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**PREDICTING SERIOUS DOMESTIC ASSAULTS AND
MURDER IN DORSET**

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ABSTRACT

In 2009, UK policing adopted the Domestic Abuse, Stalking and Harassment (DASH) risk assessment tool to identify those most at risk of serious and fatal harm. This thesis identified 107 such victims across Dorset between 2009 and 2015 with the aim of clarifying how well DASH performed in predicting serious domestic abuse and, via a case-control study, evaluated alternative risk factors. In doing so, it replicated the Cambridge thesis undertaken by Sara Thornton in 2011.

With DASH emphasising repeating and escalating violence, it was noted that only 63% of victims of serious domestic abuse had previously contacted Dorset Police. In addition, of the 67 cases that had reported prior abuse, 45 had not been previously assessed as high risk; a 67% false negative rate. Furthermore, of the 12,301 high risk DASH assessments recording during the same period only 22 cases went on to experience serious or fatal abuse; arguably a 99% false positive rate.

This thesis then explored a case-control study to clarify whether alternative risk factors were more prevalent in serious domestic abusers across Dorset. It found that such offenders had less of a criminal career than the wider violent criminal population, casting further doubt on the emphasis DASH places on repeating and escalating abuse. The study also found a number of key factors including male offenders having self-harm issues and female offenders having a later onset of violent convictions.

During its journey, this thesis highlighted both similarities and differences between the Dorset results and those found by Thornton within the Thames Valley area, and queried the development of DASH, produced from London-based homicides. In doing so it posed a key question. Is it now time to consider bespoke risk assessments based on local data, with the aim of better protecting local victims?

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INTRODUCTION

Across Dorset, protecting those most vulnerable from harm, such as serious domestic abuse (thereafter known as DA), is not just a key priority, but fundamental to policing. To predict those most at risk, a DA risk assessment tool is employed, to identify those to whom the threat is greatest, enabling protection and support. As this risk assessment focuses on previous occurrences of abuse, this thesis seeks to clarify how many victims of serious domestic assaults in Dorset had previously sought help from police, and how well the risk assessment was able to predict the subsequent harm. Having clarified its effectiveness, this thesis then examines the offenders to determine any common risk factors which may assist in improving our ability to predict serious and fatal domestic assaults.

The history of DA research spans many decades with the “first scientifically controlled test” undertaken during the pioneering Minneapolis Domestic Violence Experiment (MDVE) (Sherman and Berk 1984, p1). Providing evidence and encouragement that social science can have an impact on an uncertain area of policing, the MDVE opened up the path to a plethora of experiments that have expanded the knowledge base. Central to this research is a drive to test harm reduction plans and not just “evaluating government programs” (Sherman 2009, p1), in doing so guiding both policy and practice in “what they do, how they do it and why” (Nutley et al 2007, p301). In Sherman’s (2013b, p380) view, key to policing based on well-researched evidence is its ability to “improve public safety and police legitimacy”. Aldridge and Browne (2003) further suggest that, given

such depth of research into DA, our understanding of the more serious domestic assaults is still relatively unknown and requires more attention.

Much existing DA research focuses on what works after the event, in particular whether arrest and criminal sanctions provide enough of a deterrence to prevent future offending. As highlighted by the MDVE and later studies, evidence of any “long-term deterrent effect of arrest” is lacking (Sherman et al 1992, p167), and in the view of Sloan et al (2013, p77) low prosecution rates provide an environment where criminal sanctions are not an effective deterrence to DA. Further to this, Richards et al (2008) argue that the police are both morally and legally obliged to prevent harm, manage risks and protect those who face a known danger. These key points provide a powerful argument for examining what works prior to the event in terms of predicting the likelihood of DA, providing an opportunity to prevent such serious harm occurring in the first place.

A wide evidence-base exists as a result of many years of research into the prediction of crime, with many crime types receiving considerable attention. When focused on DA specifically, Heckert and Gondolf (2004, p779) explain that research attempting to predict such offending focused on the development of risk assessments and their driving factors. That said, Kropp (2004, p677) argues that, despite such increases in knowledge, “numerous controversies” and unanswered questions still exist as to how much is known about DA risk assessments and how well they are used in practice.

Within Dorset, operational police officers attending the scene of a DA incident are required to carry out an “initial assessment of the risk faced” by the victim via the Domestic Abuse, Stalking and Harassment (DASH) risk assessment tool (HMIC 2014b, p15). Following its development, DASH was implemented as part of a national program in 2009, based on the analysis of prior domestic assaults resulting in serious harm or murder. This analysis led to the identification of risk factors including the “escalation of abuse” (Dorset County Council, 2015). Having completed the assessment with the victim, the officer grades them as standard, medium or high risk, depending on the overall score, and those considered high risk are referred to the Multi Agency Risk Assessment Conference (MARAC). The MARAC provides an opportunity for both statutory and voluntary agencies to regularly meet to share information on such high risk cases so that action can be taken to safeguard those most at risk (Dorset County Council, 2015). Having been introduced, it is apparent that DASH was not subjected to an evaluation process that could clarify how accurately it was able to identify those most at risk of serious DA. Concerns exist regarding possible false positives (cases graded as high risk that don't result in serious assault) and false negatives (cases graded as lower risk that do result in serious assault), leading to questions as to its effectiveness.

DA receives significant attention across Dorset, with the Police and Crime Commissioner highlighting reducing such serious harm as a key force priority. In 2013, Dorset Police underwent a thorough inspection of the force's ability to manage DA, reporting that such incidents accounted for 7% of all recorded crime, 24% of all assaults with intent to cause serious harm and 38% of all assaults with

injuries (HMIC, 2014b). This, combined with the estimated £15.7 billion national cost to society, highlights the impact this offending has on victims, the wider community and the public purse during times of deep and prolonged austerity, and the need to ensure methods of identifying those most at risk are subject to scrutiny (HMIC, 2014a).

Under the title of “Predicting serious domestic assaults and murder in Dorset”, this thesis proposes to replicate the thesis of Sara Thornton (2011) within a smaller, predominately rural force and offers the following research questions –

1. How many cases of serious domestic assault and murder in Dorset had a prior history of reporting Domestic Abuse?
2. How accurate was DASH based on prior history in terms of false positives / false negatives?
3. Can a case-control study produce more accurate risk indicators than analysis of the numerator alone?

Beginning with a review of the literature to present the context for this thesis, it then discusses the methodology employed to answer each of the research questions. The results of this research are then offered in four parts; a descriptive analysis of serious and fatal DA across Dorset, an analysis of those cases with prior DA contact with the force, followed by scrutiny of the false positive and negative rates and concluding with the outcomes of the case-control study. It then discusses a range of issues identified in attempting to answer the

research questions and suggests further research. The thesis then presents its final conclusions and recommendations.

LITERATURE REVIEW

This chapter considers the range of literature which provides the background and context to the issue of risk assessments within DA. It begins by outlining the extent and impact of DA, emphasising the need for ongoing research. It then discusses prediction within DA and its links with risk factors and risk assessment tools, considered essential to identifying those most vulnerable. This is followed by a review of DASH as the mainstay of risk assessing victims of DA within England and Wales and concludes by critiquing the dependence of DASH on repeating and escalating violence as key risk factors.

Overview of DA impact

The global impact of DA has received growing recognition by influential bodies including the World Health Organisation, and more locally has led to decades of scrutiny and policy change across the United Kingdom (Maczak et al, 2011). The sobering figures provide an opportunity for reflection as to the significant scale of the challenge, with the UK's Government agency, the Office for National Statistics (ONS), highlighting 838,026 DA incidents reported to the police across England and Wales in 2012/13 (ONS, 2013). The ONS claim that this figure only represents 7.1% of women and 4.4% of men who declared being victims during the reporting period, and it is more likely that there were approximately 1.2 million female and 700,000 male victims of DA, highlighting the scale of underreporting (ONS, 2013). These worrying figures are accompanied by

77 domestic related homicides across the UK in the same period (HMIC, 2014a). Between 2009 and 2015 within Dorset, DA accounted for 11 murders, along with 12 attempted murders, one manslaughter and 83 cases of grievous bodily harm with intent, illustrating the extent of this issue in a predominantly rural context.

The impact of DA is also felt further afield, evidenced by Sherman (1992, p1) who describes “up to eight million” DA incidents attended by US police each year, offering a view that it is the most “frequent form of violence that police encounter”. The Australian Government also reported that “one in three women” will become victims of DA throughout their lifetime and that intimate partner murders “account for about one in five homicides nationally” (Australia 2009, p20). This is similar to the UK prevalence rate of one in four women (Living with Abuse, 2015) and one in seven homicides (HMIC, 2014a).

SafeLives (2015), formerly known as the Co-ordinated Action Against Domestic Abuse (CAADA), is an influential UK-based DA charity which estimates a quarter of victims are assessed as medium or high risk, with approximately 100,000 deemed at risk of serious harm. They also draw attention to the “complex or multiple needs” of such victims, highlighting mental health and alcohol and drugs dependence as common areas of concern (SafeLives 2015, p28), although the ONS (2013) advised caution on inferring any links between such dependence and DA.

Walby (2009) offered an insight into the financial implications of DA across the UK, calculating an annual cost to the nation of £15.7 billion in 2008. When considering domestic murder specifically, Richards et al (2008) highlight the financial impact at £112 million per year, at approximately £1million per victim. These costs include those within public services, such as the criminal justice system, health care, social services, housing and civil legal services, as well as costs associated with “time off work due to injuries” and the emotional impact, thereby providing clear evidence of the cost to the “wider community and society, not only the victim” (Walby 2009, p5 & p3). In the context of continuing austerity across the UK public sector, the light Walby shines on the financial implications carries even more weight.

In light of this concerning picture, during a recent national inspection into the policing response to DA, HMIC concluded that the “response to victims of DA is not good enough” (HMIC 2014a, p6) and specifically recommended the risk assessment process “be made more efficient” (HMIC 2014a, p22). With the above challenging and significant impact of DA, combined with the views of HMIC, a justifiable case is presented to further our understanding of such behaviour, with the aim of better identifying and protecting those most at risk of serious harm.

Prediction

The use of prediction across the wider criminological arena has been thoroughly examined over the years (Farrington and Tarling, 1985), but less so within DA (Kropp, 2004), leaving a critical gap in understanding this high risk area.

Employing prediction methods is accompanied by an understanding that their accuracy is fallible, even more so when attempting to predict domestic homicide (Hoyle 2008). Murphy et al (2003, p1101) offer a further view that attempts to predict violent behaviour are “inherently complex and error prone”, highlighting the cautious approach required. Roehl et al (2005, p8) further argue that as a rare crime type, low domestic homicide rates produce statistical challenges to accurate prediction, a view shared by Campbell (1995) who comments that attempts to predict homicide are more challenging than other violent offences due to its rarity. Roehl et al (2005, p8) also highlight the “unique aspect” of DA, which is centred on the individual rather than the wider population, as is more commonly found with most other crime types. Additionally, Aldridge and Browne (2003, p267) drew attention to an obvious challenge when attempting to cast the net for critical domestic homicide data by commenting that often “the key witness to the homicide is the victim”. Although it can be argued that this is the case for all homicides, it illustrates the overall challenge of domestic homicide research.

When considering research based on predicting DA, Heckert and Gondolf (2004, p779) suggested two specific focal points; key risk factors and accurate risk assessments. With the above concerns raised to the fore, getting these right is paramount to keeping victims of such abuse and the wider public safe.

Risk Factors

Having examined DA risk factors, Kropp (2004, p676) highlighted “recent advances” in the knowledge-base. In doing so, Kropp (2004) added a note of caution due to a lack of common agreement amongst both practitioners and academics alike on what risk actually means when applied to violent behaviour. Describing risk as a “complex phenomenon”, Kropp (2004, p678) outlined studies portraying risk as how likely a violent act will occur in the future, and compared these to alternative views describing risk as focusing on “imminence, nature, frequency, and seriousness” of violent acts, then combining this with how likely it will occur. This concerning lack of consensus is corroborated by Hoyle (2008, p325) who paints a picture of risk as “inhabiting the world of uncertainty”, balancing the competing needs of numerous, sometimes conflicting “interrelated factors”. This complex and confusing picture of what risk is provides a challenge to our ability to compare the various risk assessment models developed over recent years and, more importantly, the key risk factors they are based on and the weight these factors could be given.

The advances in our understanding of risk factors, as highlighted by Kropp (2004, p676), were further validated by Hoyle (2008, p327), who drew attention to an increase in UK and US based studies that produced a wide variety of differing “risk variables” associated with DA, and more specifically “homicide within a domestic setting”. When taken together, these factors helped to identify common themes found within most serious and lethal DA. Examples of these common factors are wide and varied, and include taking note of the victims views on the

likelihood and severity of future violence, stalking behaviour, the woman ending the relationship, gun and knife ownership, threats involving weapons, threats made to kill, previous serious abuse, male partner threatening suicide, drug and alcohol abuse by the male partner, sexual assault, and obsessiveness, jealous and dominating behaviour (Hoyle 2008).

In Hoyle's (2008, p327) view this emerging picture of common risk variables led to a proliferation of risk assessments across North America. One example is the Spousal Assault Risk Appraisal (SARA) guide, developed by Kropp and Hart (2000) having identified a lack of suitable DA risk assessments at that time. The SARA guide was designed to assess the risk from adult male offenders, employing 20 risk factors distilled following an extensive review of available literature. These factors cover a wide range of issues including prior violent and sexual offending, use of weapons, threats to kill, violation of court orders, employment problems, substance abuse, suicidal intentions, victim of abuse as a child, an attitude that condones DA, and mental health issues. By way of a contrast, Dutton (1995) produced the Propensity for Abusiveness Scale (PAS) which, although not focused on abusive behaviour, applied factors claimed to be related to the potential for abuse. The PAS consisted of questions given to the offender to work through, concentrating on their ability to manage their anger, self-worth, childhood experiences, and anxiety levels. The completed questionnaire was compared to their partner's report of abusiveness and correlations between them were found to be strong and significant. An obvious limitation of the PAS is, although the use of correlations can highlight a relationship between variables, they do not imply causation. As an alternative risk assessment, Murphy et al

(2003) devised the Partner Abuse Prognostic Scale (PAPS) based on questions given to both offenders and their victims. These questions were produced from 17 risk factors chosen following a review of relevant studies, and included indicators probing issues such as the severity of violence within the relationship, the use of psychoactive drugs, an increased likelihood to respond violently to conflict, unemployment and cohabitation with the victim (Murphy et al, 2003). Although Murphy et al (2003, p1099) concluded that the PAPS was an effective predictor of DA, they highlight its limitations by recommending its use in “research contexts” only and that “practice applications should await further validation”.

Further to this, having reviewed numerous examples of DA risk assessments, Kropp (2004, p679) described the “considerable consensus” when exploring DA risk factors. In doing so Kropp (2004, p679) highlighted a number of wide ranging risk factors commonplace amongst risk assessments, such as past violence toward both family and non-family, a history of intimate partner abuse, the use of weapons, anti-social behaviour and peers, unstable relationships, unemployment, a victim of childhood violence, mental health issues, lack of motivation and a belief that DA is acceptable. In addition, during their review of 22 DA risk assessment studies, Aldridge and Browne (2003, p274) identified what they considered to be nine of the most common risk factors as including being a witness or victim to family violence, an age difference of 10 years or more, alcohol or drug dependence, sexual jealousy, separation or a threat of it, the time period since a separation, stalking, and having a personality disorder. They also included common-law relationships (as opposed to marriage), although it could be argued this style of relationship is becoming more prevalent, potentially diluting its impact.

Having outlined the above examples of risk factors commonly associated with DA risk assessments, a number of issues becomes clear. Firstly, although not considered causal, these factors are wide-ranging in nature and are believed to be commonplace in violent domestic relationships. Secondly, the sheer number of risk factors generated as a result of this extensive research risks diluting our understanding, as highlighted by Matza (1964, p23), who claimed “when factors become too numerous...we are in the hopeless position of arguing that everything matters.” Thirdly, each of the highlighted examples of risk assessment tools rely on widely varying risk factors requiring differing data sources and operating methods to complete them, further highlighting the challenge of comparing their effectiveness. Finally, although we have a wide range of common risk factors, our understanding of how they “determine who is at a high risk” is limited and it is clear that more scrutiny of them is required (Robinson and Howarth 2012, p1490).

Risk Assessments

For many decades DA has been “vigorously researched” (Aldridge and Browne 2003, p265), leading to a “substantial and growing investment” in risk assessments aiming to reduce serious and fatal harm (Trujillo and Ross 2008, p458). Kropp (2004, p677) further suggesting risk assessments were “at the very core” of the effort to prevent such abuse and in doing so described the three main models most closely scrutinised.

The first of these models are 'unstructured clinical assessments', considered the most commonly used. Kropp (2004, p680) offered a view that they are employed with little or no guidance for the user, leaving them to rely on their "clinical discretion" based on experience and qualifications. This reliance on 'gut feeling' presents significant concerns when managing those at risk of serious harm. This is further compounded by the view of Litwack and Schlesinger (1999) who describe these assessments as lacking "reliability, validity and accountability", with Grove and Meehl (1996, p293) charactering them as "informal, subjective, impressionistic". When considering their positive aspects Kropp (2004) outlines their ability to provide a unique analysis of individual cases, which are person and context driven, enabling tailored risk management plans. However, this view is swamped by the inescapable fact that they are discretion-based with outcomes focused on the views of the user and not of well evidenced and validated risk factors and management plans, leading Kropp (2004) to consider them as the least preferred option.

The second model is the 'actuarial assessment', considered by Hoyle (2008, p328) as the most effective prediction model. Kropp (2004, p681) describes their role as focused on predicting "specific behaviours" within a set period of time, achieved 'relatively' by comparing a person to a "norm-based reference group", and 'absolutely' by calculating a "precise, probabilistic estimate" of the likelihood of future violence occurring. Examples of this type of assessment include the Ontario Domestic Assault Risk Assessment (ODARA) and the Domestic Violence Risk Appraisal Guide (DVRAG) both of which assess the likelihood of assault between partners, in doing so comparing them to other violent

domestic abusers, whilst analysing the speed and frequency of reoffending and injury severity (VAM, 2015). Grove and Meehl (1996) further described actuarial models as “mechanical and algorithmic” in doing so highlighting their strength in terms of reliability and validity, but exposing their weakness in discounting practical experience. Kropp (2004, p681) raised concerns that actuarial assessments determine risk based on “cut off scores”, offering a view that true risk should not rely on numbers alone, requiring context for a more accurate picture. This imbalance between science and practice has impacted on users’ confidence in a model that removes their professional judgement. This is considered by Kropp (2004, p681) as a key hurdle to overcome when producing risk management plans and treatment programmes, which focus on the more human side of managing DA such as “victim empathy” and “attitudes to violence”. Having also reported modest effectiveness with actuarial models, Kropp (2004, p681) further claimed that users may also be concerned by relying on a single assessment, which ignores guidance advising professionals to seek “information from all perspectives”. Clearly, with such assessment models, a balance is required between total reliance on the numbers and professional and practical experience.

Having identified flaws in the first two models, the third attempts to bridge the gap. In the view of Kropp (2004, p683), the ‘structured professional judgement’ model seeks to blend the “scientific rigor and professional discretion” of the previous two assessments, to produce a “well-validated instrument” in the hands of experienced professionals (Roehl et al 2005, p7). With an aim to be “more prescribed” than the unstructured clinical model, whilst “more flexible” than

actuarial assessments (Kropp 2004, p683), this third model attempts to identify those most at risk and link risk factors with the most appropriate intervention. When employing this model, users follow guidance based on theory as well as clinical and empirical evidence, focusing attention on the relevant risk factors, other sources of information and appropriate management plans (Kropp 2004). Key to this process is identifying “dynamic” risk factors, bespoke to each case and leading to tailored management plans, which Kropp (2004) suggested blends the professional judgement of the unstructured clinical model with the reliability and validity of the actuarial approach. The Spousal Assault Risk Assessment Guide (SARA) is a widely known example of this model of risk assessment, as previously discussed, as is the Historical, Clinical Risk-20 (HCR-20). The HCR-20 tool focuses on 20 essential risk factors and how they relate to the subject, guiding the user through an assessment of both future risk of violence and the production of bespoke management plans (Douglas et al, 2013). Despite its best intentions, there is a lack of understanding as to whether the structured professional judgement model is effective.

One of the most widely regarded and influential domestic risk assessment tools is the ‘Danger Assessment’. This was initially developed by Jacquelyn Campbell in the 1980s as a prediction tool for domestic murder and focusses on the pressing need for those at risk of serious DA to become better informed of the “potential for homicide with their violent relationship” (Campbell 1993, p28). In her view, Campbell (1993, p29) considers both clinical DA risk assessment tools, and those based purely on statistical processes, as having “poor track records”, further corroborating the above descriptions. When explaining the Danger Assessment,

Campbell (1993, p31) described it as striking a balance between the two, offering a “statistical prediction” tool best placed in a clinical environment aiming to increase the accuracy of clinical prediction. The assessment process is broken into two parts; an evaluation of how severe and frequent the abuse has been over the previous calendar year and a risk factor based questionnaire, both of which aim to drive the risk management planning process (Campbell et al, 2009). The risk factors employed include the offender suicide threats or attempts, attempts to choke the victim, unemployment, access to a weapon or firearm, sexual assault, use of drugs, controlling or jealous behaviour and assaulting the victim whilst pregnant (Campbell et al, 2009). These were taken from a number of previous studies and evaluated in risk environments such as DA shelters and Hospital Emergency Room departments (Campbell et al, 2009). Having considered the issue of risk factors, Campbell (1993, p29) suggests that further clarity is needed on whether certain factors should be given more weight than others, claiming that some are “more predictive of homicide than others.” Throughout its life, the Danger Assessment has benefited from regular development leading to increased accuracy and diversifying into specific areas such as same-sex relationships (Campbell et al, 2009, p657). As part of its initial and ongoing development, the Danger Assessment focused on evaluating the risk group targeted against the wider risk population from which it came, so as to increase understanding of the factors it relies on against a wider context (Campbell et al, 2009). Although a US-based risk assessment, lacking validity within the UK, its development is a reminder of the level of evaluation required.

Having identified the wide variety of risk assessment models available, Kropp (2004, p691) commented on how they are evaluated, in doing so raising the issue of “false alarm rates”, commonly known as false positives and false negatives. Roehl et al (2005) describe false negatives as cases where the victim is considered low risk but is later assaulted, thereby raising serious concerns for both the assessment tool and victim safety. They also describe false positives as suspects who are identified as high risk, but commit no further assaults, and comment on the prevalence of both false measures in many risk assessments (Roehl et al 2005). Heckert and Gondolf (2004) suggest false positives could be as a result of effective targeting and offender / victim management, creating a paradox leading to confusion as to how effective the assessment tool was in the first place. During their review of a range of DA risk assessments, Berk et al (2005, p366) offered a view that although both were to be treated with caution, the overall “undesirable consequences” of false negatives outweighed those of false positives.

It is of note that, with the wide variety of risk assessment models available, and concerns regarding the number of false positive and negative cases generated, both Berk et al (2005) and Roehl et al (2005) comment upon the lack of effective evaluations of DA predictive tools. This is a view corroborated by Kropp and Hart (2000, p102) who lamented the lack of “widely accepted and well-validated” DA risk assessment tools. This presents a gap in our understanding, and is a clear focus of this thesis.

DASH - Risk assessment within England & Wales

In 2009, the DASH risk assessment was introduced to Police Forces across England and Wales (HMIC, 2014b). It was produced to provide UK policing with a standard risk assessment tool and was approved by the Association of Chief Police Officers (ACPO) as such (Richards et al, 2008). It is currently considered the primary tool to “identify high risk cases” (HMIC 2014a, p67), aiming of identifying risk early leading to effective interventions and the prevention of serious DA. DASH was designed to be used by all those who work within the DA arena, ensuring a partnership approach by referring high risk cases to the MARAC process within each force area (DASH, 2009). MARACs provide an arena for both statutory and voluntary partners, such as the Police, Probation, Children’s Services, Health and Housing, to review such cases leading to the sharing of information and production of “a co-ordinated action plan”, focusing on mitigating risks to the victim (Home Office, 2011). Central to the MARAC process is the view that no agency alone has a full understanding of the issues affecting a victim, and taken together the understanding is greater (CAADA, 2010).

DASH was developed in conjunction with CAADA, now known as ‘SafeLives’, and was based on its predecessors, SPECSS+ and the South Wales DA risk assessment models (Richards et al, 2008). Between January 2001 and April 2002, 30 domestic homicide cases were reviewed leading to conclusions influencing the development of SPECSS+, and latterly DASH (Richards et al, 2008). Designed to be a structured professional judgement risk assessment tool, Richards et al (2008) considered the key indicators of success to be a reduction in

domestic murder, a reduction in repeat victims considered at high risk of DA, improved risk identification and management of offenders and victims, and better information sharing with agencies.

During its development, key risk factors were identified in the 30 cases, sitting at the core of DASH. These factors included the victim's perception of risk and fears, separation, pregnancy, escalation, isolation, community or cultural influences, stalking and harassment, sexual assault, threats to or actual abuse of a child, access to weapons, threats to kill, strangulation, suicide, controlling behaviour, animal abuse, alcohol and drug abuse, mental health issues, breach of court orders, assault resulting in injury, increasing abuse, more severe abuse, financial concerns and unemployment, and other criminal activity (Richards et al, 2008). What is not obvious is how many of these factors were prevalent in the 30 cases, for example how many victims were pregnant and did this number warrant pregnancy becoming a key risk factor?

In each case of reported DA, attending officers complete the assessment with the victim. DASH consists of 27 questions, based on the above risk factors, and responses to the questions results in victims being classified as standard, medium or high risk. It aims to highlight which factors are most prominent, who is at most risk, and assists in identifying the most appropriate intervention at the earliest opportunity (Richards et al, 2008). Those cases who achieve a threshold score of 15 or above are graded as high risk, defined by Richards et al (2008, p125) as "risk which is life threatening and/or is traumatic, and from which

recovery, whether physical or psychological, can be expected to be difficult or impossible”, and considered by HMIC (2014a, p67) as having “identifiable indicators of risk of serious harm”.

Of the previously mentioned 27 questions within the DASH assessment, 10 focus on domestic violence history, with specific reference to repeating and escalating violence (DASH, 2009 and appendix 1). This is corroborated by Richards et al (2008, p143) who claim “research indicates that general violence tends to escalate as it is repeated”, clearly highlighting the dependence DASH places on this issue.

Repeating and escalating violence – the evidence

When considering such reliance on prior repeating and escalating violence as key risk factors, it is important to review the evidence that warrants such emphasis. As part of their review of DA risk assessing in Australia, Trujillo & Ross (2008, p465) suggest prior reporting of DA is a consistent and key risk factor and is the “best single predictor of re-assault”. This corroborates earlier US-based studies, focusing on which interventions work best to reduce recidivism, suggesting these were based on the premise that prior abuse is a key factor (Sherman, 1992). Within the UK, the ONS demonstrated that 30% of female victims had experienced such abuse more than once in the preceding 12 months, outweighing the 19% victimised only once (ONS, 2013). Of note, no statistically significant differences were noted for male victims, and with 50% of all

respondents not providing an answer to this key issue, the results clearly demand cautious reading (ONS, 2013).

To balance this key debate, evidence exists that contradicts this view. In their evaluation of the effects of second responder interventions on DA rates, Davis et al (2008 p6) suggests that a typical abuser's "career is either short or sporadic" and the majority of victims do not report abuse in the proceeding 6-12 months. Furthermore, Hoyle (2008, p326) claims that "three-fifths of domestic homicides occur at addresses to which the police have never been called" and very few cases of repeat abuse "results in homicide", thereby suggesting repeat calls as a predictor of domestic homicide "would be wrong in most cases". As part of their review of escalating domestic violence, Dobash et al (2007, p348) confirm how risk assessments tend to focus on the "potential of nonlethal and lethal violence", concluding that progression between the two is not supported, in doing so raising "dilemmas for the growing area of risk assessment" (Dobash et al 2007, p329).

More recent academic research further highlights the risk of DASH attributing previous, escalating violence to serious DA. As part of her PhD studies, Jackie Sabire (2013) examined 207 domestic murders in London between 1998 and 2009. She was able to identify gender-specific factors such as female offending related to intoxication, self-defence and knives used as weapons, with male offending linked closely with infidelity and suicide (Sabire 2013). Sabire (2013) also described a key finding that serious DA tended to be based within the

situation, as opposed to a link with previous violence. Having done so, she demonstrated that serious domestic harm and murder is not always inevitable within violent relationships, highlighting the unpredictability of such severe behaviour. Further to this, in 2014 Bland completed a study to identify any patterns in escalation of severity and intermittency of DA as part of his Master's thesis, which involved the review of over 36,000 DA records held by Suffolk Constabulary between 2009 and 2014. In doing so he confirmed that three-quarters of cases reported DA only once, and that a 'power few' could be identified with "80% of cumulative harm" committed in 2% of cases (Bland 2014, p89). Bland (2014) also confirmed that those cases with numerous prior calls to police showed no evidence of escalating harm until the third call, and even then, the increase in harm was small. In short, Bland (2014) concluded that no evidence existed for increasing severity, and that the majority of high harm cases had no prior DA contact with Police.

As can be seen, the dependence DASH has on prior, escalating violence is contradicted and polarises opinion, casting doubt on whether it should play such a prominent role in assessing risk of future serious domestic violence.

DASH evaluation

Within her thesis, Thornton (2011, p42) offered a view that, in the development of its risk factors, DASH lacked "comparison with any form of control group", casting doubt on the strength of the risk factors identified. As previously

mentioned, Bland (2014) reduced confidence in 'escalation of abuse' being considered as an effective DASH risk factor, further exposing a shortfall in its evaluation. As part of their review of UK-based domestic violence policies, Matczak et al (2011, p13) detailed the role of DASH, commenting "the impact of this initiative is yet to be fully evaluated." Further to this, within their commentary of DASH, Pease et al (2014) suggested that as a measure of risk it has no apparent link to an outcome measure, thereby limiting its predictive validity, highlighting its "flawed construction". Pease (2010) also commented on the lack of key DA literature in the development of DASH, a lack of confidence in the statistical analysis employed and ambiguous results. He also highlighted the lack of a peer-review process, which could have assisted in the development of DASH, but only serves to add further doubt as to its credibility (Pease 2010).

Summary

Key to the effective safeguarding of those most at risk is prevention, dependant on effective risk identification and management via multi-agency partnerships such as the MARAC process. This review of the literature highlighted a lack of understanding as to how effective DASH is, which generates a risk in itself in the ongoing struggle to reduce serious harm and improve efficiency during times of continuing austerity. This view is echoed by HMIC (2014a, p79) who "believes the service must look again at the effectiveness" of DASH as the DA risk assessment of choice within the UK.

METHODOLOGY

Introduction

As outlined within the literature review, over recent decades there has been a proliferation in the knowledge and understanding of risk factors and the risk assessments models they influence in DA. Also clear are the significant volume of factors this has produced, the broad differences in how the assessments are applied and, most importantly, the lack of effective evaluation of these assessments, which clouds our trust in them and how safe they make victims of serious DA. This is never more apparent than when considering the DASH risk assessment and the reliance placed on it nationally when attempting to identify and safeguard those most at risk within the UK.

This thesis initially seeks to clarify how effectively DASH is able to undertake its task, in a predominantly rural setting. In doing so, it identifies each serious and fatal domestic assault within Dorset during the lifespan of DASH and analyses them in order to seek answers to the first two research questions. The aim was to examine the ability of DASH to complete its task in predicting such serious offending. Having identified in the literature review the concerning lack of control group comparison during the development of DASH, this thesis then identifies both the cases and a control sample taken from the wider risk population. By way of a case-control study, it then analyses their exposure to alternative, evidenced-based risk factors in order to highlight any increased presence in either group.

To achieve this, the methodology employed throughout this thesis will replicate that used by Sara Thornton within her 2011 Cambridge Master's thesis. The following details the method adopted in order to examine each of the research questions.

The Research Questions

1. How many cases of serious domestic assault and murder in Dorset had a prior history of reporting Domestic Abuse?

As a risk assessment tool, DASH relies heavily on prior DA reports to the police, which enables an assessment of the risks and the development of a plan to mitigate them. As such, understanding how many serious DA victims had previously reported such violence was vital.

The Dorset Police crime recording system, known as the Criminal Intelligence System (CIS), was interrogated to identify all cases of murder, attempted murder, manslaughter and grievous bodily harm with intent, which carried a marker flag for DA. These cases constitute the numerator. The cases captured fell within the date range of 1 April 2009, the approximate date of DASH implementation, to 31 March 2015, and is therefore the widest possible date range from which to maximise the available data collated.

In determining which cases to include, serious but non-lethal DA reports were also submitted. These cases were considered 'near misses', where it was

more by luck than judgement that a fatal injury wasn't inflicted, as outlined by Campbell (1995, p29) who stated "whether or not a serious assault becomes a homicide may be determined by the speed and/or quality of emergency response." Including these additional cases also increases the case numbers from 11 murders within Dorset to a total number of 107 eligible cases, which substantially increases the statistical power of any analysis. Consideration was also given to including cases from neighbouring Wiltshire Constabulary in order to increase the case number. Having assessed the differences in data recording, and the impact this could have on internal validity, this was discounted at an early stage.

When considering the previously mentioned crime marker for DA, it is important to note that the UK Government Home Office DA definition (Home Office, 2013) was applied, as listed within appendix 2. All DA crimes both within Dorset and across the wider UK are 'flagged' using this definition and it is appropriate that any study seeking to improve the management of DA in the UK does so for the betterment of all such victims, as defined by the Government. This common approach allows for consistency and ease of comparison between UK-based studies. It also ensures that the true nature and extent of DA is represented and not just limited to victims who were female or within an intimate relationship, which would also significantly reduce the case number and with it the accuracy of our understanding. Of note, of the 107 eligible cases, 72 (67%) victims were female and 35 (33%) were male, with those in an intimate partner relationship numbering 91 (85%) and the remainder within the wider family setting. That said, it is acknowledged that this will create obvious challenges when considering both

intimate partner and family members together, and the possible impact this may have on the heterogeneity of case characteristics.

Having identified the appropriate data, each of the 107 victims were then scrutinised for any prior contact with Dorset Police since 1 January 2002. Although this risked missing some prior reporting it was considered as an acceptable cut off limit by Thornton (2011) as it would allow for a minimum of a generous seven years between possible reports. It is also likely that some victims would not have previously reported DA - the challenge of under-reporting such crimes was highlighted within the literature review – although the launch of the National Crime Recording Standards in 2003, and its increased requirements, would have reduced this risk.

2. How accurate was DASH based on prior history in terms of false positives / false negatives?

The 107 eligible cases were then studied to see if those with prior contact with Dorset Police regarding DA had been subject to a previous DASH risk assessment, and if so, what their most recent grading was. This process aimed to provide clarity as to the false negative rate of DASH within Dorset, when prior contact had been made with these victims of serious or fatal domestic violence, whose cases had been previously graded via DASH as standard or medium risk.

In order to examine the false positive rate, the Dorset Police CIS was further probed for all DASH risk assessments graded as high risk within Dorset during the same time frame between 1 April 2009 and 31 March 2015, resulting in 12,301 identified cases. These were then compared to the 107 cases of serious and fatal domestic assaults already highlighted, to clarify how many of these high risk cases did not go on to be seriously or fatally assaulted. Only a brief examination of the false positive rate, it is done so to frame any issues. It is acknowledged that it may be considered impossible to estimate how much, if any, repeat violence was prevented by the use of DASH and any subsequent safeguarding measures developed during the MARAC process.

3. Can a case-control study produce more accurate risk indicators than analysis of the numerator alone?

As highlighted previously in this chapter, the 'numerator' is categorised as all recorded crimes of murder, attempted murder, manslaughter and grievous bodily harm with intent, which carried a marker flag for DA within Dorset, within the date range of 1 April 2009 to 31 March 2015.

In answering research questions 1 and 2, clear shortfalls were identified with the use of DASH within Dorset with regards to prior contact, false negative and false positive rates. These highlighted concerns corroborating those outlined in the literature review and, as such, the focus moved to the DASH risk factors. As identified within the literature review, in engineering DASH it was apparent that

these factors had been developed from the analysis of a cohort of murder cases without making any comparison with the larger violent crime risk pool. During the ongoing development of the highly regarded Danger Assessment, Campbell et al (2003) compared lethal DA cases with non-lethal cases. This method enabled her to employ a case-control study using bivariate (victims only) and then multivariate (both victims and offenders) analysis. Due to the success of the Danger Assessment, Thornton (2011) viewed this as a key method for her analysis of DASH within the Thames Valley area, but due to time constraints focused on bivariate analysis only.

As a method of analysis, case-control studies are observational, as opposed to experimental, and are predominately used to gain an understanding of the epidemiology of disease within medical research, particularly where ethics play a key role (Lewallen and Courtright, 1998). As the study of the risk factors associated with serious and fatal DA carry similar ethical concerns, a case-control study was considered appropriate. They are designed to clarify any link between exposure and outcome in both the cases and the control groups, and operate retrospectively, starting with the outcome and working backwards, highlighting association but not causation (Lewallen and Courtright, 1998). Case-control studies are considered ideal by Lewallen and Courtright (1998) for investigating risk factors associated with rare medical conditions, therefore are appropriate for similar rare criminological events such as serious and fatal DA. When selecting the case and control groups, care is needed to ensure similarity in terms of sample characteristics so as to limit bias, and to add power to the analysis of a case-control study more than one control sample is required for each case,

although more than two is not considered necessary (Lewallen and Courtright, 1998).

For this thesis, a case-control study was employed with the aim of clarifying whether alternative risk factors would better identify high risk victims of DA than those used by DASH. To achieve this, it will compare the actual cases to a control group, undertaking an important process not completed during the development of DASH. The focus of the study is how likely these factors are to appear in the cases and control groups, by first considering the incident rates in both. In the view of Schlesselman and Stolley (1982) analysis of these incidence rates identifies the ratio between them, producing R , where $R > 1$ is a positive association and $R < 1$ a negative. It is important to note that the purpose of case-control studies is not to highlight incidence rates, but to provide clarity on the relative risk between the groups under scrutiny, as case and control groups are chosen from the same overall population. Monahan and Steadman (2003) explained that in determining a prevalence rate it is best to divide the known cases by the overall population. As such, the prevalence rate of lethal or serious domestic assault in Dorset over 6 years was 107 cases divided by 6 producing an average of 17.6 per year. This is further divided by the Dorset population of 754,500 to produce a rate of 2.34 per 100,000 population per year. By comparison, Thornton (2011) identified a prevalence rate in the Thames Valley area of 1.78 per 100,000 per year, highlighting a higher rate in Dorset.

To identify the case-control samples Thornton (2011) noted that only a minority of victims of serious or fatal domestic assaults had reported previous DA

(45%) in the Thames Valley area. As such, 'victims' were not considered suitable as the optimal group for the study and the 'offender' group were employed as a broader cohort for the case-control comparison. Of note, in Dorset, 63% (67/107) of the victims were identified as having reported previous DA, which is a clear majority and differs from the findings of Thornton (2011). In keeping with this being a replication of Thornton (2011) this thesis continued with 'offenders' as the optimal group, having done so the search for the most appropriate offenders began. Of the 107 cases of serious and fatal DA in Dorset, 107 offenders were identified. To identify the most appropriate comparison group of offenders, the following offender history analysis occurred, with the results of Thornton (2011) in brackets for comparison –

Previous criminal record	Number	% of cases
Offender has prior criminal record	87 (83)	82.1 (69.1)
Offender has prior criminal record for violence	58 (58)	54.7 (48.3)
Offender has prior arrest	90 (92)	84.9 (76.6)
Offender has prior arrest for violence	83 (71)	78.3 (59.1)

Offender has no prior criminal record	15 (37)	14.1 (30.8)

Table 1: Offenders criminal histories

As highlighted previously, both control and case samples must be similar within case-control studies to ensure analysis regarding exposure is not compromised (Lewallen and Courtright, 1998). In helping to achieve this, the above table identifies 'prior arrest' and 'prior criminal record' as having the highest prevalence in the offender case group, in doing so offering a view as to which offenders to focus on when selecting the offender control cohort. As can also be seen, this was the case within the Thames Valley area, which led Thornton (2011) to explore this further. Having done so, Thornton (2011) highlighted the view of Farrington et al (2006), who found that 40% of men have criminal records by the age of 50, thereby risking the production of a large cohort with the potential of increased false positives. Due to these concerns, the third largest group from table 1, 'prior arrest for violence', came into focus. This category of offenders was less likely to produce false positives as they are common within 78% of case offenders in Dorset, despite such arrests being a minority of arrests generally. As another common factor between the Dorset and Thames Valley data, this category of offenders was considered a more appropriate cohort and was chosen for the selection of both case and control offenders within this thesis. As such, the sampling framework for the control group was confirmed as all offenders arrested for violence during the same time frame from 1 April 2009 to 31 March 2015 in Dorset. These included offences within the Home Office category of violent crime,

as listed at appendix 3, with or without a domestic violence flag, providing a wider risk population from which the case offenders came.

Having identified the sampling frame, the process of selecting the control sample from it began. The sampling frame identified 27,870 offenders who matched the above criteria, clearly necessitating a need to select a more manageable control cohort size, representative of the characteristics of the case offenders. Thornton (2011, p49) described beginning with a process known as “stratified sampling” within age groups, although upon closer inspection the process of ‘quota sampling’ is a more accurate description. Bachman and Schutt (2011, p128) describe quota sampling as similar to stratified sampling, albeit less “rigorous and precise”. Quota sampling is focused on dividing the wider population into “proportions of some group that you want to be represented in your sample”, in this case, the age range of the cases (Bachman and Schutt, 2011). As such, the age range of the cases (the age of the offender at the date of the offence) was identified as 16 to 83 years, and was applied to the sampling frame. All of the sampling frame offenders, whose age at the time of their arrest for violence fell within this range, were selected. This is clearly a wide age range with 23,015 male offenders within the sampling frame and 3,891 female, providing a total of 26,906 from the overall population of 27,870. This large sample clearly highlights limitations with quota sampling, which Bachman and Schutt (2011, p129) comment include “no way of knowing if the sample is representative” of other characteristics and are non-probable, lacking “random selection”.

To further narrow the sampling frame to an appropriate control sample size, Thornton (2011, p49) reviewed “theoretically relevant” case characteristics, highlighting the need for case and control samples to be similar, ensuring increased outcome confidence. In doing so, Thornton (2011) commented upon Johnson’s (2008) view that significant differences exist in the type of violence used by both male and female offenders, introducing gender as a means to sample further. Such significant differences in cases need to be catered for in a case-control study and in doing so Thornton (2011, p49) described the process of “randomised block design”. Upon closer inspection the process of ‘random sampling’ is a more accurate description. The randomisation, or random assignment, process in randomised block design ensures cases involved in a study are “randomly divided” into both test and comparison groups, whereas random sampling ensures cases are chosen for a single sample group (Bachman and Schutt 2011, p177). As such, control samples were randomly selected from the quota sample and arranged into male and female blocks. As stated previously, to achieve the required power of analysis, twice the number of control samples were necessary, compared to the cases (Lewallen and Courtright, 1998). To ensure this, the number of cases within the female control sample was set at 58, to be compared against the 29 female case offenders, with the male sample set at 156, to be compared against the 78 male cases.

Having identified the final female case and control cohorts, they will be tested for exposure to selected risk factors, as outlined in table 2 below. This will be followed by bivariate analysis and the process repeated for the male case and control cohorts. The risk factors employed within table 2 are replicated from

Thornton (2011), and exposure to them will be evaluated via the Police National Computer (PNC) record of each offender against a hypothesis of ‘In comparison with offenders who do not commit serious domestic harm those who do will be more likely or less likely to.....’

Criteria	Evidence
Number of prior arrests	There are some studies which suggest that those who commit serious domestic violence often have less substantial criminal histories than those who commit the less serious domestic violence (Dobash et al, 2007).
Number of prior arrests for violence	As above.
Number of prior convictions and cautions	Many who kill their partners are already in the criminal justice system (Stanko, 2008).
Number of prior convictions and cautions for violence	As above.
Age at first arrest	
Age at first arrest for violence	
Age at first conviction	
Age at first conviction for violence	
Employment	Campbell’s work in the US found that unemployment was a significant risk factor for lethal attacks. (Campbell et al, 2009)

Weapons	The individual has used a weapon to commit an offence or intelligence suggests that he carry a weapon unlawfully. Again, Campbell's research found this to be a proximate risk indicator.
Firearm	Intelligence or conviction information exists to suggest that the individual has used, and may use or possess a firearm or imitation for the purpose of committing crime.
Drugs	This describes a very loose association with controlled drugs.
Self-harm – other than suicide	The individual may cause harm to themselves.
Suicidal	Previous history or threats indicate that the individual may make a determined effort to commit suicide.
Mental health	The subject is known to suffer from a mental condition or order.

Table 2: Case-control variables

The final stage of the analysis process is to test the results of the bivariate analyses for significance. A series of t-tests for independent samples will be applied to the case and control samples with reference to the first eight of the above variables, which consider offending history. Cohen's D (standardized mean difference) will be then employed to measure any effect size. The remaining

seven variables, relating to the exposure of PNC warning markers, will be evaluated by way of the relative risk ratio process described previously.

RESULTS

Presented in four sections, this chapter begins with a descriptive analysis of DA crimes, as reported to Dorset Police, focusing on serious and fatal harm, namely Murder, Attempted Murder, Manslaughter and Grievous Bodily Harm with intent. It then seeks to answer the three research questions in turn, beginning with an analysis of the prior reporting history of the victims of serious and fatal abuse, followed by reports on the false positive and false negative rates of DASH within Dorset, thereby offering a view as to how well it is able protect those most at risk. It concludes with the outcomes of the case-control study, to clarify how other risk factors perform in Dorset in terms of identifying DA offenders who have committed serious or fatal harm. Throughout this chapter, occasional comparison is made against the similar results highlighted by Thornton in her 2011 thesis, which included both Thames Valley and Hampshire offences. It is acknowledged that these comparisons are for illustrative purposes only due to potential differences in data sets, including differing time frames and possible differences in the recording practices of officers in each force area.

Descriptive analysis

107 offences of Murder, Attempted Murder, Manslaughter and Grievous Bodily Harm with intent were reported to Dorset Police between 1 April 2009 and 31 March 2015, the life span of DASH within the County. These reports focused on the Home Office definition of DA and included male and female victims, aged 16 and over and included both intimate partner and family members.

Offence	Offences between 2009 - 2015	% of sample
Murder	11	10.3
Attempt Murder	12	11.2
Manslaughter	1	0.9
GBH with intent	83	77.6
TOTAL	107	100

Table 3: DA offences in Dorset

Table 3 highlights the spread of offences, with 11 (10.3%) murders, 12 (11.2%) attempted murders, 1 (0.9%) manslaughter and 83 (77.65%) grievous bodily harm with intent. This follows a very similar distribution found in Thames Valley by Thornton (2011).

	Murder	Attempt Murder	Manslaughter	GBH W/I	All offences
Female victims	8 (73%)	10 (83%)	1 (100%)	53 (64%)	72 (67%)
Male victims	3 (27%)	2 (17%)	0 (0%)	30 (36%)	35 (33%)
TOTAL	11 (100%)	12 (100%)	1 (100%)	83 (100%)	107 (100%)

Table 4: Gender and outcomes in Dorset

Male victims made up 33% (35 cases) of the total, with 67% (72) female victims. This is slightly more than Thornton (2011) found in the Thames Valley area with 57% female victims. The male offender rate was 73% (78), with 27% (29) female offenders. The average age of offenders was 36 years, with victims averaging 38 years, very similar to that found by Thornton (2011). Table 4 shows

the kinds of offences with 'GBH with intent' the vast majority (77.5%) of the 107 cases. It also highlights differences in victimisation between genders, with 1 in 9 females murdered, compared to almost 1 in 12 males. This finding is in line with Hester's (2009, p19) view that "men and women appear to experience and use violent / abusive behaviour in different ways", with women more likely to use weapons to protect themselves. This is a smaller difference to that found by Thornton (2011) who found in her data set 1 in 6 women were murdered compared to 1 in 25 men. Of the 107 Dorset cases, 91 were offences between intimate partners, with just 16 between family members.

When considering the geographical spread of the 107 cases, table 5 below provides an illustration in terms of the cases of serious and fatal DA per 100,000 population per year. The results could be considered misleading due to the small population numbers, for example, Sturminster Newton, a small rural village, has the highest rate of 7.65 cases per 100,000 per year. Kahneman (2011) reminds us of the "law of small numbers" and the care needed in interpreting results associated with them.

Local police area	Frequency of serious and fatal DA cases (2009 – 2015)	Area population	Serious and fatal DA cases per 100,000 population per year
Blandford Forum	1	10,541	1.58
Bournemouth (Unitary Authority)	49	188,730	4.33

Bridport	3	14,697	3.40
Christchurch (Authority Area)	4	48,370	1.37
Dorchester	3	19,143	2.61
Ferndown	5	17,981	4.63
Gillingham	1	11,871	1.40
Poole (Unitary Authority)	20	149,010	2.24
Sherborne	1	9,581	1.74
Sturminster Newton	2	4,355	7.65
Verwood	2	14,985	2.22
Wareham	2	5,490	6.07
Wimborne	2	6,901	4.83
Weymouth and Portland (Authority Area)	12	65,130	3.07

Table 5: Geographical spread of cases

The geographical spread of the cases can be better understood when comparing the rural / urban divide. Bournemouth, Poole, and Weymouth & Portland are considered to be the main urban population centres of the County, with the remainder considered rural. With this assumption in mind combining Bournemouth, Poole, and Weymouth & Portland provides a value of 3.35 cases per 100,000 population per years, compared to a value of 1.28 for the remainder of the County, illustrating a clear difference in rates.

QUESTION 1 – How many cases of serious domestic assault and murder in Dorset had a prior history of reporting DA?

When considering the first research question regarding prior contact, 67 of the 107 cases had previously contacted Dorset police for a domestic incident (63%). This is much higher than the 45% found by Thornton (2011). Of the 35 total male victims, 23 (66%) had prior DA contact with Police, as did 44 of the 72 female victims (61%). These prior contact rates are also higher than those identified within the Thames Valley area, with Thornton finding male and female rates of 46% and 42% respectively.

Victim's most recent prior domestic incident contact with the police	Number	% of sample
Non-crime domestic incident (verbal altercation)	21	31.3
ABH	16	23.9
Common Assault	13	19.4
Harassment	5	7.4
Breach of injunction	4	6.0
Public Order / Breach of the Peace	3	4.5
Criminal Damage	2	3.0
Theft	1	1.5
GBH	1	1.5
Sexual Assault (minor)	1	1.5

Total	67	100
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Table 6: Most recent prior victim contact with the police for domestic incidents

Thornton (2011) undertook further analysis of the crime type of the most recent previous police contact by the victims. Within Dorset, table 6 highlights low harm, minor and non-crime domestic incidents as the majority of prior cases, with verbal altercations accounting for 21 of the 67 cases (31.3%), followed by ABH and Common Assault with 16 (23.9%) and 13 (19.4%) respectively, with GBH only accounting for 1 case (1.5%). This is very similar to the trends identified by Thornton (2011) in the Thames Valley area and adds a counter-view to the assumption that prior DA offending escalates in severity. Of note, questions within DASH include many on previous, escalating harm, suggesting this as an apparently significant risk factor.

Total number of contacts	Number of victims	Cumulative %
20+	3	3
10-19	10	12
3-9	33	43
2	8	50
1	13	63
Sub-total	67	63
No prior DA contact with police	40	37
TOTAL	107	100

Table 7: Prior incident contacts between victim and Dorset police

When considering volume, table 7 shows that 37% of victims of serious and fatal domestic assaults had no prior contact with Police. More specifically, 8 out of the 11 domestic murder victims in Dorset had no prior contact with police. As a risk assessment tool, DASH is focused on identifying and protecting these victims, but relying on prior reporting would not identify 73% of domestic murders in Dorset. In addition, where the victims had made prior contact with police regarding previous domestic assaults, 31% had only 1 or 2 prior contacts. When combined, of the 107 cases, 61 (57% of all cases) had between 0-2 prior contacts with police regarding DA. Tables 7 and 8 offer a contradicting view to the widely held assumption made by DASH that DA increases in escalation and severity. These are similar to the trends identified by Thornton (2011, p56), who found that “nearly half of the cases involved only one prior contact” and also support the findings of Bland (2014).

QUESTION 2 – How accurate was DASH based on prior history in terms of false positives / false negatives?

False negatives

The victim data was then scrutinised to clarify whether those with prior contact regarding DA had been subject to a previous risk assessment, and if so, to what grading. The analysis included those cases where prior victim contact had taken place and a DASH grading of standard or medium risk had been identified.

Risk Assessment	Number	%	Valid %
High	22	21%	33%
Medium	16	15%	24%
Standard	29	27%	43%
Prior DA Contact but RA not known or not recorded	0	0%	0%
N/A as no prior DA contact with Police	40	37%	-
TOTAL	107	100%	100%

Table 8: Prior risk assessment

Analysis of the risk assessment gradings, as shown in table 8, shows that of the 67 domestic homicides or serious assaults with prior DA contact, only 22 (33%) were previously graded as high risk. Of note, 45 were not, with 29 cases (43%) with prior police contact assessed as standard risk, and 16 (24%) assessed as medium risk. The false negative rate was then calculated by dividing the number of cases that were not assessed as high risk (therefore not considered by MARAC safeguarding measures) by the total number of cases where there was both prior contact and a risk assessment completed. This represents 45 of the 67 cases, thereby providing an overall false negative rate of 67%.

More specifically, only 3 of the 11 domestic murder victims in Dorset had previous DA contact with Police. When considering those cases, only one of the three had been previously risk assessed as high, the other two had been risk

assessed as standard, again providing a 67% false negative rate. Additionally, when considering attempted murder, 3 of the 5 cases had not been graded high risk, providing a false negative rate of 60%. The victims of Grievous Bodily Harm with intent, with prior contact, had not been graded high risk in 40 of the 59 cases, a 69% false negative rate. The single case of manslaughter did not have prior contact with police.

What does this mean? 67% of serious domestic assaults and murder victims, with prior police contact and a risk assessment conducted using DASH, had not been graded as high, and shows the false negative rate for DASH in Dorset is high. Within the Thames Valley area, Thornton (2011) had also identified high levels of no prior contact and false negative rate, 55% and 90% respectively. Concerned that DASH had been applied with bias in the Thames Valley area, Thornton (2011) compared these levels with those in neighbouring Hampshire Constabulary. Table 9 illustrates the rates identified and are listed with the Dorset result for comparison.

Force	No prior contact rate	False negative rate
Dorset	37%	67%
TVP	55%	90%
Hampshire	48%	63%

Table 9: Force comparisons

Having undertaken a Thames Valley / Hampshire comparison, Thornton (2011) commented upon a number of variations between the two force areas.

Beginning with the prior contact rates, in both Thames Valley and Hampshire approximately 50% of serious or fatal DA cases had no prior contact, an issue which Thornton (2011) suggests highlights a clear weakness of DASH. Of note, the Dorset level of 37% is noticeably lower than both forces.

A clear gap in terms of false negative rates is also apparent, with very high levels observed in Thames Valley, when compared to those found in Hampshire and Dorset. Thornton (2011, p60) offers a view that the higher levels are due to “comparatively lower level of cases assessed as high risk” and is “problematic in the accuracy of its prediction”. Differences were also noted in the risk assessment grading of the prior victim contact, with more high risk assessments identified in Hampshire (17%) than Thames Valley (4%), with the Hampshire levels closer to those found in Dorset (21%).

When considering the offences, slight differences in the levels of Grievous Bodily Harm with intent were identified, with 74% in Thames Valley and 86% in Hampshire, with Thornton (2011) offering a view that this was likely to be related to differing offending levels and recording practices. The Dorset rate of 77% is midway between the two forces.

In her analysis of fatal harm, Thornton (2011) noted that of the 17 murders recording in Hampshire, 11 victims had no prior contact with police and 3 had prior contact with police resulting in a high risk assessment. This can be compared to the 13 murders in the Thames Valley area, of which 7 victims had no prior contact and none were previously assessed as high risk following prior police contact. Of

note, of the 11 murders in Dorset, 8 victims had no prior contact and only 1 victim had previous contact with police graded as high risk. In providing this analysis, Thornton (2011) highlights the flawed reliance DASH has in focusing on prior contact as it will miss 54% of murders in Thames Valley, 65% in Hampshire and 73% in Dorset.

False positives

In seeking to clarify the false positive rate within Dorset all high risk assessments conducted over the same date range was collated and compared to the cases of serious and fatal domestic assaults already highlighted. Having done so, 12,301 high risk assessments were recorded over the period of April 2009 to March 2015, with only 22 later resulting in a serious or fatal domestic assault. This equates to a False Positive rate of greater than 99%. It is important to note that this rate could be misleading and indicative of safeguarding measures put in place as a result of the high risk grading and exposure to the MARAC process.

Local police area	High risk assessments (2009 – 2015)	Area population	High risk assessments per 1000 population per year
Beaminster	27	3,087	1.45
Blandford Forum	113	10,541	1.78
Bournemouth (Unitary Authority)	4881	188,730	4.31
Bridport	129	14,697	1.46

Christchurch (Authority Area)	653	48,370	2.25
Dorchester	237	19,143	2.06
Ferndown	197	17,981	1.82
Gillingham	150	11,871	2.11
Lyme Regis	25	3,637	1.15
Poole (Unitary Authority)	2799	149,010	3.13
Shaftesbury	78	7,707	1.69
Sherborne	110	9,581	1.91
Sturminster Newton	47	4,355	1.79
Swanage	82	9,556	1.43
Verwood	53	14,985	0.59
Wareham	42	5,490	1.27
Wimborne	41	6,901	0.99
Weymouth and Portland (Authority Area)	1298	65,130	3.32

Table 10: Risk assessments by Local Police Area

When considering the geographical spread, table 10 shows wide differences in the number of DASH risk assessments graded as high across Dorset. Unsurprisingly, the highest is in Bournemouth at 4.31 per 1000 population per year and the lowest in Verwood at 0.59, against a County wide average rate of 1.91. This reflects a common theme in terms of lower high risk DASH assessment rates in rural areas and higher in the denser, more populated conurbations of Bournemouth, Poole and Weymouth. That said, how DASH is applied by officers could also be a factor, particularly with those towns with similar population sizes, but differing rates. Both Verwood and Bridport have approximately 14,500 people

but high risk assessment rates of 0.59 and 1.46 respectively. This is an issue worthy of further exploration, but beyond the scope of this thesis. Also of note, all of these high risk cases will have been fed into the MARAC process and led to significant partnership working and demand, a key issue worthy of consideration by all agencies involved navigating public sector austerity.

QUESTION 3 – Can a case-control study produce more accurate risk indicators than analysis of the numerator alone?

In attempting to answer this question, the case offenders were compared to a sample of control offenders, drawn from the wider risk population, in terms of exposure to a number of alternative risk factors. To assess the comparability of the control sample with the case offenders, initial analysis was undertaken to clarify any if any difference existed between the case and control offenders in terms of prior violent offending. In doing so, offenders in both groups with no prior convictions and cautions for violent offences were identified and compared, with the results displayed in table 11.

Proportion of DA case offenders who are first time offenders		Proportion of control sample who are first time offenders / only have one offence	
MALE	FEMALE	MALE	FEMALE
		42 / 156	19 / 58

25 / 78 (32.1%)	14 / 29 (42.3%)	(26.9%)	(32.8%)
TOTAL = 39 out of 107 (36.4%)		TOTAL = 61 out of 214 (28.5%)	

Table 11: First time violent offenders

In order to clarify if any differences between the case and control offenders occurred by chance alone, a series of Z-tests were undertaken¹. The male case offenders were compared with the male control group, resulting in a Z-score of 0.8181 and a p-value of 0.41222. The result was not significant at $p < 0.05$. The female case offenders were then compared with the female control group, resulting in a Z-score of 1.4062 and a p-value of 0.15854. Again, the result was not significant at $p < 0.05$. When the total case offenders were compared with the total control group, the Z-Score produced was 1.4487, and the p-value 0.14706. This result was also not significant at $p < 0.05$. An 8-cell Chi-square test was then conducted involving all cases and both genders producing a chi-square score of 5.36 (DF=3) and a p value of 0.1473, highlighting no statistically significant difference.

Male block

The male offenders involved in serious or fatal DA and the sample of male offenders from the wider risk population of those arrested for all Home Office

¹ This is a difference of proportions test, so the Z-test is closest. Strictly speaking, a significance test is inappropriate because the cases are not a sample, but a 'universe'. However, if they were considered as a sample over a longer time period, it could be considered excusable to use a significance test for difference of proportions.

violent offences, were then compared, in terms of exposure to the alternative risk factors identified by Thornton (2011). This analysis occurred via a series of t-tests for independent samples to investigate any significant difference between the two groups, at the 0.05 level. This was followed by a Cohen's d test to clarify any effect size and table 12 below illustrates the outcomes of these comparisons.

	Offenders in the Dorset cases (<i>standard deviation</i>)	Offenders in the Dorset control sample (<i>standard deviation</i>)	Effect size Cohen's d	P value of T test
Average number of prior arrests	11.96 (13.90)	16.70 (28.48)	0.211	0.167
Average number of prior arrests for violence	4.65 (5.57)	6.56 (8.00)	0.277	0.061
Average number of prior convictions and cautions	18.23 (23.19)	17.79 (32.44)	0.016	0.916
Average number of prior convictions and cautions for violence	3.74 (4.77)	5.26 (7.10)	0.251	0.091

Average age at first arrest	23.17 (13.87)	21.74 (10.09)	0.118	0.370
Average age at first arrest for violence	27.90 (14.77)	23.91 (9.89)	0.317	0.016
Average age at first conviction	22.41 (12.20)	20.01 (7.66)	0.236	0.094
Average age at first conviction for violence	27.38 (14.35)	22.20 (7.26)	0.455	0.002

Table 12: Male case control – significant variables

When comparing the 'Average number of prior arrests' across Dorset, the t-test did not detect a significant difference between the male case group and control group ($p = 0.167$), and with $d = 0.211$, the effect size was small. In addition, when considering the 'Average number of prior arrests for violence', the t-test also found no statistically significant difference when comparing the male case and control groups ($p = 0.061$). The effect size was also noted as small with $d = 0.277$.

With regards to the 'Average number of prior convictions and cautions', there was no statistically significant difference between the male case group and control group ($p = 0.916$), and with $d = 0.016$, the effect size was minimal. Furthermore, in respect of the 'Average number of prior convictions and cautions for violence', the t-test compared the difference between the male case group and

control group, and again found no statistical significance ($p = 0.091$). With $d = 0.251$, the effect size was small.

Having compared the 'Average age at first arrest', the t-test did not detect a significant difference between the male case and control groups ($p = 0.370$), with a small effect size noted with $d = 0.118$. Further comparing the 'Average age at first arrest for violence', the t-test did find a statistically significant difference between the male case group and control group ($p = 0.016$), and with $d = 0.317$, a small to medium effect size was apparent.

When observing the 'Average age of first conviction', the t-test compared the difference between the male case and control groups and found no statistical significance ($p = 0.094$), and with $d = 0.236$, the effect size was small. A further comparison of the 'Average age of first conviction for violence' between the male case group and control group, resulted in a statistically significant difference between the two ($p = 0.002$), with a medium effect size of $d = 0.455$.

For two of the eight variables statistically significant differences were observed at the 0.05 level, with 'Age at first conviction for violence' offering a P value of 0.002 and 'Age at first arrest for violence' a P value of 0.016. When considering their d values of 0.317 and 0.445 respectively, they provide some clarity on potential risk factors when focusing on male offenders of serious and fatal DA in Dorset.

By comparison, Thornton (2011) found statistically significant differences between the male case and control groups in the Thames Valley area, with higher case ages at 'first conviction for violence', 'first conviction', and 'first arrest for violence'. Thornton (2011) also found significant differences in terms of higher control group numbers of prior 'convictions and cautions for violence', and 'arrest for violence', highlighting both similarities and differences in offending behaviour in the two force areas.

The two male offender groups were then further compared by way of relative risk ratio analysis, in terms of selected PNC warning markers, with the results presented in table 13 below.

	Offenders in the Dorset cases	Offenders in the Dorset control sample	Relative risk ratio
Unemployed	42.3%	43.6%	0.970
PNC warning for Weapons	17.9%	15.4%	1.162
PNC warning for Firearms	1.3%	1.3%	1.000
PNC warning for Drugs - describes a loose association controlled drugs	23.1%	17.9%	1.290
PNC warning for Self-Harm – other than suicide	14.1%	6.4%	2.203

PNC warning for Suicidal	7.7%	6.4%	1.203
PNC warning for Mental Health	5.1%	9.6%	0.531

Table 13: Male case control – relative risk ratios

A difference was noted with the PNC warning marker for self-harm, with 14.1% of case offenders having the marker compared to 6.4% of the control group. With a relative risk ratio of 2.20 this highlights that, within Dorset, male offenders who have committed serious or fatal DA are more than twice as likely to have this marker than the wider population group. Of interest, in the Thames Valley area, Thornton (2011) identified suicide as the only PNC marker of note, with a relative risk ratio of 3.23, highlighting a potential common risk in terms of mental fragility and self-harming amongst men in this serious offender group.

Female block

The female offenders in serious and fatal DA in Dorset were compared with female offenders from the wider risk population of those arrested for violence, by way of a t-test for independent samples. Again, this test looked for differences between these two groups in terms of criminal history and whether that difference was significant. A Cohen's d test was then conducted to establish any effect size and the results of these analyses are present in table 14 below.

	Offenders in the Dorset cases	Offenders in the Dorset control sample	Effect size Cohen's D	P value of T test

	<i>(standard deviation)</i>	<i>(standard deviation)</i>		
Average number of prior arrests	7.86 (13.36)	9.12 (14.91)	-0.089	0.702
Average number of prior arrests for violence	2.76 (5.01)	5.09 (8.89)	-0.322	0.195
Average number of prior convictions and cautions	12.97 (25.07)	5.58 (8.38)	0.395	0.046
Average number of prior convictions and cautions for violence	2.66 (6.29)	3.46 (8.01)	-0.111	0.640
Average age at first arrest	27.96 (11.74)	26.11 (11.46)	0.159	0.499
Average age at first arrest for violence	31.73 (12.56)	27.68 (11.26)	0.339	0.147
Average age at first conviction	26.57 (10.53)	21.94 (8.01)	0.494	0.071
Average age at first	33.61 (11.99)	25.50 (9.82)	0.739	0.018

conviction for violence				
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Table 14: Female case control – significant variables

When comparing the 'Average number of prior arrests' across Dorset, the t-test did not detect a significant difference between the female case group and control group at the 0.05 level ($p = 0.702$), and the effect size was minimal ($d = -0.089$). In addition, when considering the 'Average number of prior arrests for violence', although the difference between the female case and control groups was not considered statistically significant at the 0.05 level ($p = 0.195$), the noteworthy d value of -0.322 indicates a small to medium effect size in terms of a greater number of arrests observed in the control group.

With regards to the 'Average number of prior convictions and cautions', there was a statistically significant difference between the female case group and control group ($p = 0.046$), and with $d = 0.395$, the effect size was small to medium. Furthermore, in respect of the 'Average number of prior convictions and cautions for violence', there was no significant difference between the female case and control groups ($p = 0.640$), with a small effect size noted ($d = -0.111$).

Having compared the 'Average age at first arrest', the t-test did not detect a significant difference between the female case group and control group at the 0.05 level ($p = 0.499$). With $d = 0.159$, the effect size is small. Further comparing the 'Average age at first arrest for violence', although the t-test did not detect a significant difference between the female case and control groups ($p = 0.147$), the

$d = 0.339$ indicates a small to medium effect size in terms of a higher age within the case offenders.

When observing the 'Average age of first conviction', the t-test compared the difference between the female case group and control group and found no statistically significant difference at the 0.05 level ($p = 0.071$), but a medium effect size of $d = 0.494$ is worthy of note. A further comparison of the 'Average age of first conviction for violence' led the t-test to compare the difference between the female case and control groups, resulting in a statistically significant difference between the two ($p = 0.018$). With $d = 0.739$, the effect size is medium to large.

As can be seen, in two of the eight variables statistically significant differences were observed, with 'Age at first conviction for violence' offering a P value of 0.018 and 'Number of prior convictions and cautions' offering a P value of 0.046. When considering their d values of 0.739 and 0.395 respectively, they highlight potential risk factors when considering female offenders of serious and fatal DA in Dorset. The additional age-related factors of 'first arrest for violence' and 'first conviction' are also worthy of comment, with d values of 0.339 and 0.494 respectively indicating higher effect sizes in terms of ages within the case offenders. Of note, Thornton (2011) found no statistically significant differences between the female case and control groups, in terms of criminal history, in the Thames Valley area.

The same two Dorset female offender groups were then compared by way of relative risk ratio analysis, in terms of selected PNC warning markers, with the results presented in table 15 below.

	Offenders in the Dorset cases	Offenders in the case control sample	Relative risk ratio
Unemployed	62.1%	70.9%	0.87
PNC warning for Weapons	24.1%	5.3%	4.55
PNC warning for Firearms	0%	0%	0
PNC warning for Drugs - describes a loose association controlled drugs	17.2%	7.0%	2.46
PNC warning for Self-Harm – other than suicide	13.8%	15.8%	0.87
PNC warning for Suicidal	10.3%	8.8%	1.17
PNC warning for Mental Health	24.1%	7.0%	3.44

Table 15: Female case control – relative risk ratios

A considerable difference was found with the PNC warning marker for weapons, with 24.14% of case offenders having the marker compared with just 5.26% of the control group. With a relative risk ratio of 4.55 this shows that, within

Dorset, female offenders who have committed serious or fatal DA are nearly five times more likely to have this marker than the wider population of female violent offenders. Differences were also observed with PNC warning markers for Mental Health, with a relative risk ratio of 3.44 and Drugs, with 2.46, highlighting potential risk factors for female offenders within Dorset. Of interest, in the Thames Valley area, Thornton (2011) identified weapons as the only PNC marker of note, with a relative risk ratio of 4.65, consistent with the Dorset data.

DISCUSSION

This chapter presents an opportunity to discuss the results obtained during the production of this thesis and considers how they were obtained and their implications. In doing so, this chapter focuses on each of the three research questions in turn.

Question 1 - In how many cases did the victim have a prior history of reported domestic violence?

The focus of this first research question is to shine a light on the prevalence of prior reporting of DA by victims of serious and fatal harm in Dorset. The need for its inclusion becomes apparent when considering how much emphasis it enjoys within the DASH risk assessment, with 10 of its 27 questions assessing repeating and escalating violence (DASH, 2009). With its author claiming “violence tends to escalate as it is repeated” (Richards et al 2008, p143), it is clear that DASH assumes such offending behaviour is a common factor in DA, providing a key opportunity to engage at an early stage. However, such reliance does not appear to be backed by the evidence-base which presents, at best, a confusing picture. As illustrated within the literature review, prominent studies support this viewpoint with Trujillo & Ross (2008), Sherman (1992) and ONS (2013) highlighting prior, escalating violence as a common factor of DA, with Davis et al (2008), Hoyle (2008) and Dobash et al (2007) balancing the debate with counterviews. More recently Sabire (2013) suggested serious domestic harm

was not linked to previous violence, and Bland (2014) offered compelling evidence which found no increasing severity in DA cases within Suffolk, with the majority of high harm cases having no prior DA contact with Police.

With such an unclear landscape, what does the evidence tell us about prior and escalating reporting within Dorset? In order to answer this, cases of serious and fatal DA, which were committed during the life span of DASH within Dorset, were identified using the Home Office DA definition (Home Office, 2013), which included both intimate partner and family members together. In doing so, it is acknowledged that this may impact on the heterogeneity of cases, but it was considered important that any UK-based studies seeking to examine national policy should be influenced by the Government-led definitions they are based upon, and follows the method employed by Thornton (2011). It is also important to note the issue of low case numbers throughout this study, with only 107 eligible cases identified as a starting point. Roehl et al (2005) and Campbell (1995) both illustrate the statistical challenges associated with evaluating rare crime types such serious and fatal DA. Of these 107 cases, 67 had previously contacted Dorset Police, a rate of 63%. Although this is a clear majority of the cases, Thornton (2011) identified a minority 45% prior contact rate across the Thames Valley area. Although some serious and fatal abuse occurs where there has been no prior violence at all, these rates again provide an inconsistent picture and suggest a worryingly high level of victims at risk, with no opportunity for agencies to intervene and prevent the presumed escalation.

Of the 67 repeat cases across Dorset, the majority of prior reports were of a low harm, minor or non-crime nature, with only 1 prior report of GBH, and of the 107 total cases, 57% (61) had between 0 and 2 prior contacts with police. Also of note, when debating this issue, were the results of the case-control study. The ages at 'first arrest for violence' and 'first conviction for violent offences' within the male group were significantly higher in the case offenders. Within the female group age at 'first conviction for violence' was higher in the case offenders, and the 'number of prior convictions and cautions' higher in the control group. Ages at first arrest for violence and first conviction also present noteworthy effect sizes within the female case group. Although this analysis was not developed in answer to this first research question, it is suggestive of a view that those responsible for causing the most domestic-related harm across Dorset have a later onset of violent criminal behaviour and a lower offending rate when compared to the wider violent offender population. It offers support to the overall evidence that suggests not only does the issue of 'prior contact' appear to be overestimated but so does the prominence given to the issue of escalation of violence over time.

It is important to note that in attempting to answer this research question consideration was given to deeper analysis, specifically case-by-case scrutiny of the 67 cases where prior calls for service had taken place. This would have assisted in clarifying how many previous calls had been received, as opposed to focusing on just the most recent, and whether any increase in severity could be observed. Although, arguably, this could provide a clearer picture, the challenge with this method is one of low case volume. As previously highlighted in table 7 (p48), of the 107 case population the vast majority (61) had only 0 to 2 prior

reports, and only 13 cases had 10 or more. This low number of viable cases could limit the worth of this exercise. The decision to focus on the most recent 'prior report', and how severe this was, provided an acceptable number of cases (67). Although it is true that some cases had numerous prior reports, they are in a minority and could be considered insufficient for effective conclusions to be drawn

Question 2 - How accurate were the risk assessments based upon prior history in terms of false positives and false negatives?

Of the 107 eligible cases of serious and fatal domestic harm, 67 had previously reported DA to Dorset police. Of these 67, only 22 had been previously risk assessed as high. More critically, 45 had not, providing a false negative rate of 67%. When broken down into each of the eligible offences a consistently similar rate was observed. This is similar to the Hampshire rate of 63% identified by Thornton (2011), although is much less than the Thames Valley rate of 90%. It is agreed that these comparisons are for illustrative purposes only due to potential differences in data quality, offending behaviour and recording practices by officers, but even so begs the questions as to whether the reliance DASH has on prior contact is flawed. It could be argued that DASH cannot be blamed for the cases of serious or fatal harm which had no prior contact and therefore no prior assessment, however, it will miss 67% of such cases in Dorset, presenting a challenge to any assessment placing such importance on prior, escalating violence.

When determining the false positive rate, the 22 cases of serious and fatal abuse that had prior contact with police, resulting in a prior high risk assessment, were compared to all 12,301 high risk assessments recorded during the same period. This represented a false positive rate of over 99%, consistent with that found in Thames Valley. Although considered unacceptable, it can be claimed that as DASH signposts high risk cases to the MARAC process this rate is indicative of effective safeguarding. This point can only be conceded after evaluating MARAC within Dorset, which has not been done and is beyond the role of this thesis, casting further doubt as to the actual role of DASH; a risk assessment to predict serious harm or merely a signpost to another process?

It is clear from the results of this research question that the effectiveness of DASH is in doubt, but can we determine why? Thornton (2011) posed three important questions; is DASH flawed, is it poorly used by officers, or is the wrong question being asked? Whether DASH is flawed is an issue explored throughout this thesis and, is outlined in the literature review. The consensus is that DASH was developed with poor methodology with no reference to the wider violent risk population, was not evaluated and was not subject to any peer review process, which could have identified these concerns and suggested solutions. DASH also appears focused on female victims within intimate partner relationships, leaving a wide range of other relationships covered within the Home Office definition not catered for. Johnson's 2008 review of the varying types of domestic violence highlights the need for this wider perspective.

It is of note that in September 2015 the College of Policing launched its Authorised Professional Practice on DA, having reviewed and updated national guidance for officers and staff. In doing so, it focused attention on the Home Office definition and provided officers with a timely reminder of the wider scope of abusive relationships, including those based on sexuality, gender-identity, sexual orientation, religion, age, disability, social status and occupation as well as those within non-intimate, familial relationships (College of Policing, 2015). Such broad typology of DA offers an opportunity for further research into what risk factors are prevalent in each type of relationship, producing a more focused range of DA risk assessments. However, as each relationship type is a sub-section of overall DA, low case volume can be anticipated. The statistical challenge this presents would be overcome by including cases from many force areas, although risking heterogeneity in the process.

Further to the accuracy of DASH is the accuracy of its use by officers and staff. The data relating to the geographical spread of the DASH high risk assessments across Dorset (table 10, p53) presented concerning differences in rates with Bridport having much higher figures than Verwood. Both towns are rural, very similar in population size and demographics, located at either end of the County and not known for issues relating to DA. The differences in high risk assessments could be indicative of differences in training and implementation resulting in varying recording practices by the local officers who completed them. Trujillo and Ross (2008) reported on geographical variations in the rates of high risk DA risk assessments in Australia and offered a view this was likely to be related to differing policing approaches and not levels of risk. In addition, Kropp

(2004) suggested that in the US there is no minimum training, qualifications and monitoring of those who regularly use DA risk assessments, or even best practice guidance. Are we confident that officers within Dorset, or across the UK, don't experience similar conditions? Are we sure that, even if front line officers were given regular training, they could still be considered the experts intended during the production of DASH? DASH was designed to be a structured professional judgement tool, blending user experience and judgement with key risk factors so as to increase accountability, and to consider the wider context of specific cases (College of Policing, 2015). As such, it arguably requires a level of experience and expertise most front-line officers do not possess, pulling DASH away from the structured professional judgement arena and pushing it towards the less favourable and weaker world of actuarial tools, which is not what it was designed for.

When examining DASH as an assessment tool, consideration needs to be given to what it is assessing. Its authors, Richards et al (2008) asserted that DASH was focused on the prevention of DA, by attempting to identify high risk cases and signposting them to the MARAC process, and was not designed to predict it. But are prevention and prediction exclusive of each other and can we prevent serious crime without first attempting to predict who will be involved? To embrace prediction requires an understanding that it is not 100% accurate, as can be seen in other specialisms that rely on it, for example weather reporting. Campbell (1993, p28) produced the Danger Assessment tool for the "prediction of homicide in battering relationships", claiming that "clinical prediction has been relied upon in most instances to determine the risk of violence in battering

situations.” In her 2011 thesis, Thornton commented on a review of DA undertaken across the Thames Valley area², which offered a view that risk is best assessed by actuarial tools and that other types, such as structured professional judgement tools, are more aligned to assessing the threat of harm. Key to this viewpoint is an understanding that risk and threat are different, with ‘threat’ focusing on the capability of the offender to cause harm and ‘risk’ providing clarity as to how likely the victim will be subject to that harm. This is considered important as the prevalence of a factor within a specific risk population, such as serious or fatal DA cases, needs to be compared against the wider population, an issue not addressed during the development of DASH. As such, can DASH really be considered a risk assessment or should it focus on assessing the threat of harm? More widely, should all risk assessments used in UK-based public policy be developed with such comparisons?

The answers to the first two research questions within Dorset raised valid concerns in how DASH was developed, its effectiveness and how it is employed by officers. Following its review of DA policy across the UK, the College of Policing (2015) advised forces to continue using their current risk assessment methods “in the immediate term” and encourages forces that do not employ DASH to “feel comfortable with their current arrangements”. This presents a far cry from the initial full ACPO support for DASH when it was initially launched in 2009 and is suggestive of declining confidence in it.

² This study was undertaken by MacVean, A and Ridley, N (2007) ‘An Evaluation of the Thames Valley Response to Domestic Violence’, an unpublished report to the Chief Constable of Thames Valley Police.

Question 3 - Might the use of a case control sample produce more accurate risk indicators than analysis based on the numerator alone?

This, and Thornton's thesis, highlighted concerning weaknesses in the accuracy of DASH, evidenced by the high false positive and negative rates. This research question looked at the use of a case-control study to attempt to identify risk factors within the cases which were significantly more prevalent than in the wider risk population. In doing so, it began by employing a process of evaluating whether to focus on victims or offenders. As only 45% of Thornton's (2011) cases had prior police contact, using victims as the focus risked excluding many cases. As such, offenders were chosen for the case-control study. Contrary to the Thames Valley data, analysis of the Dorset cases highlighted victims more often having prior contact with police, however, in keeping with this being a replication of Thornton (2011) it was decided to proceed with offenders. Further analysis of the case offenders identified those with a prior history of arrests for violence as the most appropriate group. The control sample was therefore chosen as offenders with a prior arrest for violence over the same time period as the cases. A random sample was selected and the case and control groups were divided into male and female blocks. Both groups within the gender blocks were compared against alternative risk factors that focused on prior criminal history and PNC warning markers. Statistically significant differences were highlighted via independent t-tests.

Prior to these tests, initial analysis of the case-control offender groups was completed to assess how well they compared. This analysis sought to examine whether any differences between them were apparent, using prior violent offending as the point of reference. Having completed a series of Z-tests, no statistically significant differences were noted. It is conceded that a significance test could be considered inappropriate as the case population is the 'universe' and not a sample. However, it was considered the most appropriate test as it is a sample taken over a long period of time and seeks to offer an illustration and context, as opposed to rigid statistical analysis.

The results of the case-control study identified a number of issues of note; a range of risk factors significant to Dorset, introducing the concept of each force designing bespoke risk factors, and assisting in dispelling the notion of the inevitability of increasing severity of prior violence. In terms of the analysis of the male groups, 'age at first conviction for violence' and 'age at first arrest for violence' were found to be significantly higher in the case offenders and self-harm amongst the same group also more prevalent (tables 12 and 13, p57 & 60). The results from the female analysis also identified 'age at first conviction for violence', and the 'number of prior convictions and cautions' as significantly higher within the case offenders, with weapons, drugs and mental health issues all more likely to affect the same (tables 14 and 15, p62 & 64). These results provide a clear direction in terms of identifying and targeting those who commit serious domestic assaults within Dorset, but do come with a health warning. As outlined in the literature review, domestic homicide and serious assaults are low in number which

introduces challenges in terms of statistical power and confidence in our ability to predict such offending.

These results, based on Dorset data, appear similar in nature to those presented by Thornton (2011) in the Thames Valley area. Differences in results did exist leading to factors identified which could be considered specific to each force area, indicating local differences in offender history and behaviour. These slight differences, combined with differences in false positive and false negative rates across both force areas, suggests a need for each force to make more use of its own data to help inform on risk management at a local level, and to become less reliant on a national risk assessment developed from London-based cases. This view, combined with concerns regarding the lack of confidence in front-line officers making best use of a structured professional judgement based tool such as DASH, supports the need for such a different approach in protecting those most at risk of serious harm. This approach could lead to bespoke risk assessments using local data to protect local victims. The point was raised by Kahneman (2011) who reminded us of the need to focus more on being informed by data and less on intuition.

As outlined in the answer to the first research question above, the fundamental issue of repeating and escalating violence, and the prominence it plays within DASH, is also addressed by the case-control study. As previously stated, the results highlight a higher onset of criminal behaviour and lower offending rate with those responsible for serious and fatal DA across Dorset, and

is at least suggestive that such focus on escalation is misplaced, in doing so supporting the findings of both Thornton (2011) and Bland (2014).

Before policies of vital importance, such as those guiding our response to DA, are to be reviewed and considered by the newly formed National Police Chiefs Council (formerly ACPO), the closer relationship policing now enjoys with both academia and the College of Police will be of huge benefit. This relationship must be maintained to ensure research is undertaken in partnership, with effective evaluations and a clear focus on taking an evidence-based approach, an approach not enjoyed during the development of DASH.

CONCLUSION

The wide-ranging effect DA has on society renders it a key priority for policing across the UK. Recent scrutiny by HMIC (2014a) suggested more was needed to identify and protect victims of such harm at a force level. With this in mind, this thesis sought to examine DASH as the DA risk assessment tool of choice across the UK, in doing so replicating the thesis undertaken by Thornton (2011), but in a predominantly rural context within Dorset.

It began by examining the emphasis DASH places on repeating and escalating violence as a precursor to serious and fatal harm. Having identified a lack of evidence to support this view it found that only 63% of victims of serious DA had previously contacted Dorset Police. When compared to the 45% rate in the Thames Valley area (Thornton, 2011) and “just over half” of repeat callers who had suffered high harm in Suffolk (Bland 2014, p89), it is clear that a large number of cases do not provide an opportunity to examine repeating and escalating violence, and then intervene. This study also identified low-harm antecedent crimes in the vast majority of victims who had prior reporting of DA, and a lower offending rate of perpetrators; all valid concerns given the weight DASH affords this.

This thesis then probed the accuracy of DASH by evaluating false negative and positive rates. In doing so, it became clear that of the 67 victims of serious and fatal DA that had reported prior abuse, 45 (67%) had not been previously assessed as high risk; a concerning level of false negatives. It also noted that 12,301 high risk DASH assessments were recorded during its lifespan in Dorset, compared with only

22 cases of serious and fatal abuse which had prior reporting. This 99% false positive rate was also observed by Thornton (2011) and could be considered alarming, but for the unknown impact the MARAC process could have had on these cases, highlighting an area noteworthy of further investigation.

Having highlighted concerns with the performance of DASH across Dorset, this thesis then attempted to identify alternative risk factors based on Dorset offender data, by way of a case-control study. In doing so, it compared these factors against those who committed serious and fatal abuse and a sample from the wider violent crime offender group. During its development DASH did not seek such comparisons therefore it was unable to state with any confidence whether its risk factors were more prevalent in the risk group it sought to protect. The results of this study identified key differences between the case and control offenders, with gender also playing a role. Male case offenders were shown to have higher ages at first arrest and conviction for violence as well as self-harm issues, with female offenders having a higher age at first conviction for violence, number of prior convictions and cautions, accompanied by issues relating to weapons, drugs and mental health. It was of interest that Thornton (2011) observed both similar and vastly different traits amongst offenders across the Thames Valley area.

During its journey, this thesis has shown that DASH is unable to accurately predict serious and fatal harm within Dorset and has cast a number of key doubts. Of concern is whether the role of DASH is fully understood. Is it merely a sign-post to MARAC or a risk assessment, and indeed does it measure true risk or the threat of harm? Evidence also suggests it was poorly developed with no comparison with

a wider risk population and lacked effective peer review and evaluation processes. Its use by front-line officers was also highlighted as in need of further scrutiny. Are these officers, who are the main users of DASH, considered as having the required level of experience and expertise to use it effectively, and do concerns exist regarding apparent variances in recording practices across Dorset?

Having identified concerns regarding the performance of DASH, and the potential for further exploration, this thesis also suggested an alternative focus for risk assessing serious and fatal DA. Although the results of the descriptive analysis and case-control study identified similarities between Dorset and the Thames Valley area (Thornton, 2011), important differences emerged, particularly in relation to the exposure to the alternative risk factors. Having been developed from factors identified from London-based domestic homicides, could DASH be considered as being too “metropolitan-centric”, leading to variances in performance and increased risk to victims in more rural settings? More critically, should each force area now focus on more bespoke risk assessments? Based on a similar process adopted by this thesis, these tools could allow for the identification of risk factors based on local data, local offenders, and most critically with the aim of protecting local victims. Less reliance on national risk assessment tools and becoming more self-aware of what works at a local level, may be the direction UK policing needs to adopt in its strategic aim of doing more with less and ensuring communities are protected during times of significant austerity.

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APPENDICES

Appendix 1 - DASH Risk Assessment questions (DASH, 2009)

1. Has the current incident resulted in injury?
2. Are you very frightened?
3. What are you afraid of? Is it further injury or violence?
4. Do you feel isolated from family / friends?
5. Are you feeling depressed or having suicidal thoughts?
6. Have you separated or tried to separate from (name of abuser(s)...) within the past year?
7. Is there conflict over child contact?
8. Does (.....) constantly text, call, contact, follow, stalk or harass you?
9. Are you currently pregnant or have you recently had a baby in the past 18 months?
10. Are there any children, step-children that aren't (.....) in the household? Or are there other dependants in the household (i.e. older relative)?
11. Has (.....) ever hurt the children/dependants?
12. Has (.....) ever threatened to hurt or kill the children/dependants?
13. Is the abuse happening more often?
14. Is the abuse getting worse?
15. Does (.....) try to control everything you do and/or are they excessively jealous?
16. Has (.....) ever used weapons or objects to hurt you?
17. Has (.....) ever threatened to kill you or someone else and you believed them?
18. Has (.....) ever attempted to strangle/choke/suffocate/drown you?

19. Does (....) do or say things of a sexual nature that makes you feel bad or that physically hurt you or someone else?
20. Is there any other person that has threatened you or that you are afraid of?
21. Do you know if (.....) has hurt anyone else?
22. Has (.....) ever mistreated an animal or the family pet?
23. Are there any financial issues? For example, are you dependent on (.....) for money/have they recently lost their job/other financial issues?
24. Has (.....) had problems in the past year with drugs (prescription or other), alcohol or mental health leading to problems in leading a normal life?
25. Has (.....) ever threatened or attempted suicide?
26. Has (.....) ever breached bail/an injunction and/or any agreement for when they can see you and/or the children?
27. Do you know if (.....) has ever been in trouble with the police or has a criminal history?

Appendix 2 - Home Office Domestic Abuse definition (Home Office, 2013)

“Any incident or pattern of incidents of controlling, coercive or 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. This can encompass, but is not limited to, the following types of abuse:

- Psychological
- Physical
- Sexual
- Financial
- Emotional

Controlling behaviour is a range of acts designed to make a person subordinate and/or dependent by isolating them from sources of support, exploiting their resources and capacities for personal gain, depriving them of the means needed for independence, resistance and escape and regulating their everyday behaviour.

Coercive behaviour is: an act or a pattern of acts of assault, threats, humiliation and intimidation or other abuse that is used to harm, punish, or frighten their victim.”

Appendix 3 - Home Office Violent Crime Category – List of offences

(Thornton 2011, p98)

- ABH
- Assault on Police
- Attempted Murder
- Causing Death By Dangerous or Careless Driving under the influence
- Child Abduction
- Common Assault
- Conspiracy to Murder
- Cruelty/Neglect of Children
- Death by Careless or inconsiderate Driving
- Death by Driving - Unlicensed etc
- GBH with Intent
- GBH without Intent
- GBH/ABH
- Harassment
- Harassment/Public Order
- Manslaughter
- Murder
- Possession of article with Blade or Point
- Possession of Firearms with Intent
- Possession of Offensive Weapon
- Possession of Other Weapons
- Public Order
- Threats to Kill