the case. Whilst tatistically significant differences have been identified, not all of these differences are 'practically' significant in the context of this study.

Examples of this include age and the difference in dates of the matching incidents. The difference between the mean ages of MARAC (M=33.03, SD=10.83) and comparison groups (M=32.73, SD=10.68) is significant t(538)=2.414, p=0.016. However in practical terms the difference between the two means equates to 0.3 years, or 109 days. There is no reason that an average age difference of 109 days would create any practical difference in how these victims would react to a MARAC referral.

The 'date of incident' match was designed to ensure the report date of the precipitating incident prior to MARAC for the treatment group was as similar to the date of the reported incident in the comparison group as possible. It was unlikely it would be possible to match every case to a comparison case occurring on the same day, but the aim was to ensure the incidents happened as close together as possible. The difference between the mean dates of the 'precipitating incident' of MARAC (M=10th December 2012, SD=264.67) and comparison groups (M= 24th November 2012, SD=257.79) is significant t(538)=2.920, p=0.04. However the mean difference equates to fifteen days, which is not important in practical terms.

The 'instant crime harm' measures the level of crime harm associated with the precipitating incident prior to the first MARAC referral for the treatment group, and the equivalent incident for the comparison group. It tells us the mean harm associated with the precipitating incident (or equivalent incident in the comparison group) of cases referred to MARAC (M=61.81, SD=281.58) is not significantly different than in the comparison group (M=43.76, SD=236.37), t(538)=1.532, p=0.126.

The ‘prior crime harm’ measure looks at the mean of the total crime harm experienced in the 12 months prior to the precipitating incident. This measure is also higher in cases referred to MARAC (M=83.93, SD=316.95) than in the comparison cases (M=58.35, SD=268.19). Whilst the difference does not quite reach significance at the 0.05 level, the measure does approach significance t(538)=1.885, p=0.06.

The ‘prior serious crime’ measure counts the number of ‘serious’ crimes (as defined by Appendix 3) reported in the 12 months prior to the precipitating incident. A matched pairs t-test between the mean count of prior serious crime incidents of MARAC (M=0.12, SD=0.355) and comparison (M=0.11, SD=0.316) groups was undertaken to test the actual values. Again, whilst the difference is not significant, it is approaching significance, t(538)=1.894, p=0.059.

The ‘minimum deprivation’ measure counts the level of deprivation of the area within which the victim was seen most frequently. The matched pairs t-test shows no significant differences in the mean of minimum levels of deprivation of MARAC (M=1.92, SD=1.24) and comparison groups (M=1.91, SD=1.25), t(538)=0.384, p=0.701

The ‘prior drug or alcohol’ measure takes account of whether the victim has any reported crimes or incidents in the 12 months prior to the precipitating incident which have been flagged as drug or alcohol related. The paired t-test shows a significant difference between the mean drug and alcohol incidents linked to MARAC referred victims (M=0.76, SD=1.212) and the comparison (M=0.57, SD=0.804) group, t(538)=4.518, p=0.000. This means MARAC cases had a higher number of drug or alcohol related incidents.

The ‘DASH risk assessment’ measures are based on mean values of high and medium risk assessments for both groups in the 12 months prior to the precipitating incident. For victims referred to MARAC, 59% (320/539) of victims have a prior ‘high’ risk assessment, compared to 22% (120/539) in the comparison group. Given that a ‘high’ risk

assessment triggers a mandatory referral to MARAC, it can safely be assumed the remaining 41% of victims referred to MARAC were referred via one of the other criteria.

Perhaps unsurprisingly, a matched pairs t-test shows a significant difference in the count of 'high' risk assessments for MARAC referred victims (M=0.73, SD=0.762) and the comparison group (M=0.22, SD=0.542), t(538)=14.428, p=0.000. 'Medium' risk assessments are more frequent in the comparison group. A matched pair t-test shows a significant difference in the number of medium DASH risk assessments for MARAC referred victims (M=0.59, SD=0.890) and the comparison group (M=0.76, SD=0.290), t(538)=-3.856, p=0.000.

Three further measures are not included in table 2. The first of these is gender, where the criterion of the match ensures a victim in the MARAC group is matched to a victim of the same gender in the comparison group. Therefore, there is no difference between the groups on this measure. The same can be said of the measure of geographic district, whereby a victim from the MARAC group is matched to a victim from the same geographic district in the comparison group.

The results of a Chi Square test on the ethnicity of victims shows no relationship between the ethnicity of the victim and whether they were referred to MARAC or not. X^2 (5,N=1,078)=2.76, p=.736. 97% (522/539) of victims referred to MARAC are of white ethnicity. This is marginally higher than the overall demographic profile of the county, where 95.2% of the total population is white.

Summary

Overall, the differences in the factors measured are limited. In some cases, such as gender and district, the two groups are exactly the same. In others, such as instant crime harm and prior crime harm there are differences, but these are not statistically significant. In factors such as age and date of precipitating incident the differences are statistically significant, but not significant in practical terms. Furthermore, there are

notable differences in DASH risk assessments. It is important to recognise that this is based only upon the criteria which were used for matching, and it is accepted that a better match could be achieved by matching on other factors which for which data was unavailable. This will be addressed in greater detail in the discussion section.

Is MARAC associated with reduced levels of harm?

The primary research question this study sets out to address is whether there is an association between MARAC referral and reduced levels of crime harm to the victim in the 12 months following. The analysis will examine a series of measures in the 12 months pre and 12 months post periods for each of the two groups to identify differences. A difference of differences analysis is then presented, which is a tool to estimate potential treatment effects comparing the pre- and post-treatment differences in the outcomes of treatment and comparison groups. In effect, it compares the differences in mean measures between both groups in the pre and post periods.

Table 4 overleaf provides a summary view of the results of a series of t-tests comparing the mean values of factors measured in both groups in the pre and post 12 month periods, as well as results of a difference-of-differences analysis.

At first glance, it presents some interesting results. It is immediately apparent that all measures in the 12 month post-period are lower than in the 12 month pre-period for both groups, and nearly all of these reductions are found equally in both the MARAC and non-MARAC groups. The differences between pre and post measures are not only lower, but significantly lower for all measures apart from Crime Harm in the comparison group, where the reduction is approaching significance at 0.05. At this stage in the analysis, there has been a significant reduction in crime harm in the 12 month post period compared to the 12 month pre-period in the MARAC group. There has also been a reduction in the non-MARAC group, but not one which is statistically significant.

Table 4: Summary of pre and post difference-of-differences between MARAC and non-MARAC comparison cases

	MARAC					Non MARAC					Difference in Differences
	Pre	Post	Diff.	% change	p-value	Pre	Post	Diff.	% change	p-value	p-value (of differences)
Calls to Service	2.12	0.98	-1.14	-54%	.000***	1.42	0.5	-0.91	-65%	.000***	.034*
Serious Crimes	0.11	0.05	-0.07	-55%	.000***	0.07	0.03	-0.04	-57%	.002**	0.272
Crimes	1.22	0.51	-0.71	-58%	.000***	0.79	0.25	-0.54	-68%	.007**	.018*
Non Crimes	0.9	0.47	-0.43	-48%	.000***	0.63	0.25	-0.38	-60%	.000***	0.513
Detected	0.69	0.25	-0.44	-64%	.000***	0.4	0.14	-0.26	-65%	.000***	.001**
Charged	0.61	0.24	-0.37	-61%	.000***	0.29	0.12	-0.17	-59%	.000***	.000***
Caution	0.07	0.01	-0.06	-86%	.000***	0.11	0.02	-0.08	-82%	.000***	0.206
NFA	0.45	0.24	-0.22	-47%	.000***	0.32	0.1	-0.22	-69%	.000***	0.97
Crime Harm	78.8	32.01	-46.79	-59%	.001**	39.93	19.84	-20.09	-50%	0.09	0.154
Offenders	1.06	0.46	-0.6	-57%	.000***	0.88	0.34	-0.54	-61%	.000***	0.211
Drug / Alcohol	0.69	0.32	-0.37	-54%	.000***	0.43	0.16	-0.27	-63%	.000***	0.095
DASH - Used	1.83	0.93	-0.9	-49%	.000***	1.25	0.49	-0.76	-61%	.000***	0.187
DASH - High	0.71	0.37	-0.34	-48%	.000***	0.18	0.08	-0.09	-56%	.000***	.000***
DASH – Med	0.57	0.28	-0.29	-51%	.000***	0.66	0.21	-0.45	-68%	.000***	.006**
DASH - Stand	0.55	0.28	-0.27	-49%	.000***	0.41	0.19	-0.22	-54%	.000***	0.431

Data shown is the mean

* Significant at the 0.05 probability level

** Significant at the 0.01 probability level

*** Significant at the 0.001 probability level

The next key point to make is that whilst the 'difference-of-differences' between the two groups are mostly not statistically significant, significant differences are apparent in two key areas. The first of these is in calls to service. This measure is comprised of all domestic related crimes and non-crimes associated to a victim – or all domestic events which are recorded by police. The mean change in the number of calls to service in the MARAC group (M=-1.14, SD=1.992) (or 1.14 fewer calls in the post-period) is significant compared to the mean reduction in the volume of calls to service in the comparison group (M=-0.92, SD=1.444) t(1,076)= -2.118, p = 0.034. This suggests the average victim in the MARAC group saw a mean reduction of 1.14 calls to service pre vs post, compared to a 0.92 mean reduction in the non-MARAC referred group, as represented in Figure 8.

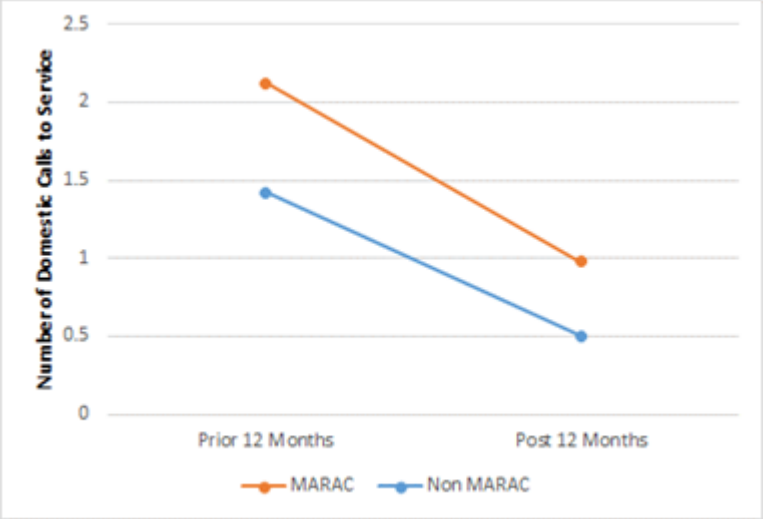

Figure 8: Difference in pre / post levels of calls to service in MARAC and non-MARAC groups

The difference-of-differences analysis compare the two slopes shown on the chart to determine if they are significantly different. The test shows they are different, but it is clear both have very similar slopes. The MARAC group goes down by just over 1 call for service, while the non-MARAC group goes down by just under 1 call for service. In this case, the statistical difference has little practical importance, given the size of the sample totalling up to 539 pairs, or 1,068 victims.

An oft quoted statistic from research conducted by SafeLives (2010) into the effectiveness of MARACs states that in the six months following referral to MARAC, 6 in

10 victims make no further reports of domestic abuse incidents to police. The same research was undertaken in this study, and echoes that finding. In the present study, 6 in 10 (60.1%) victims made no further reports of domestic incidents to police, this time in the twelve months post MARAC referral. However, when the same analysis was conducted on victims in the comparison group, 6.7 in 10 (67%) made no further reports to police over the same period. As seems common in these results, both groups saw substantial declines in subsequent domestic abuse indicators. In this case, the comparison group did marginally better than the MARAC group.

There is also a significant difference between the mean pre-post differences in the numbers of crimes recorded due to domestic abuse between the MARAC and comparison groups. The difference in the mean reduction of crimes in the MARAC group (M=-0.71, SD=1.409), or 0.71 fewer recorded crimes, is significant compared to the mean of the volume of crimes in the comparison group (M=-0.54, SD=1.002) t(1,076)=-2.367, p=0.018. As was the case with calls to service, the reduction in the mean number of crimes seen in the MARAC group in the post 12 month period is significantly greater than the reduction seen in the comparison group, as displayed in Figure 9 overleaf.

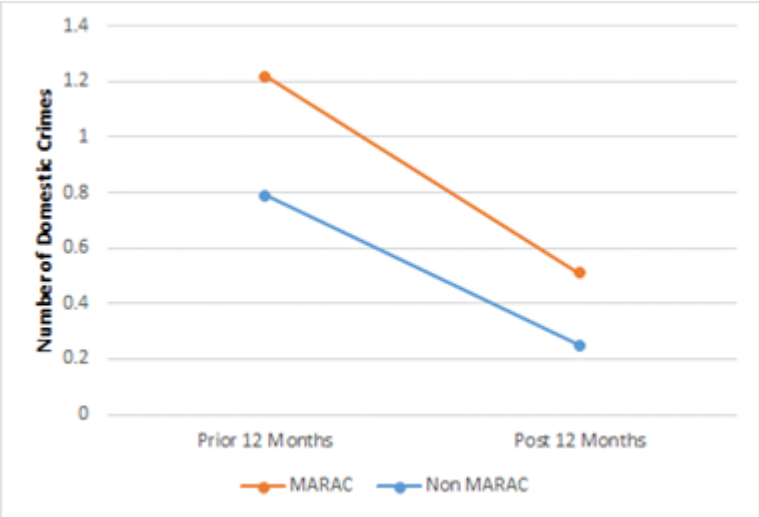

Figure 9: Difference in pre / post levels of recorded crimes in MARAC and non-MARAC groups

The measure of total crime harm merits a closer examination. In this sample, both the treatment and comparison groups see notable reductions in crime harm in the post 12 month period. In the MARAC referred group that reduction is significant.

Figure 10 shows the reductions in total crime harm for both groups pre and post, with cases not referred to MARAC seeing a 50% reduction in crime harm in the post 12 month period. However, for cases referred to MARAC, a 59% reduction is seen. On this measure, the difference in the two slopes is clear and unambiguous.

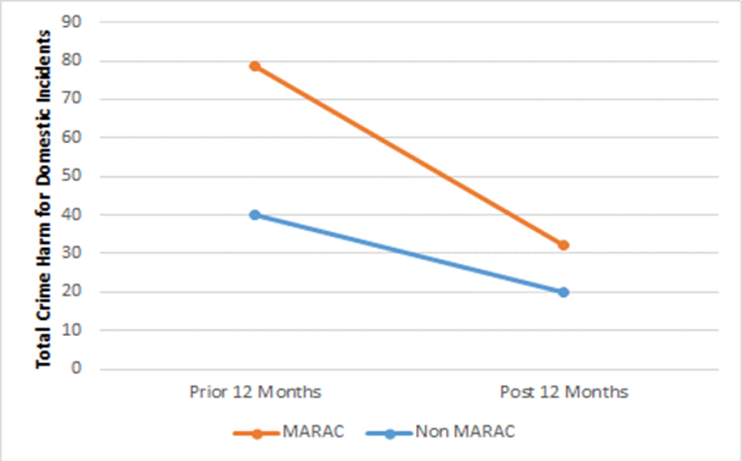

Figure 10: Differences in pre / post levels of total crime harm in MARAC and non-MARAC groups

Whilst at first glance these reductions seem promising, it is important to bear in mind that whilst every effort was made to identify two similar groups, undeniable differences exist between the MARAC referred cases and the comparison group. By looking at the pre-period results in the figures above, it is apparent that in each case the starting points are relatively far apart, and therefore the baseline is not comparable, which becomes problematic for interpretation. This is particularly apparent in total crime harm, where average prior crime harm in the MARAC group is 78.8, compared to 39.3 in the comparison group.

Perhaps the most plausible explanation for the reductions seen in Crime Harm is regression toward the mean. Regression toward the mean stipulates that if a variable is extreme in its first measure, then the second measure is likely to move toward the

average. Given that MARAC cases are starting at a higher level of crime harm, they are then subject to a greater regression toward the mean effect. At the point of deciding to refer a case to MARAC it is likely that levels of crime harm are spiking, which has driven the selection of the case. In effect, the cases are selected for referral to MARAC because harm is spiking. Cases in the comparison group were not selected for MARAC, perhaps in part because their crime harm was not spiking to the same degree. Therefore they did not get as much regression toward the mean benefit as those cases that were. There is a danger that when MARAC cases regress toward the mean, credit for this regression is attributed to the MARAC intervention, rather than considering that perhaps despite any interventions, levels of crime harm, or calls to service, or recorded crimes would have reduced in the post 12 month period.

To address the potential regression toward the mean effect, a subset of cases was identified where, of the 539 pairs, only those where the difference in total prior harm between them was ten or less would be considered. The samples in the subset should have similar levels of CHI in the pre-12 month period, and therefore provide a fairer baseline for comparison in the post 12 month period. If similar reductions were seen in both MARAC and non-MARAC groups between the pre and post 12 month periods, it would provide stronger evidence that MARAC is creating benefit. The 539 matched pairs were filtered by these criteria, which left 377 cases, (70% of the original sample of 539 cases, and 59% of all 642 first-time MARAC referrals between 2012 and 2013, prior to case matching). Table 5 displays the pre and post data for these 377 cases across the main measures of harm.

Table 5: Pre and post difference-of-difference analysis between MARAC and non-MARAC cases in the sub-set matched more closely on crime harm

	MARAC					Non MARAC					Difference in Differences
	Pre	Post	Diff.	% change	p-value	Pre	Post	Diff.	% change	p-value	p-value (of differences)
Calls to Service	1.71	0.88	-0.83	-49%	0.000***	1.36	0.45	-0.91	-67%	0.000***	0.492
Serious Crimes	0.06	0.05	-0.01	-17%	0.623	0.05	0.01	-0.04	-80%	0.001**	0.108
Crimes	0.86	0.42	-0.44	-51%	0.000***	0.68	0.19	-0.49	-72%	0.000***	0.455
Crime Harm	16.46	31.89	15.43	94%	0.162	16.26	7.89	-8.36	-51%	0.32	0.086
Drug / Alcohol	0.56	0.33	-0.23	-41%	0.000***	0.41	0.14	-0.37	-66%	0.000***	0.568

Data shown is the mean

* Significant at the 0.05 probability level

** Significant at the 0.01 probability level

*** Significant at the 0.001 probability level

As expected, the mean pre-measures of total crime harm for both MARAC (M=16.46) and non-MARAC (M=16.26) cases become much closer, and therefore are a far better match, at least on this one factor. This method reduces the chances of regression toward mean as it effectively reduces any outliers in the matched pairs. Figure 11 displays the pre and post differences in crime harm between both groups for those 70% of cases in the sample where the total value of crime harm in the 12 months leading up to MARAC is within a value of ten.

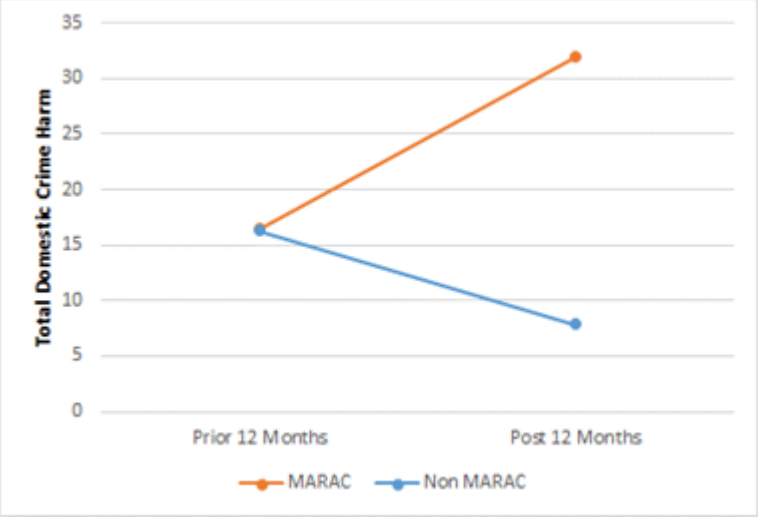

Figure 11: Differences in pre / post levels of total crime harm in MARAC and non-MARAC cases in the sub-set analysis matched more closely on crime harm

When the data from the subset of cases is examined, the reduction in levels of crime harm between the pre / post period in non-MARAC cases is still apparent, with a reduction of 50%. However data from the MARAC cases shows a polar opposite effect.

Rather than the reduction seen in the original sample, in this subset of MARAC cases, harm increased by 94% in the 12 months following referral to MARAC. This finding, whilst striking, must be treated with caution. The two slopes displayed in figure 11 are not significantly different, despite their opposite directions, which is most likely caused by the reduction in sample size. The result does come close to the traditional definition of significance, at p=0.086, and indeed could be considered significant at the 0.10 level. When the sample is limited to pairs which exhibited similar levels of prior crime harm, the MARAC cases got worse over time, while the non-MARAC cases did better.

Conclusion

As previously stated, there is no attempt to draw causal inference from this study due to the non-randomised nature of the research design. This research acknowledges that whilst efforts to identify a similar matched 'non-MARAC' group to compare with the MARAC group have produced the best comparison group possible using available data, there will still be differences between the groups which this research was unable to measure.

When the full matched sample is used, there are very few significant differences in the slopes, with all measures trending downwards at very similar rates. Even where the slopes are significantly different, the practical distinction between them is not so important. The levels of significance are largely an artefact of the large sample size. The one exception here is crime harm, which went down far more steeply in the MARAC group compared to the non-MARAC group. Initial results presented in this section would suggest MARAC referral is associated with a reduction in crime harm in the 12 months following referral. However, non-MARAC referred cases also saw a reduction in harm in the post 12 month period, and any reduction in both groups could just as likely be due to regression toward the mean effects. In the original sample of 539 cases, levels of crime harm were also notably greater in the MARAC group in the 12 month pre-period, which

would potentially increase any regression toward the mean effect compared to the non-MARAC group.

The use of difference-of-difference analysis addressed the primary research question, and identified that -- at least initially -- there appears to be a positive association between MARAC referral and reduced future crime harm to victims of domestic abuse in the 12 months following. However, it seems likely regression toward the mean effects contributed to the measured reduction in crime harm. This poses the question of whether this reduction (or part thereof) would have been seen regardless of any intervention. It also highlights the importance of having an effective case matching technique to make fair comparisons between both groups.

When further analysis was undertaken on a subset of cases to correct a large difference between the groups in pre-MARAC crime harm, this difference reversed itself. Crime harm increased in MARAC referred cases, compared to a reduction in non-MARAC cases. MARAC appears to be producing little reduction in subsequent domestic abuse that would not have happened anyway, and could even be making things worse for those who enter the program without high levels of harm beforehand.

Discussion

This study set out to provide a descriptive analysis of Multi-Agency Risk Assessment Conferences (MARACs), and to provide a preliminary assessment of their association with reduced future harm to victims of domestic abuse in Suffolk. MARACs are at the core of the response to high-risk domestic abuse in Suffolk, and across England and Wales. This chapter will discuss findings against each of the research questions, outlining how the question was addressed, what the results were, and placing these results in the context of previous research. It will attempt to draw conclusions on what the findings mean for the policing response to domestic abuse in Suffolk, and what the implications are for future research. The chapter will conclude by discussing the limitations and strengths of the research. First, to set the scene for the primary research question, the chapter will discuss the question of how successful the case matching methodology was in identifying a similar group of non-MARAC referred cases to be used as a comparison group.

Effectiveness of Case Matching

The primary research question addressed is whether or not assignment to MARAC is associated with reduced harm to victims of domestic abuse in the twelve months following referral to MARAC compared to the twelve months leading up to the conference, and in comparison to a matched sample group of domestic abuse victims who have not been subject of a MARAC over a similar time period. Whilst the first part of that question can be addressed with simple before and after tests, in order to compare the MARAC referred cases with a comparison group, such a comparison group needed to be identified. The inherent limitations of such an undertaking will be discussed later in this chapter.

The research methodology used a set of complex procedures to find matching victims for each victim in the MARAC sample, as described in the methods section. Once

the matched group had been identified, a series of tests were run to analyse how similar the two groups were, based upon the criteria used. The results of these tests showed the two groups were, in the main, not significantly different. In two factors (gender and geographic district) the two groups were identical. The average age difference between both groups equated to 88 days, which was statistically significant, but not deemed to be substantive in practical terms. The incidents upon which pairs were matched occurred on average within 15.6 days of one another, a difference which again was statistically significant, but of little practical importance. The mean levels of total crime harm during the year prior to the precipitating incident were higher in the MARAC group, as was mean level of crime harm associated with the precipitating incident itself and the mean count of 'serious' offences. However, none of these differences reached statistical significance.

Three areas were identified where significant differences between both groups exist. MARAC cases had a higher average number of high DASH risk assessments, which is to be expected given this is one of the routes in to MARAC referral. MARAC cases also had a higher average number of drug / alcohol linked incidents in the prior 12 months than non-MARAC cases. Non-MARAC cases had a higher average number of 'Medium' DASH risk assessments. This is to be expected, given cases with a risk assessment less than 'High' would not necessarily be automatically referred to MARAC.

Overall, based on the measures utilised to compare cases, it would be fair to say the groups are not dissimilar, and certainly are as similar as it was possible to achieve based on the methodology used.

Is MARAC assignment associated with a reduction in future crime harm to victims of domestic abuse in Suffolk?

The literature review chapter identified extensive gaps in available evidence of 'what works' in tackling domestic abuse. One such gap identified was in the evidence of what works in partnership approaches to preventing domestic abuse (National Institute for

Clinical Excellence, 2013), and more specifically in terms of evidence of outcomes from Multi-Agency Risk Assessment Conferences (MARACs), dealing with high-risk cases of domestic abuse (Steel et al, 2011). The review of literature into studies evaluating MARAC, particularly studies reviewing evidencing of outcomes for victims arising from MARAC referrals, reiterates the need for more robust evaluation of MARAC outcomes.

The hypothesis underpinning this research question was that MARAC assignment would be associated with a reduction in future crime harm to victims of domestic abuse. The research set out to address this by undertaking pre / post analysis across a number of measures in the 12 months leading up to MARAC compared with the 12 months following MARAC. This analysis was then augmented by undertaking the same exercise for a group of matched non-MARAC referred cases with a difference-of-differences analysis to compare the amount of change seen in both groups.

Findings of the initial pre / post analysis of MARAC referred cases support the hypothesis that MARAC assignment is associated with a reduction in future crime harm. There were significant reductions across the range of measures used to measure harm in the post 12 month period compared to the pre. These included significant reductions in key measures such as calls to service (p=.000), crimes (p=.000), non-crimes (p=.000), and crime harm (p=.001). 6 in 10 victims referred to MARAC in Suffolk make no further reports to police in the 12 months following MARAC referral.

These findings support those of Robinson's (2005) study in Cardiff which found 6 in 10 victims referred to MARAC reported no further incidents to police in the six months following referral, with this number dropping to 4 in 10 in the 12 months following MARAC. These findings were echoed by a Safelives study (2010) which found 6 in 10 victims referred to MARAC reported no further incidents to police in the 12 months following MARAC. However, neither of these studies attempted to use a comparison group, which is a limitation in the research design.

The main conduit into MARAC is the Domestic Abuse Stalking and Harassment (DASH) checklist risk assessment, used by Suffolk Constabulary and by 27 other police forces in England and Wales (College of Policing, 2014). If the risk assessment asses the case to be 'High' risk it should trigger an automatic referral to MARAC. In theory, if it is accepted that the DASH risk assessment provides an evidenced based and effective tool for assessing the risk to victims of domestic abuse, then any attempts to match these cases to cases which have not been assessed as high-risk (and subsequently not been to MARAC) would be futile. However, recent work completed by the College of Policing (2014) identifies that DASH has not been evaluated in any published studies, and concludes that the effectiveness of domestic abuse risk assessment in England and Wales is unknown. It questions how the DASH model operates best in practice, how accurate the identification of risk is and what impact it has on victim safety. Furthermore, research by Thornton (2011) highlighted inaccuracies in the ability of the DASH to predict serious domestic assault and homicide. On that basis, the researcher decided it would not be an unreasonable to identify such a comparison group who had not been formally identified as high-risk victims and referred to MARAC.

The case matching procedures designed for the present study identified a matched group of non-MARAC referred cases for comparison. Then the same pre / post analysis procedure was repeated for this group. Results of this analysis showed that, just as in the MARAC group, a large number of significant reductions were seen across the range of measures used to measure harm in the post 12 month period compared to the pre-12 month period in the non-MARAC group. Significant reductions were seen in the same key measures of calls to service (p=.000), crimes (p=.007) and non-crimes (p=.000). The reduction in total crime harm in the comparison group was not statistically significant, though it was approaching significance (p=0.09). The results of these analyses potentially indicate that there is a regression toward the mean effect taking place in both

groups. The reductions in harm may, at least in part, have occurred regardless of referral to MARAC.

Regression toward the mean would suggest that if a variable (in this case crime harm) is extreme in its first measure, then the second measure is likely to move towards the average. This phenomenon is often used to explain performance in professional athletes, for example footballers. A striker might usually score fifteen to twenty goals a season. If the player then has a particularly good season, and goes on to score thirty goals, it is unlikely this will be followed up with another thirty goals the following season. It is more likely that the player will, in effect, regress to the mean, and perhaps score fifteen to twenty goals again all other things being equal. If the striker's performance is measured simply by goals scored in the exceptional season compared to the following season, deterioration in performance may be inferred. This would not necessarily be the case, with just as likely an explanation being regression toward the mean.

Regression toward the mean often occurs where samples are non-random with a less than perfect correlation of measures, as is the case with the MARAC referred samples in the present research. One argument is that referrals made by police tend to be assessed as high-risk following either a particularly violent incident, or a build-up of a series of incidents over time. It is likely that cases would likely be approaching peak levels of harm over the previous 12 months at the point of going to MARAC. However, a similar (if smaller) pattern of regression was also seen in the comparison group. An alternative argument might be that given high levels of under reporting of domestic abuse, the simple fact that all of the victims in both groups did get reported to the police could suggest that the level of abuse was especially public or otherwise noteworthy when the precipitating incident took place. The incidents calmed down after that in both groups, perhaps because it would be difficult for them to get much worse. In either case, regardless of any intervention, levels of harm, or volumes of crime or calls to service could be expected to reduce in the following 12 months, regardless of interventions applied.

However, when the subset of cases matched more closely on crime harm was analysed, a different picture began to emerge. The purpose of selecting a subset of data in this way was driven by the original findings. If a subset of the cases with much closer matches on crime harm in the prior 12 month period was taken, and the reduction in crime harm was still apparent in the post 12 month period, it would be stronger evidence for the MARAC intervention being associated with a reduction in harm. This method reduces the likelihood of experiencing regression toward the mean, because many of the 'outliers' (i.e. matched cases with particularly large differences in crime harm which could pull mean levels of harm artificially higher or lower), are removed. It would arguably provide a fairer comparison between the two groups.

The results of the subset analysis produced surprising results. Cases referred to MARAC saw an increase in crime harm in the 12 months following MARAC referral compared to the 12 months leading up to MARAC. Those non-MARAC referred comparison cases still saw a reduction in harm. It should be noted that neither effect was statistically significant, but a notable finding nonetheless. The two groups moved in opposite directions reflecting a difference-of-differences which was significant at the 0.10 level ($p = 0.086$). The next question is, of course, why is this happening? Given the limitations in this research, the answer to this question would be entirely speculative. The matching procedure used was not strong enough to support causal inference, and picking a subset of cases from the sample further reduces internal validity. Internal validity refers to the extent to which it is possible to infer it is the administering of the treatment (or not) causing the effect that is found, thereby eliminating competing hypotheses (Robson, 2002). It could be that, having been through MARAC, victims feel more empowered to report any future domestic abuse episodes, which may have been largely unreported previously. It could equally be that MARACs have little or no effect on future harm to most victims of domestic abuse. Without further more rigorous research, this question remains unanswered.

Implications for policing of domestic abuse in Suffolk

This research is suggestive that MARACs may not be as effective as they are publicised to be, which echoes the findings of other research which has questioned the effectiveness of MARAC processes (McGlaughlin et al, 2014, Berry, 2014). However the limitations of this study have also been discussed, and therefore the findings should be treated with a certain amount of caution.

MARACs are a resource intensive process, particularly for the police, who have primary responsibility for both chairing the conferences, and managing administrative processes surrounding them. This study provides the best available evidence that MARACs may not be producing any impact which could not also be obtained by not sending cases to MARAC at all. Given the resourcing implications of MARACs, coupled with reducing police budgets, the onus should now be placed upon proponents of MARAC to develop more robust evidence that MARACs are having an impact that is proportional to the costs involved.

In the meantime, there is an opportunity to reduce the costs of MARACs by re-visiting how referrals are made into the process. If the focus is placed on the victims at highest risk, instead of on the arbitrary DASH risk assessment process, where every victim who gets 14 ticks on the form is automatically referred, the process may become more sustainable. Allowing MARACs to continue expanding at the present rate is not sustainable in the long-term.

Furthermore, a key learning point for policing to take from this study is the importance of using a comparison group when undertaking any form of 'evaluative' work. It has shown that whilst a simple before and after study alone may provide some very positive results, unless a comparison group is also used, those outcomes can be misleading.

Implications for future research

This study has considered association, not causation. Neither the decrease in harm identified in the initial analysis, nor the increase in harm in the subset analysis can be considered as having been caused by the MARAC intervention. This study is not an RCT, and has not been able to control for any number of other factors which might affect measures in both pre and post periods. As has already been stated, the findings do add to the weight of calls for more rigorous outcome based evaluation of MARACs. That may include replications of this study in other parts of the UK, or nationally. Any replications could employ enhanced matching techniques, such as propensity score matching (PSM) to improve case matching. Propensity Score Matching (PSM) techniques are used to identify matching comparison pairs. The propensity score is a type of balancing score (Caliendo and Kopeinig, 2005), which in this context would indicate the probability of a case being referred to MARAC based on observed characteristics. It would ensure a similar distribution of observed characteristics in both treatment and comparison groups. Cases are matched on a 1:1 ratio, as was the case in this study, but the method of achieving the match would be more robust, and minimises the effect of confounding factors. In turn, this would raise the internal validity of the study.

An RCT would provide a better method of evaluating MARACs, and would enable researchers to draw more robust conclusions from the findings, but the resources involved in running an RCT on a local basis would be challenging. However, if there is a chance that an intervention is harmful (and a similar chance that it is not), there should be no ethical dilemma posed by random assignment. At this stage, the effects of MARAC are unknown, and random assignment is as fair as any other method to allocate people to treatment. Random assignment would be the best way to assess whether the treatment is a net benefit or detriment to the health and safety of victims.

Nonetheless, this study presents some evidence that MARACs may be linked to increased harm to victims. The evidence presented has limitations, but is the best available research at present.

Limitations

The limitations of this study mean that it is not possible to causally address the question of what impact MARACs have had on the future harm to high-risk victims of domestic abuse. Ostensibly, based on the measures used the two groups are not entirely dissimilar, and the case matching technique was reasonably successful. However, as Ellis et al (2010) point out, such studies are open to criticism on the basis that the matched pairs may be different in other ways than those criteria chosen for matching. Bachman and Schutt (2007) discuss selection bias as a threat to this type of study. Indeed, selection bias is identified as the main threat to the internal validity of this work. Cases have not been randomly assigned to treatment or control conditions, and whilst MARAC victims have been matched to a comparison non-MARAC referred to victim to obtain a comparison group, the criteria used to match upon is based on relatively basic factors and has been undertaken retrospectively.

Where a research design such as this is used, it cannot take account of the many variables which this study has been unable to measure. To answer the question of what impact do MARACs have on levels of harm experienced by victims of domestic abuse post referral, with implied causation, the aim would be to have a control sample which is indistinguishable from the MARAC sample. It would be desirable for the matched cases to be very similar on every single measure, including:

a) Factors measured in this study and used to form the matches – age, gender, deprivation etc.
b) Factors measured in this study but not used to form matches – number of prior incidents, the number of times a DASH risk assessment took place

c) Factors that could have been measured in this study, but were not, such as marital status, prior criminal history of the victim, numbers of children in the home, whether the victim was pregnant at the time of the incident occurring, physical or mental ill health issues or the substance misuse history of the victim

d) Factors which cannot be measured, such as the victim's degree of self-control, the offenders childhood abuse history, beliefs regarding the sanctity of marriage and other 'unknowable's'

In experiments where an RCT design is employed, all these things would be assumed to be equivalent between the two groups. In a non-RCT such as this the aim was to show the groups were at least similar on points a) and b) above. Whilst this was achieved to a greater or lesser extent in this study, more robust research would be required to overcome some of the unmeasured differences which are likely to exist between the two groups in this research. The limitations of the matching methodology used have been articulated, but there are opportunities for it to be improved in future research. One such opportunity would be the use of propensity score methods as discussed in the implications for future research section, which seek to replicate some of the characteristics of RCTs in observational study settings (Austin, P., 2011)

However, RCTs continue to be considered the 'gold standard' in experiments. An RCT would negate the requirement to undertake a case matching exercise, and it could safely be assumed that cases would be identified as eligible for MARAC referral first, then randomly assigned to either treatment or control groups. Therefore, it may be assumed that the treatment and control groups are the same. In the present study, retrospective case matching has been undertaken to identify 'similar' cases. Despite any similarities identified between the two groups based on the available measures, the decision to refer to MARAC or not had already been made. Whilst this case matching has identified the best possible matches based on the information available, the author recognises that

differences must exist between both groups – some of which have been measured, and others which have not been able to be measured.

The external validity of this study should also be questioned. External validity refers to how 'generalizable' findings from one study setting may apply in another – to other situations, to other people, to other areas. Whilst MARAC processes have been set up across the country based on a common formula of processes and guidelines, how these processes are implemented in practice is likely to differ between MARACS. Each MARAC may deal with different numbers of cases; have varying degrees of attendance and participation, different methods of allocating actions and holding parties to account, and therefore varying levels of effectiveness. Replication of this type of study would be required before generalizations to other MARACs across the country could reasonably be made.

Another consideration is that by simply comparing a twelve month pre and post analysis, a potential for a regression toward the mean effect is seen. Whilst this is a likely contributor to the reductions in harm seen in the MARAC referred group in the twelve months post referral, any future research should consider extending the time period over which such measures are taken to provide a clearer picture of the victim's history of domestic abuse, as a stronger method to support or refute the theory of regression toward the mean.

These limitations notwithstanding, this research provides a valuable contribution to the small body of research on MARAC intervention. It has highlighted the likelihood that where MARAC has been evaluated previously, any reductions in calls to service made by victims in the twelve months following referrals compared to the twelve months prior are perhaps mostly as a result of regression toward the mean, as opposed to any positive impact of MARAC. This research disputes the relevance of the much publicised claim that 6 in 10 victims referred to MARAC report no further calls to police in the 12 months

following referral, given 6.7 in 10 victims in the non-MARAC referred group in this study also made no further calls to police over the same period.

Furthermore, the finding that in the sub-set cohort of cases matched more closely on crime harm in the prior twelve months showed the harm in MARAC referred cases increasing post referral, compared to a reduction in the non-MARAC group should prompt further discussion amongst practitioners regarding the effectiveness of MARAC. It makes a very clear case for more rigorous research to be undertaken into MARACs across the country.

In order to ensure that the impact of being referred to MARAC does contribute to positive outcomes for victims, further research must be undertaken. At present, dedicated practitioners are devoting substantial time and resources to a well-intentioned process, but one for which there is little robust evidence to suggest works.

Conclusion

The literature review presented earlier outlined the scale and extent of domestic abuse in England and Wales, which according to Walby (2009), has an estimated cost to society of £15.7bn per year, constituting up to 8% of all recorded crime annually. The physical injuries to victims can be severe, and in some cases life threatening, not to mention the psychological damage domestic abuse can inflict on victims.

MARACs can be described as the primary response to high-risk victims of domestic abuse in England and Wales. They are multi-agency information sharing meetings attended by a range of agencies; held on a regular basis with the combined aims of safeguarding adult victims, making links with other public protection arrangements where required, safeguarding agency staff, and addressing the behaviour of the perpetrator.

Given the rapid and widespread growth of MARACs since the first MARAC in Cardiff in 2003, the lack of academic study or evaluation of these processes over the last 12 years is all the more surprising. It is in this context, then, that the present study should be seen. Its aim has been to understand whether or not there is an association between referral to MARAC and future reductions in crime harm to victims of domestic abuse. Previous work evaluating MARACs has been largely historic, and limited by very basic research designs. This study sought to add to a small but growing body of research seeking to understand the effectiveness of MARACs by employing a more sophisticated research design (albeit with a great many limitations, as have been discussed) based on more up to date and complete data sets.

This is the first study where a matched group has been used. The case matching processes to match a sample of victims referred to MARAC with a comparison group of victims not referred to MARAC was successful to a greater or lesser extent, but fraught with difficulty. It is acknowledged that this process was far from perfect, and the

discussion makes suggestions as to how future iterations of this research design could be improved, or an alternative, altogether more robust design, in the form of an RCT.

Nonetheless, the results of analyses conducted produced some surprising results. The first finding was that on the face of it at least, MARACs are indeed associated with a reduction, not only in crime harm, but in crimes recorded, calls to service and a number of other measures. Reductions were seen across the board when comparing measures in the 12 months prior to MARAC referral with the 12 months post period. These reductions were, without exception, statistically significant. The results of this study mirrored the finding publicised widely by Safelives, that 6 in 10 MARAC victims make no further reports of domestic abuse to police in the six months following referral to MARAC (and in the 12 months following referral in this study)

However, when these results are compared with findings in the comparison group, very similar relationships were found, even though the comparison victims remained un-associated with MARACs. Reductions were also seen across the board in the 12 month 'post' period for cases which had never been referred to MARAC. Whilst 6 in 10 victims referred to MARAC reported no further domestic incidents in the 12 months following referral, 6.7 in 10 victims not referred to MARAC also made no further reports to police in the 12 month post period.

The discussion section describes the statistical phenomenon of regression toward the mean in great detail, but in simple terms, it is hypothesised that whilst MARAC referred victims did see reductions in crime harm in the post 12 month period, these reductions, at least in part, would have been seen regardless of MARAC referral. In other words, the analyses suggest many of the reductions observed in the untreated comparison group would likely have also occurred to the treatment group victims, even if they had never been to MARAC. At the point of being referred to MARAC, there has often been a build-up of incidents reported to police, to the extent that victims will likely be

approaching a peak in levels of harm experienced. At the point of next measure, the likely direction of travel would be downwards.

To compensate for differing starting positions in both groups for a number of measures in the pre-12 month period, including crime harm, a subset of cases, matched more closely on crime harm was identified (which accounted for 77% of the sample). Based on this sample, the results of measures of crime harm were startling. Crime harm in the MARAC referred group increased, whereas crime harm in the comparison group declined. It is this finding, then, that should encourage those with a stake in MARAC processes to take note, and perhaps seek out a thorough and unambiguous test of MARACs' impact on future victimisation.

The limitations of the research design are writ large in this thesis, and the findings should be treated with caution. But by the same token, this study is amongst the best available evidence relating to the effectiveness of MARACs at the present time, and it is suggesting they may have little positive benefit for victims. It makes a strong call for further research into the effectiveness of MARACs as soon as possible, either by way of replicating this type of research in other areas, applying more advanced matching techniques to form stronger comparison samples, or ideally, through an RCT being carried out from which more causal inferences could be drawn.

In the meantime, an opportunity to reduce the costs of MARACs is identified, by re-visiting how referrals are made into the process, ensuring only the highest risk cases are referred. The continued expansion of MARACs at the present rate is unsustainable. Whilst this study alone may not provide a robust enough evaluation to suggest immediate and urgent changes to the police response to high-risk cases of domestic abuse, it should provoke immediate discussion as to how effective MARACs really are at reducing harm to victims of domestic abuse.

This study does not question the work of the dedicated professionals involved in MARAC processes, who are committed to achieving the best possible outcomes for victims of domestic abuse in Suffolk. Rather, the study calls into question the effectiveness of the MARAC model, and poses the question, does it *really* work?

Appendices

Appendix 1: Glossary of terms

Association of Chief Police Officers (ACPO)

ACPO provided a forum for chief police officers to share ideas and develop policing in the UK, providing national police coordination and leadership. On 1st April 2015, it was replaced by the newly formed National Police Chiefs' Council (NPCC)

Crime and Intelligence System (CIS)

Primary system used by Suffolk Constabulary to record all crime and intelligence. Domestic Abuse non-crimes (or domestic incidents) are also recorded on this system for ease of research)

Co-ordinated Community Response (CCR)

Originally developed in Duluth, Minnesota in the 1960's, CCRs were developed to provide a holistic response to domestic abuse, involving a number of agencies working together. MARACs were born out of this approach to tackling domestic abuse.

Crime Survey of England and Wales (CSEW)

The CSEW, (formerly known as the British Crime Survey (BCS)), is a face-to-face survey asking people who are resident in households in England and Wales about their experiences of a range of crimes in the past year. The survey interviews both adults and children about a variety of crime types.

Crime Harm Index (CHI)

CHI is a method of assigning a value (in days) of harm caused by different types of crime, developed by the University of Cambridge. The value is based on the starting point sentence for the crime, for a first-time offender and reflects the level of harm of each type of crime, as agreed by the sentencing council for England and Wales.

Domestic Abuse, Stalking and Harassment (DASH) Risk Assessment

The DASH risk assessment checklist is widely used by police forces and partners in England and Wales to risk assess cases of domestic abuse. The assessment will assign cases one of three levels of risk – Standard, Medium or High. A 'High' DASH risk assessment will invoke an automatic MARAC referral. The College of Policing have recently identified that DASH has had no formal evaluation in peer reviewed publications, and as such the evidence base for its use is limited.

Deprivation Quintile

Council wards in England and Wales are assigned a deprivation quintile. A ward in deprivation quintile 1 would be in the top 20% most deprived areas, and a ward in quintile 5 would be in the 20% of least deprived areas.

Domestic Abuse

For the purposes of this study, domestic abuse is as per the Home Office definition (2013):

"Any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners, or family members, regardless of gender or sexuality"

Domestic Abuse Non-Crime

Suffolk Constabulary records crimes which are domestic abuse related, such as violence, sexual assault or criminal damage. The offence is identified as being related to domestic abuse by a flag the officer inputs on the crime. The constabulary also records incidents where a call to service is made relating to a domestic incident, such as an argument between a couple. When police attend, if no actual crime can be identified – perhaps there has simply been an argument, the incident will still be recorded as a Domestic Abuse Non-Crime.

Her Majesty's Inspectorate of Constabularies (HMIC)

Her Majesty's Inspectorate of Constabulary (HMIC) independently assesses police forces and policing across activity from neighbourhood teams to serious crime and the fight against terrorism. It carries out regular inspections of police forces in England and Wales. HMIC describe their role as 'inspecting, monitoring and advising, to promote and advance improvements in the efficiency and effectiveness of policing'

Incident date

The date on which the crime(s) / non crime(s) occurred – if multiple events occurred on one day, inferred to be part of the same incident

Independent Domestic Violence Advocate (IDVA)

IDVAs support high-risk victims of domestic abuse. They provide practical and emotional support to victims who are at the highest levels of risk. Their aim is to keep victims safe whilst liaising with the numerous agencies involved in pressing charges against perpetrators. They advocate for the victim, which includes attending MARACs on behalf of high-risk victims being discussed.

Multi-Agency Risk Assessment Conference (MARAC)

The Multi-Agency Risk Assessment Conference used in response to identified cases of high-risk domestic abuse. MARACs are multi-agency meetings where representatives from both statutory and voluntary agencies meet, usually on a monthly basis, to discuss cases. The outcome of a referral to a MARAC is the development of a bespoke action plan to 'increase the safety' of the victim (Steel, Blakeborough & Nicholas, 2011). MARACs were first implemented in England and Wales in Cardiff in 2003.

MARAC date

The date of the first MARAC meeting the victim appeared at in calendar years 2012 and 2013.

MODUS

The case management system used in Suffolk by Police and partner agencies to manage cases of high-risk domestic abuse referred into the MARAC process.

Precipitating Incident

The date of the most recent incident prior to the MARAC

Propensity Score Matching (PSM)

Used in statistical analysis, propensity score matching (PSM) is a matching technique that attempts to estimate the effect of a treatment, policy, or other intervention by accounting for the covariates that predict receiving the treatment

Randomised Control Trial (RCT)

A controlled trial is a study in which participants are assigned to a study group. In a randomized controlled trial, participants are assigned to treatment conditions at random (i.e., they have an equal probability of being assigned to any group). Randomisation allows researchers to assume the treatment and control groups are the same, allowing for a high degree of internal validity.

Regression toward the mean

Regression toward the mean stipulates that if a variable is extreme on its first measurement, it will tend to be closer to the average on its second measurement—and if it is extreme on its second measurement, it will tend to have been closer to the average on its first.

SafeLives (formerly known as CAADA)

SafeLives is a charity dedicated to ending domestic abuse. The charity pioneered the use of the DASH risk checklist, and have trained more than 1,800 Independent Domestic Abuse Advocates. The charity is also heavily involved in the setting up of MARAC meetings across England and Wales.

Starting Point Sentence

The sentencing starting point applies to all convicted offenders irrespective of plea, previous conviction, or aggravating factors not otherwise already taken account of in the offence classification.

Structured Query Language (SQL)

SQL is a programming language designed for managing data held in a relational database management system (RDBMS), and allows for advanced querying of that data.

STORM

STORM is the name given to the command and control system used by Suffolk Police. The system is used by call handlers and call despatchers to manage all calls from the public (both emergency (999) and non-emergency (101)) into the Constabulary.

T-test

The t-test assesses whether the means of two groups are *statistically* different from each other. This analysis is frequently used to compare the means of two groups

Victim

This research is based upon recorded crimes and domestic incident non-crimes and therefore each has a named victim. A number of different terms may also be used to describe a person who has suffered from domestic abuse, such as ‘survivor’. The term victim is not intended to cause offence, merely as a simple and consistent term to describe the person who has suffered from domestic abuse at the hands of a perpetrator.

Appendix 2: Extract of Bland (2014) Relevant to victim URN data cleansing procedures

Victim URN

The most significant obstacle to meaningful analysis of Suffolk Constabulary's data set was the absence of a victim unique reference number (URN). Offenders and suspects are classified by a "nominal" number beginning with "N" followed by a sequence of numbers. The force regularly audits these records to remove duplicates and as such it is typical that analysis focusses on repeat offending and offender profiling more frequently than it does victims. Victim details are recorded however, the dataset contains surname, forename, gender and data of birth as well some higher level address information relating to where the event took place. It is with some of these variables than an "artificial" URN has been created for victims in the dataset. The process for this is described as follows.

For each record of data (n=36,742) a new variable was created concatenating the victim surname and date of birth. This was the basis of a victim URN but remained subject to errors, primarily in spelling or incorrect dates of birth. As such, further cleaning was required to match different victim "URNs" which are in fact related to the same victim.

To achieve this, each of the victim "URNs" was applied to a formula which created a code based on the letters that appeared in the victim forename and surname and the district and sector in which the event took place. For example, John Smith, victim of crime in Newmarket, Forest Heath would generate a code of HIJMNOSTForestHeathNE. The component parts of this code are the letters which appear in the name, in ascending alphabetical order, the district in which the event took place (Forest Heath) and the sector in that district in which the event took place (in this case NE stands for Newmarket). These codes were then sorted in ascending order and used to aid a visual matching exercise of the database. Where codes matched the episodes were assigned a matching victim "URN" (based on the first URN that appeared in the sequence).

There were two inherent flaws in this process which merit discussion. Firstly, the coding system assumes that even when names are mistyped, they use the same letters. Secondly, it assumes that victims' offences take place in the same locality, which of course, they may not. However, both these flaws were partially mitigated by the manual nature of the matching exercise, whereby the author visually examined each record and was able to identify where these flaws yielded errors. This was done in short batches of around 1,000 records over a period of two months to reduce the chances of human error. It is important to underline that this process is not without its limitations, but it represents a methodical and meticulous attempt at defining unique victims.

Appendix 3: Crime Harm Index and Offence Classification

CIS offence name	Classification	CHI Value
Abduction of child by parent	Violence Without Injury	84
Administer poison/noxious thing to injure/annoy	Violence With Injury	10
Aggravated burglary - dwelling	Serious Violence	730
Aggravated taking - motor vehicle - twc	Non-Violence	30
Arson	Non-Violence	30
Arson endangering life	Non-Violence	3825
Assault occasioning ABH (s.47)	Violence With Injury	10
Attempted murder	Serious Violence	4380
Attempted rape - female aged 16 or over	Serious Sexual Violence	1825
Attempted robbery - personal property	Serious Violence	10
Blackmail	Non-Violence	10
Breach of Non-molestation Order	Public Disorder	91
Breach of Restraining Order (Protection from Harassment)	Public Disorder	91
Breach of the peace (common law)	Public Disorder	10
Burglary - dwelling	Non-Violence	15
Burglary - dwelling with intent	Non-Violence	15
Burglary - dwelling with violence	Serious Violence	730
Burglary - other building	Non-Violence	10
Cause harassment/alarm/distress (s.5 POA)	Violence Without Injury	10
Cause intentional harassment/alarm/distress (s.4A POA)	Violence Without Injury	10
Cause person to engage in sexual activity without consent - male - penetration	Other Sexual Violence	730
Cause/incite into sexual activity - offender aged under 18 - female aged under 13 - penetration	Other Sexual Violence	730
Causing an affray	Public Disorder	5
Common assault (no injury)	Violence Without Injury	0.3
Community resolution - non crime	Other Sexual Violence	0.1
Controlling prostitution for gain	Other Sexual Violence	10
Criminal damage - dwelling - over £5000	Non-Violence	84
Criminal damage - dwelling - racially/religiously aggravated	Non-Violence	15
Criminal damage - dwelling - under £5000	Non-Violence	15
Criminal damage - dwelling - value unknown	Non-Violence	15
Criminal damage - other - over £5000	Non-Violence	84
Criminal damage - other - under £5000	Non-Violence	15
Criminal damage - other - value unknown	Non-Violence	15
Criminal damage - other building - over £5000	Non-Violence	84
Criminal damage - other building - under £5000	Non-Violence	15
Criminal damage - other building - value unknown	Non-Violence	15
Criminal damage - vehicle - over £5000	Non-Violence	84
Criminal damage - vehicle - under £5000	Non-Violence	15
Criminal damage - vehicle - value unknown	Non-Violence	15

Criminal damage endangering life	Non-Violence	3825
Cruelty to animals	Non-Violence	0.96
Cruelty to or neglect of children	Violence Without Injury	84
Dangerous driving	Non-Violence	20
Domestic incident - non crime	Non-Crime	0.1
Driving motor vehicle taken without consent	Non-Violence	0.3
Driving motor vehicle with excess alcohol	Non-Violence	0.96
Drunk and disorderly in a public place	Public Disorder	0.3
False imprisonment	Violence Without Injury	10
Fear or provocation of violence (s.4 POA)	Public Disorder	5
Forgery and uttering - other	Non-Violence	0.96
Fraud by false representation - cheque/plastic card	Non-Violence	0.6
Fraud by false representation - other fraud	Non-Violence	0.6
GBH serious wound without intent (s.20)	Serious Violence	15
Harassment - breach of injunction (s.3)	Public Disorder	10
Harassment - breach of restraining order	Public Disorder	91
Harassment - cause fear of violence (s.4)	Violence Without Injury	10
Harassment - pursue course of conduct (s.2)	Violence Without Injury	10
Harassment - pursue course of conduct (s.2) - non-crime	Non-Crime	10
Harassment - racially/religiously aggravated	Violence Without Injury	10
Harm/threaten juror/witness/person assisting in investigation	Violence Without Injury	42
Having an article with a blade/point in public	Violence Without Injury	0.3
Homophobic incident - non crime	Non-Crime	0.1
Interference with motor vehicle (tampering)	Non-Violence	1
Intimidate juror/witness/person assisting in investigation	Non-Violence	10
Involuntary manslaughter	Serious Violence	3825
Kidnapping	Violence Without Injury	84
MALICIOUS COMMUNICATION - SEND LETTER ETC	Non-Violence	0.6
Minor wound without intent (s.20)	Serious Violence	15
Murder of a person over the age of 1 yr	Serious Violence	5475
Neglect ill-treat person lacking capacity	Non-Violence	84
NON COUNTING FRAUD INVESTIGATION	Non-Violence	0.1
OBSTRUCT/RESIST A POLICE OFFICER	Non-Violence	0.3
Obtaining services dishonestly	Non-Violence	0.3
Other notifiable offences	Non-Violence	5
Permitting premises to be used - Cannabis	Non-Violence	0.3
Pervert the course of justice	Non-Violence	1460
Possess air weapon/imitation with intent to cause fear of violence	Violence Without Injury	0.3
Possess extreme pornographic images - sexual act with animal	Non-Violence	10
Possess firearm/imitation to commit indictable offence	Violence Without Injury	0.3
Possess firearm/imitation to commit Schedule 1 offence	Violence Without Injury	1095
Possess indecent photo or pseudo photo	Non-Violence	15
Possess offensive weapon without authority	Violence Without Injury	0.3

RACIAL MINOR WOUND WITHOUT INTENT	Serious Violence	15
Racial/religious agg assault - common/beating	Violence Without Injury	10
Racial/religious aggravated har/alarm/distress	Violence Without Injury	10
Racial/religious aggravated intent harassment/alarm/distress	Violence Without Injury	10
Racial/religiously aggravated ABH	Violence With Injury	10
RACIALLY AGGRAVATED ASSAULT - COMMON/BEATING	Violence Without Injury	10
RACIALLY AGGRAVATED ASSAULT/ABH	Violence With Injury	10
RACIALLY AGGRAVATED HARASSMENT	Violence Without Injury	10
RACIALLY AGGRAVATED HARASSMENT,ALARM,DISTRESS	Violence Without Injury	10
Racially motivated incident - non crime	Non-Crime	0.1
Rape - female aged 16 or over	Serious Sexual Violence	1825
Rape - female aged under 13 - by male	Serious Sexual Violence	3650
Rape - female aged under 16	Serious Sexual Violence	2920
Rape - male aged 16 or over	Serious Sexual Violence	1825
Rape - male aged under 13 - by male	Serious Sexual Violence	3650
Rape - male aged under 16	Serious Sexual Violence	2920
Robbery - personal property	Serious Violence	365
SEND OR TELEPHONE OFFENSIVE/INDECENT/OBSCENE	Non-Violence	0.6
SERIOUS SEX OFFENCE - NON VALIDATED	Non-Violence	0.1
Sexual activity - offender aged 18 or over - female aged 13-15 - penetration	Other Sexual Violence	1460
Sexual activity - offender aged under 18 - female aged under 13 - penetration	Other Sexual Violence	730
Sexual activity with child family member - female aged 13-17 - offender aged 18 or over - penetration	Other Sexual Violence	912
Sexual assault - female aged 13 or over	Serious Sexual Violence	15
Sexual assault - female aged 13 or over - by penetration	Serious Sexual Violence	730
Sexual assault - female aged under 13	Serious Sexual Violence	182
Sexual assault - female aged under 13 - by penetration	Serious Sexual Violence	1460
Sexual assault - male aged 13 or over	Serious Sexual Violence	15
Sexual assault - male aged 13 or over - by penetration	Serious Sexual Violence	1460
Stalking - cause fear of violence	Violence Without Injury	10
Stalking - cause serious alarm or distress	Violence Without Injury	10
Stalking - pursue course of conduct	Violence Without Injury	10
Take a conveyance - motor vehicle - twc	Non-Violence	5
Take conveyance other than motor vehicle - twc	Non-Violence	0.6
Take etc indecent photographs of children	Other Sexual Violence	182
Take or ride pedal cycle without consent etc	Non-Violence	5
Theft - by employee	Non-Violence	0.6
Theft - from motor vehicle	Non-Violence	10
Theft - from the person	Non-Violence	10
Theft - in dwelling	Non-Violence	10
Theft - of mail	Non-Violence	0.6

Theft - of motor vehicle	Non-Violence	126
Theft - of pedal cycle	Non-Violence	0.6
Theft - other	Non-Violence	10
Threat to commit criminal damage	Non-Violence	0.64
Threat to kill	Violence Without Injury	10
Trespass with intent to commit sexual offence	Serious Sexual Violence	730
Unauthorised access to a computer with intent to commit an offence	Non-Violence	1.5
Use public communications network to send indecent/obscene/threatening/false message	Non-Violence	1.5
Use violence to secure entry	Violence With Injury	10
Violent disorder	Public Disorder	5
Voyeurism	Other Sexual Violence	10
Wasting police time	Non-Violence	0.32
Wound with intent to cause GBH (s.18)	Serious Violence	1460

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