# Individuals, Families and Neighbourhoods: Predictors of Domestic Abuse in Essex

Ruth Margaret Weir
Doctor of Philosophy in Criminology
Department of Sociology

University of Essex

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# **Abstract**

The human and economic cost of domestic abuse is enormous. In the UK two women a week are dying as a result of their abuse and the cost to society and the economy is estimated to be in the region of £66 billion pounds a year. Having the ability to predict those most at risk is essential in identifying victims' earlier, reducing harm and improving access to support and justice.

Domestic abuse is also one of the most under-reported crimes, with the Crime Survey in England and Wales (CSEW) estimating that only 21 per cent of abuse is reported to the police. One of the implications of this is that current service responses are broadly designed around the needs of these known victims, even though they only account for one fifth of the likely total. This quantitative research adopts a multi-facated approach, using statistical analysis and geographical information systems, combined with social and geographical theory, to identify the risk factors and predictors of domestic abuse at the individual, family and neighbourhood level. The research finds that taking an intersectional approach to analysis at the individual and family level adds particular value, with the risk factors for repeat victimisation varying according to the gender, age and class of the victim and the relationship between the victim and the perpetrator. At the neighbourhood level, this thesis makes a significant and unique contribution to theory and practice, discovering that the predictors of domestic abuse are not stationary over space. By combining the findings from each of the empirical chapters an overall causal pathway is proposed.

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# Foreword

I am an interdisciplinary researcher and whilst my PhD is in Criminology, my background in Geography is also very apparent. After finishing my undergraduate degree in Geography, I went to work as a researcher for Suffolk County Council in the Community Safety Unit. It was during my time in this job that I discovered a love and passion for crime mapping. Realising the value of visualising and analysing crime data using a Geographical Information System (GIS) I returned to UCL to undertake an MSc in GIS. Following this I have held several research, policy and intelligence positions at the Home Office and in local government.

During my last role at Essex County Council I was seconded on to the Whole Essex Community Budget Project as a subject matter expert. Here I began to question whether we can rely on police data to commission services, knowing that only around a fifth of victims report to the police. With the support of Essex County Council, I applied to the Economic and Social Research Council (ESRC) and was successful in getting collaborative funding to take my work forward into this PhD.

I dedicate this work to the victims of domestic abuse. I hope that this research will enable those experiencing abuse to be identified earlier and to receive the most relevant support.

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## Chapter One: Introduction

Context and significance

Internationally, Violence Against Women and Girls (VAWG) is framed by the United Nations as a fundamental abuse of human rights and many states have strategies to reduce it at both the national and local level (Gill et al., 2018).  In the UK, understanding and reducing domestic abuse has become an issue of priority for both local and national governments, with its substantial human, social and economic costs.  Two women a week are dying as a result of their abuse (Coleman and Osborne, 2010) and the cost to society and the economy is thought to be in the region of £66 billion per year (Home Office, 2019).  The Early Intervention Foundation (EIF) estimates that the price of late intervention, the potentially preventable fiscal cost of short-term acute services, is £5.2 billion per year in England and Wales (EIF, 2018).  Domestic abuse is also one of the most underreported crimes, with the Crime Survey in England and Wales (CSEW) estimating that only 21 per cent of abuse is reported to the police (Flatley, 2016).   Although other agencies, such as the National Health Service (NHS), may record some information on domestic abuse, the data is often collected for other purposes and sharing of data between agencies is an exception, rather than common practice.  In the absence of a multi-agency approach the commissioning of services is often, therefore, reliant on the fifth of incidents that we do know about through police reporting.  Assumptions have to be made that the victims who do not report their abuse to police are the same in profile as those who do report and that their service needs are the same.  Therefore,

having the ability to predict and identify abuse earlier and target resources and services to the right areas is fundamental in reducing its impact.

To date the focus of research in the UK has been on individual level risk factors of abuse, where variables such as age, gender, ethnicity and repeat victimisation have been considered.  There have been substantially fewer studies that have considered the geographic variation of abuse and predictors at the neighbourhood level.  A recent systemic review of neighbourhood studies of interpersonal violence found most research was carried out in urban areas in the US, with no research from the UK (Beyer et al., 2015) and the only study from Europe focused on Spain (Gracia et al., 2014).  This quantitative study aims to address this imbalance, by offering a multi-faceted approach, using a number of methods, based on both geographical and sociological theory.  Taking a very applied approach to the problem has offered both a new contribution to the academic literature but has also already led to a change in practice for policy makers at Essex County Council.

Research aims and objectives

The aims of this research were to identify the predictors of abuse at the individual, family and interpersonal level; to explore the geographical distribution of domestic abuse, the neighbourhood level predictors of abuse and their variation over space; and to see whether the profile of those who report to the police is the same as those who do not.  To do this, the research sets out to answer three research questions, with the first two policy questions and the final academic question:

**Research questions**

1) Where should Essex County Council focus their resources and services to have the most impact in reducing domestic abuse?

2) Can Essex County Council rely on Essex Police recorded crime data to predict the service requirements of those who do not report their abuse to the police?

3) Are individual or neighbourhood variables a better predictor of domestic abuse?

Why Essex?

In 2011 Essex County Council and other partner agencies were successful in bidding to pilot one of the government Whole Place Community Budget (WPCB) projects. The aim of the WPCB was to trial a new way of working which involved integrating public service delivery, by working across agencies, rather than on specific organisation led programmes or projects. The pilots aimed to identify services that were fragmented and high cost and to shift the focus from organisational responsibility to a pooled response to particular issues. The pilots were driven by an economic motivation to maximise provision, whilst cutting duplication and waste. The focus favoured early intervention and action (Local Government Association, 2015).

The WPCB project in Essex, known as the Whole Essex Community Budget (WECB), developed into 5 work streams, one of which focussed on reducing domestic abuse. In 2012 a multi-agency team was pulled together to research and write a business case aimed at redesigning domestic abuse services. The team consisted of staff from Essex County Council, Essex

Police, Crime and Disorder Partnerships with input from District, Borough and City Councils, Unitary Authorities, Housing Officers Group, refuges, Essex Probation, Victim Support, Essex Fire and Rescue, and Whitehall.

The business case acknowledged that in increasing the awareness of services and in implanting a systematic approach to prevention, reporting of domestic abuse will increase, but in the long term if incidents are responded to and disclosed sooner than the demand on services should decrease. One of the gaps that was identified in the business case was the lack of analysis around domestic abuse in Essex, particularly multi-agency data. It was recognised that by conducting in-depth multi-agency data analysis other more effective approaches to tackling domestic abuse may be found.

It was not just Essex County Council who were concerned about domestic abuse. At the same time domestic abuse was also becoming an issue of growing importance for Essex Police, with both the Chief Constable and the newly elected Police and Crime Commissioner (PCC) making the issue one of their key priorities. One of the key drivers for this prioritisation was the heavily criticism that the police had received from the Independent Police Complaints Commission (IPCC) for their failings to four victims, whose abuse had ended in domestic homicide.

The first victim, Maria Stubbings, was strangled to death by her ex-partner, Marc Chivers in December 2008 in Chelmsford. The IPCC found that a gap in the law meant that Mr Chivers, who had murdered a previous girlfriend in Germany and served 15 years in prison there before returning to the UK, did not have restrictions placed on him, as he had not committed the previous

murder in the UK.  The report also found that Essex Police had made human errors, had missed opportunities and there were found to be failures by particular individuals in the case.  One such individual was the initial call hander who failed to record the correct address for Maria, this resulted in flags and alerts that were attached to Maria's address not being accessed.  The call was then treated incorrectly as burglary rather than domestic violence.  Had the call been treated correctly she would have been assessed as high risk.

The second and third victims Christine Chambers and her two-year old daughter Shania were shot and murdered by Shania's father David Oakes (Christine's ex-partner) in June 2011 in Braintree.  Prior to their murder Essex Police had contact with the family on numerous occasions and the victims were killed on the day that proceedings were due to decide on the custody of Shania.  The IPCC report found a failure of systems rather than individuals.  Specifically the issues identified were; that each incident was dealt with in isolation and the police failed to connect the incidents or recognise patterns of escalation; fear was not considered when Ms Chambers declined to make complaints about Mr Oakes or withdrew information given; information that her neighbours, solicitor, Court Advisory and Support Service (CAFCASS) and the County Court had was not available to the police or social services; and the failure to not assess the risk correctly meant the abuse was not referred to a Multi-Agency Risk Assessment Conference (MARAC) (IPCC, 2012a).

The fourth victim, Jeanette Goodwin died when her ex-partner, Martin Bunch stabbed her multiple times in July 2011 in Southend.  The IPCC found that

prior to her death there had been seven reports of harassment and domestic abuse made to the police since January 2011.  The IPCC found that Essex Police had taken Mrs Goodwin's reports seriously from the outset and had offered her practical assistance and had put the perpetrator before the courts. However, on the day of her death they did not provide the essential emergency response that should be given to a high-risk victim. The IPCC investigation found a lack of clarity in Essex Police's domestic abuse policy and their working practice partially responsible for the lack of background and intelligence checks being carried out (IPCC, 2012b).

Both the WECB and Essex Police recognised that in-depth research on domestic abuse was needed, particularly around the risk factors that could have helped to prioritise these cases earlier.  Essex County Council led the way in conducting and commissioning research.  There were three main activities; the first was to look at existing research and what had worked in other areas (both in the UK and internationally); secondly in-house research was conducted to give a brief analysis of domestic abuse in Essex; and finally, academic research was commissioned to look at particular issues around domestic abuse.

The brief analysis conducted in-house at Essex County Council used 20 months of domestic abuse incident data that had been reported to Essex Police. It identified several variables that impact upon the severity of the incident and characteristics of offenders and victims that can contribute towards 'risk of repeat'.  The relationship between the victim and offender was found to impact the risk, with incidents where the perpetrator was male and

the victim female and of the same age found to be at higher risk than those incidents between family members of different ages. The presence of drugs and alcohol also had a large impact on the severity and risk of repeat. Incidents were found to be more prevalent depending on season, day of the week, and time of the day. For example, alcohol related incidents increased at weekends, late at night and in the early hours of the morning (around midnight). This suggested periods where services are most likely to be utilised. The analysis briefly looked at the geographic distribution of domestic abuse, but it was acknowledged that further research was needed to look at this further and for a longer time period to be studied.

At the same time Victim Support commissioned a short piece of research that used Essex Police and Victim Support data to produce a profile of domestic abuse in Essex (Brimicombe, 2013). Repeat victim analysis showed that the level of chronic domestic violence had risen between 2007 and 2011 and that single and repeat victims have significantly different patterns of victimisation during the weekly cycle. The repeat victim analysis also enabled probabilities to be calculated as to the likelihood of further events occurring to the same victim. The analysis found domestic abuse to be geographically concentrated with a relationship between deprivation and particular geodemographic groups.

Both the in-house and academic research highlighted the need for a much more in-depth and thorough analysis of victimisation and in particular the geographical concentration of domestic abuse. The brief analyses provided

some useful initial findings on which to build a much more detailed and focused multi-agency analysis that can offer tangible benefits to those providing services to victims of domestic abuse in Essex.

Essex County Council became a commissioning focused organisation in 2011.  Working in the research team it became apparent that domestic abuse services were largely commissioned using police data, as this was the only data that was readily available.  With domestic abuse being one of the most underreported crimes the implications of this commissioning practice was that the services were largely designed, located and resourced around the needs of these known victims – even though they only account for one fifth of the likely total. The socio-economic profile of known victims can be summarised as follows: they are predominantly women, under 45 years old, overwhelmingly drawn from white, working class neighbourhoods, and the perpetrator is a current or former partner (Harne and Radford, 2008; Flatley, 2016; Walby and Towers, 2018).

**Demography**

As illustrated by figure 1.1, Essex is a large single police force in the east of England.  It has a population of 1.725 million and is one of the largest non-metropolitan forces in the UK.  It has a mixture of rural, urban and coastal areas with concentrated deprivation but also some very affluent areas. Jaywick, situated on the coast near Clacton was found to be the most deprived area in England in both the 2010 and 2015 Index of Multiple

deprivation (Gov.uk, 2016). Essex is not as ethnically diverse as the whole of England and Wales, with Black and Minority Ethnic (BAME) groups making up only 6.4% of the population, compared to 14.0% nationally (NOMIS, 2011).

*Figure 1.1 Location of Essex in England*



In 2016 Essex had a total crime rate of 66.0 per 1000 population (compared to a England and Wales average of 71.9), and ranked 23rd out of the 43 police forces in England and Wales (Flatley, 2017). The police force area comprises, Essex County Council and two unitary authorities, Southend on Sea and Thurrock.

Context

To be able to address the problems faced by victims and policy makers today, it is important to understand where the interest in ending domestic abuse has come from and how it is defined. This section will therefore give a brief history of the offence and how it has been brought into the public sphere, both theoretically and politically by feminism. It will identify how domestic abuse is defined, legislated, measured and disclosed. Finally, it will discuss the agencies that respond to and have statutory responsibilities to support victims and end perpetration.

The literature on domestic abuse is vast and this section is unable to cover all aspects of the crime. It will, however, provide an overview of the relevant key debates and issues to set the scene for the rest of the thesis, enabling a better understanding of the challenges in researching this subject. This thesis employs different methods and theories to address the individual; relationship and family; and neighbourhood level predictors of domestic abuse. A separate literature review will follow this chapter, giving more detail of the existing knowledge on each area and the gaps in the literature that the analysis chapters will address.

**History of domestic abuse**

There is little doubt that domestic violence, or domestic abuse as is has also become known more recently, has been experienced for centuries. However, it was not until the 1970s, with second wave feminism that the previously

private problem became an issue of public interest. This was achieved through both activism and academic research.

An activist who was instrumental in bringing domestic abuse to the public sphere was Erin Pizzey. In 1971 Pizzey set up the first Women's Aid in Chiswick, a centre aimed at allowing women to come together to discuss the issues of the day. It was during discussions at the centre that women began to disclose that they had been beaten by their husbands for many years (Pizzey and Forbes, 1974). News of the success of the first Women's Aid centre quickly spread and other shelters for women and children were set up all over Britain (Dobash and Dobash, 1979). This was just the beginning of the campaign to raise awareness of the issues that had up until this point gone on behind closed doors. The establishment of Women's Aid and refuges also vitally gave women the opportunity to escape from their abusive relationships. In parallel to the introduction of refuges, the championing of victims' rights was also evolving through other support charities, including Victims Support (Victims Support, 2016)

The influence of activists reached parliament in the 1975, when the House of Commons set up its first select committee on the Rights of Women. From this committee came three civil acts; 1976 Domestic Violence and Matrimonial Proceedings Act; 1977 Housing Act; and 1978 Domestic Violence and Magistrates Court Act. Whilst the civil nature of the acts did not contribute to criminal justice system, they were successful in raising the awareness of domestic violence and highlighting the sheer scale of the problem in the UK (Groves and Thomas, 2014; Sanders-McDonagh and Neville, 2017; Ward and Bird, 2005) leading the way to the development of

subsequent, albeit delayed, legislation, such as the Domestic Violence, Crime and Victims Act of 2004[1]

However, despite almost fifty years of activism, research, legislation and policy development, domestic abuse remains a huge problem.  Whilst considerable progress has been made it remains a crime that is far less likely to be reported compared with other offences.  The CSEW estimates that only 21 per cent of victims report their abuse to the police and whilst some victims may report to other agencies or individuals[2], there is currently no joined up way in which to collect this information.

Despite the campaigns by activists and policy makers over the last 50 years a stigma still exists that suggests that the public generally appear less interested in domestic abuse, compared to other crimes such as child abduction and knife crime.  Attitudes towards violence impact the level of empathy and support that victims are offered by informal helpers, with those with violence-condoning attitudes more likely to blame the victim, less likely to report the incident and unlikely to recommend steep penalties for the perpetrator (Flood and Pease, 2009; Pavlou and Knowles, 2001; West and Wandrei, 2002).  If the amount of money that is given to charities supporting victims of abuse is an indication of public opinion, then domestic abuse is fairly low on the donor's agendas.  A much-publicised report by the New Philanthropy Capital found that for every pound that was given to charities supporting violence against women, twenty pounds was given to donkey charities (Booth, 2008).  If this stigma is impacting public opinion, then in a

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[1] See the legislation section for further information.
[2] As discussed further at the end of this chapter

country with a reputation of policing by consent (Carter and Radelet, 2002), it is unlikely that the police will be able to achieve their goals unless the public shares their concern (Wood, 2013).

**Feminism**

The paradigm shift that has been crucial in bringing domestic abuse to the attention of the public, has been feminism. Feminists have played a critical role in developing theory, research, practice and policy though a range of feminist voices with clear political and personal drivers. Radical feminists were instrumental in uncovering the gendered nature of abuse and the crime that was taking place in the private sphere. They highlighted the importance of gender in understanding the nature, extent and victimisation of domestic abuse. Key to their activism and research has been the concept of patriarchy. More recently black feminists have played an important role in recognising the interaction between patriarchy and capitalism including the intersections of victimisation by gender, class, age, race and ethnicity. Postmodern feminists have also moved beyond the previously polarised views of different feminist agendas, bringing with them a new focus on diversity. The last couple of years have also seen a rise in digital feminism, particularly through the rise in the use of social media. Whilst there have been a range of different feminist agendas, the common thread throughout all their work is the challenge to the traditional victimology agenda (Davies, 2017), making gender central to analysis and policy (Rhode, 1990). This section will explore the work that feminists have done in relation to domestic abuse and the impact that this has had.

Prior to the 1970s criminologists, and more specifically victimologists focused their research on crimes that occurred in the public sphere, with the majority of acquisitive and violent crime perpetrated by men against male victims.  The positivist influence that beset victimology encouraged objectivity and detachment of researchers from the world that they are researching.  Radical feminists on the other hand set out to challenge this approach, by developing theory that was very much linked to activism, with women carrying out research about other women around issues that affected them (Bograd, 1988; Davies, 2017; Dobash and Dobash, 1988; Gill and Rehman, 2004; Walklate, 1994). Much activism has been demonstrated by the creation of organisations such as Women's Aid and the Rape Crisis Federation and also the conception of campaign groups like Justice for Women and Sisters Uncut (Fincher and McQuillen, 1989; McLaughlin and Muncie, 2012; Sisters Uncut, 2019).

*Patriarchy*

The radical feminist approach identified the nature of violence as a gendered problem, with violence against women being perpetrated by men.  It goes beyond the single incident of domestic violence but rather acknowledges the interconnectivity of crimes carried out by men against women and children (DeKeseredy and Schwartz, 2011; Groves and Thomas, 2014; Kelly, 1987; Mooney, 2000).

One of the concepts that radical feminists suggest is key to understanding domestic abuse is patriarchy.  The notion was introduced by Brownmiller (1975) as a theoretical concept in her book 'Against our Will', which

developed the theory in relation to rape.  There are varying definitions of patriarchy, but Eisentein  (1979) defines it as 'a sexual system of power in which male possesses superior power and economic privilege' (Eisentein, 1979, p. 16).  Radford extends this definition to describe the power hierarchies 'between men, between women and over children'.  She also explores the generational dimension that can be used as a framework for understanding difference and change over (Radford, 2013, p. 362).

A widely used analytical model which was informed by radical feminism is the Duluth Wheel (Pence et al., 1987).  The model illustrates the main dynamics of domestic abuse and the male pattern of power and control and it has been used extensively in the US on perpetrator programmes.  The wheel, illustrated in figure 1.2, recognises abuse that is exerted on women and children is not purely physical, but also features economic abuse, coercive behaviour, intimidation, emotional abuse, isolating, involves demeaning behaviour, uses children and involves using male privilege.

*Figure 1.2: Duluth Wheel (Pence et al., 1987)*

VIOLENCE

PHYSICAL — SEXUAL

**USING COERCION AND THREATS**
Making and/or carrying out threats to do something to hurt her • threatening to leave her, to commit suicide, to report her to welfare • making her drop charges • making her do illegal things.

**USING INTIMIDATION**
Making her afraid by using looks, actions, gestures • smashing things • destroying her property • abusing pets • displaying weapons.

**USING ECONOMIC ABUSE**
Preventing her from getting or keeping a job • making her ask for money • giving her an allowance • taking her money • not letting her know about or have access to family income.

**USING EMOTIONAL ABUSE**
Putting her down • making her feel bad about herself • calling her names • making her think she's crazy • playing mind games • humiliating her • making her feel guilty.

**POWER AND CONTROL**

**USING MALE PRIVILEGE**
Treating her like a servant • making all the big decisions • acting like the "master of the castle" • being the one to define men's and women's roles

**USING ISOLATION**
Controlling what she does, who she sees and talks to, what she reads, where she goes • limiting her outside involvement • using jealousy to justify actions.

**USING CHILDREN**
Making her feel guilty about the children • using the children to relay messages • using visitation to harass her • threatening to take the children away.

**MINIMIZING, DENYING AND BLAMING**
Making light of the abuse and not taking her concerns about it seriously • saying the abuse didn't happen • shifting responsibility for abusive behavior • saying she caused it.

PHYSICAL VIOLENCE SEXUAL

Another widely used concept has been Kelly's, (1987) continuum of sexual violence. The continuous form that abuse takes means that it may be difficult to break it into separate events or elements. Rather than concentrate on discrete groups of offences, such as domestic abuse, the continuum recognises that sexual violence exists in many forms, such as coercion, abuse and assault, which are all used to control women. The form that the violence takes, the way in which women define the events and the impact that it has on them differs and varies over time (Kelly, 1987, 1984; Radford et al., 2000).

The merits of the concept of patriarchy, particularly in more recent years have been fiercely debated in the literature. One of the key criticisms has been around variety in patriarchal structures in different cultures, with arguments

that patriarchy is seen to suggest universalism (Hunnicutt, 2009; Patil, 2013), when a fully integrated theory needs to take account of the ways in which structural and cultural variables interact with patriarchy (Hoyle, 2012; Patil, 2013). However, these views of patriarchy are argued to be too simplistic when the concept does in fact recognise hierarchies and differences amongst men (Groves and Thomas, 2014) and indeed amongst women if Kelly's continuum is going to be considered (Radford et al., 2000). Hearn's (2009) recent development of the concept of transpatriarchy, where gender relations and their variations are viewed in the global context rather than at the national level have attempted to overcome criticisms of over simplifying the issue.

Another issue that has created questions around the value of using patriarchy as an explanation of domestic abuse is where men or those in same sex relationships have experienced abuse (Hunnicutt, 2009). Research on sexuality and domestic abuse suggests that there are strong similarities between homosexual men and heterosexual women's experiences of domestic abuse, with the motivation of the perpetrator being control of their partner (Cruz and Firestone, 1998). The concept of patriarchy is therefore more difficult to understand in lesbian relationships, with lesbians tending to have less physically aggressive partners than gay men (Kelly and Warshafsky, 1987). An alternative way of theorising this issue has been devised by Johnson (2006, 1995).

Johnson (2006) categorised domestic abuse into four types of violence; common couple violence, intimate terrorism, violent resistance and mutual violent control. Common couple violence is low in frequency and severity and

does not include controlling behaviour but mutual violence as a result of a specific argument.   Intimate terrorism on the other hand is based on controlling behaviour and is more serious and more likely to escalate over time.  It is unlikely to be mutual and in line with the concept patriarchy, is almost exclusively perpetrated by men.  Violent resistance is said to be mainly perpetrated by women in an attempt to fight back and defend themselves, often in an attempt to escape the relationships, this has therefore been put forward as an argument by feminist for why women may show violent behaviour towards men.  The final type, mutual violent control is when both partners are controlling and violent (Johnson, 2006).  This type is thought to be far more unusual and there has been little research or data collected on this category.  Like Johnson, Dempsey (2005) also breaks domestic abuse into different types.  There are 'strong' types, which are similar to Johnson's definitions of intimate terrorist, and 'weak', like couple violence and violent resistance.  Dempsey argues that both types feature violence and domesticity but only the strong types of domestic abuse are characterised by structural inequalities and patriarchal characteristics. Johnson (1995) therefore states that we must assume that the bulk of violence in lesbian relationships is common couple violence, with the causal processes similar to those involved in non-lesbian common couple violence.

Moving forward a concept that has been argued to address the simplicity of the dichotomisation and homogeneity found in the concept of patriarchy is intersectionality (Crenshaw, 1991; Hooks, 1981; Patil, 2013).  Rather than purely focusing on gender, intersectionality identifies how gender interacts with other factors such as race, ethnicity, age and class.  This is a framework

that is going to be tested in this thesis and a more comprehensive discussion of intersectionality and its potential applications to domestic abuse research are discussed in Chapter Four.

Walklate (1994) argued that feminist work has only had a marginal impact on victimology as a discipline, however the impact has been felt much wider than by just subset on an academic discipline and the influence on society continues to the present day.  A recent example has been #MeToo, a campaign for women to disclose their sexual violence using the hashtag, following the revelation by women about former Hollywood producer, Harvey Weinstein[3].

Overall the influence of feminism has been felt in both civil and criminal justice legislation.  The next section examines how domestic abuse has developed as an offence.

**Domestic abuse as an offence**

*Legislation*

Although legislation around domestic abuse does now exist, it took a long time to develop, with the first criminal law only coming in 30 years after feminist's first exposed the issues.  Using the public/private dichotomy, intimate relationships had been viewed as belonging to the private sphere and not candidates for public regulation (Lacey, 1998), however the influence of feminism in bringing domestic abuse to the attention of the public, has

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[3] Further discussion on the strengths and the weaknesses of this campaign can be found in the disclosure and measurement section.

resulted in the use of the law to make the previously private matter a public issue (Burton, 2008). It has, however, been argued that social change has limited possibilities through legal reform alone (Smart, 2002).

Since the civil acts mentioned in the introduction to this chapter, the most significant piece of domestic abuse legislation has been the Domestic Violence, Crime and Victims Act of 2004.  The Act recognised that historic attitudes towards domestic violence needed to change before victims could feel safe and that strategies needed to be put into place that would demarcate domestic violence as unacceptable behaviour and bring in measures that would prevent abuse, protect victims and give them access to justice and support (Home Office, 2003; Ward and Bird, 2005).

The key changes brought in by the Domestic Violence, Crime and Victims Act were amendments to the 1996 Family Law Act, which had brought in a set of remedies giving all family courts the consistent guidelines on making non-molestation and occupation orders.  In an interesting move the new legislation gave criminal justice responses to civil law, with the Domestic Violence, Crime and Victims Act making breaches of non-molestation orders a criminal offence.  Moreover, the Act also extended the Family Law Act to same sex couples or those in an intimate personal relationship that might not live with each other.  The new Act also introduced a new offence of causing or allowing death of a child or vulnerable adult (which was later amended to include serious harm (Parliament, 2012), it made common assault an arrestable offence, it brought in the Domestic Homicide Review process (discussed at the end of this chapter), it created an Independent

Commissioner for victims and gave the Home Secretary the power to make a code of practice for victims (Groves and Thomas, 2014; Lawson et al., 2005; Ward and Bird, 2005).

The Act was welcomed by victims and practitioners (Hester et al., 2008), but although billed as the most radical change to the domestic violence legislation in 30 years, critics thought that it fell short of this claim.  Although the bill started out with a domestic violence agenda, it ended up with other clauses added to it that showed no relevance to domestic abuse (Lawson et al., 2005).  Commenting in the House of Lords Baroness Warmsley commented that 'the Home Office must have a large and dusty box of Christmas baubles in its attic.  It seems to raid that box very frequently to hang them on any unsuspecting passing Bill' (Hansard, 2004).

Since the Domestic Violence Crime and Victims Act (2004) further legislation has been introduced, with Domestic Violence Protection Orders introduced in 2014.  This legislation has given police and magistrates in England and Wales the authority to ban perpetrators from the home or from having contact with the victim for up to 29 days.

In 2012 the UK government committed to ratify the Council of Europe's Istanbul Convention, which sets out to end violence against women and girls by focusing on prevention, protecting victims, prosecuting perpetrators and integrating policies (Home Office, 2017).  Operating within a human rights framework ratification will involve recognising the gendered nature, impact and consequences of violence against women and girls (Women's Aid, 2018a).

One of obstacles to implementing the Istanbul Convention has been the lack of a statutory definition that recognises the gendered nature of the crime (Women's Aid, 2018a). There have been calls for a statutory definitions of domestic violence for years (Lawson et al., 2005), as this still does not exist this has led to agencies having a number of different interpretations and definitions. The next section explores the problems of defining the issue.

*Definition*

There are several definitions of domestic abuse that are currently in use across the criminal justice system and other public sector and voluntary agencies and reporting and recording will vary according to the definition that is used and the standpoint of the organisation. Until recently the term 'domestic violence' has been the most widely recognised terminology in the UK. Both the words 'domestic' and violence have, however, received some criticism. There have been arguments against the use 'domestic', as this suggests that the victim and perpetrator must live together. However, domestic violence has been found to be experienced in all stages of the relationship, with some experiencing abuse before the couple choose to live together and it often carries on after the couple have separated or the victim has left. It also might be experienced between family members who do not live together, such an older parent and their adult chid. Also, the violence may not occur exclusively in the home, but may take place in the public sphere. Some suggest the relationship would be more accurately defined through the relationship not the place in which it took place (Groves and Thomas, 2014; Walby and Allen, 2004). The word 'violence' suggests the abuse is physical, but there is a range of abuse including sexual violence,

physiological abuse and controlling behaviour (Groves and Thomas, 2014; Kelly and Westmarland, 2014; Myhill and Hohl, 2016; Schechter, 1982; Stark, 2006; Women's Aid, 2016).  The term 'domestic abuse' is becoming more popular as it includes the broader, non-violent element of abuse.  It also reflects a pattern of behaviour that includes criminal and non-criminal elements (Richards et al., 2008).  An example of this was the adoption of the term 'domestic abuse' by the British Medical Association in 2007, reflecting the health angle of the issue.  However, the terminology is not favoured by all, with some academics preferring the term Domestic Violent Crime, owing to the standpoint that all physical violence includes coercive and controlling behaviour (Walby and Towers, 2018)

Other terminologies in use include 'Intimate Partner Violence', a term often used in the US, but it is also the name given to the module in the Crime Survey in England and Wales (CSEW)[4].  Another expression used in the US is 'Family Violence' and this includes broader areas of child and elder abuse as well (Groves and Thomas, 2014).  The Home Office has a broad strategy for 'Violence Against Women and Girls', but within this are more specific terms such as 'forced marriage' and 'honour-based violence', which are used to identify specific issues within the broader definition of domestic abuse or violence (Gill et al., 2018).

The definition of 'domestic abuse' that will be used in this research is the one that the Home Office has been using since April 2013.   The aim is for the

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[4] This module was introduced in 2001, when the CSEW was known as the British Crime Survey.

definition to be used across agencies.  It is not a statutory or legal definition, but it is used to inform policy and identify cases of domestic abuse.  This definition was revised in 2013 following consultation with government departments, local government, Independent Domestic Violence Advisors (IDVAs), Multi-Agency Risk Assessment Conference (MARACs), police and Community Safety Partnerships.  The agencies voted overwhelmingly to include coercive control in the definition and to extend it to include 16 and 17 year olds as well.  The definition is used by all police forces in England and Wales.

*'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 and emotional'.*

Home Office, 2013.

Domestic abuse is currently not a crime in its own right and only 50 per cent of reported incidents will become a crime (ONS, 2018).  Of the incidents that have become a crime, the overwhelming majority are categorised as violence against the person (78 per cent), with the remainder recorded as criminal damage and arson (9 per cent), public order (4 per cent), sexual offences (3 per cent) and miscellaneous (6 per cent) (Flatley, 2016).

However, in 2015 the Serious Crime Act created a new offence of controlling or coercive behaviour in intimate or familial relationships (section 76). The offence carries a maximum sentence of 5 years' imprisonment, a fine or both.

The offence recognises that the behaviour is repeated or continual, rather than a one-off incident. The cross-Government definition of controlling or coercive behaviour is:

*'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: a continuing 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.'*

Home Office, 2015

It looks likely that domestic abuse will become an offence in the future, with the recent draft Domestic Abuse Bill launched in January 2019.  After a public consultation in 2018 the bill sets out to create a new statutory definition of domestic abuse, which will also include economic abuse (Duggan, 2019).

The definition that is adopted is key to what is counted or discounted in the measurement of domestic abuse.  Another factor that is crucial to understanding the scale of the problem is disclosure.  The next section will discuss how domestic abuse is currently measured and how disclosure or lack of disclosure limits our current knowledge of the true scale of the problem.

**Measurement and disclosure**

Figure 1.3 highlights just how complicated it is to capture data on domestic abuse within the criminal justice system and beyond.  The CSEW estimated that there were almost two million victims in 2016/17, but due to the

methodology used in the survey, this is only capturing victims aged from 16-59, so there is already an underestimate of the actual level of abuse[5].

*Figure 1.3 How data are captured and interlinked across the CJS; (ONS, 2018)*

This flowchart explains how cases of domestic abuse are captured and flow through the criminal justice system. The data are not directly comparable, since they are collected on different bases (for example victims, crimes, suspects or defendants) and may not cover the same cohort because of variation in the time taken for cases to progress through the system.

**Incident of domestic abuse occurs**
1,946,000 ESTIMATED VICTIMS AGED 16 TO 59
(victims can experience repeated incidents)

Incident not reported to police and victim does not seek support

Incident not reported to police but victim seeks help from support services or is referred by another agency, e.g. health

**Victim remains hidden**

Incident is reported to the police (by victim or someone else, can include repeat calls from same victim)

Victim is referred to support services by the police

**Support provided to victims from a range of services**

**Report recorded by the police**
1,068,020 REPORTS OF DOMESTIC ABUSE RECORDED BY THE POLICE

Victim may report to police following engagement with services

The NCRS does not require a crime to be recorded and the police deem it neither appropriate nor necessary. This includes incidents reported by someone other than the victim and the victim fails to confirm the crime, those where the victim cannot be traced and those being dealt with by another force.

**Incident investigated by the police**

If it is clear when an offence is first reported that a crime has occurred, a crime may be recorded in accordance with National Crime Recording Standard without an incident first being recorded

**Incident remains recorded as an incident**
579,971 REPORTS REMAINED RECORDED AS INCIDENTS

**Crime committed, incident recorded as a crime and identified as domestic abuse-related**
488,049 CRIMES RECORDED BY THE POLICE

Police conduct investigation to identify suspect and gather evidence

**Suspect is charged following referral to Crown Prosecution Service**

**Suspect receives an out of court disposal e.g. a caution**

**No suspect is identified and case cannot proceed**

**Decision made that no further action taken**

No further action includes a number of different outcomes, e.g. not enough evidence to take the case forward, or prosecution not in the public interest

**Prosecution**
93,590 DEFENDANTS PROSECUTED

Successful prosecution

Unsuccessful prosecution

**Defendant is convicted**
70,853 DEFENDANTS CONVICTED IN COURTS

**Defendant is not convicted**
22,737 DEFENDANTS NOT CONVICTED IN COURTS

The initial decision by the victim on whether to report or disclose abuse is fundamental to their recognition in the system in terms of support and justice. If a victim does report (or somebody else reports on their behalf), where they report is also important[6].  There are just over a million incidents recorded by

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[5] See further discussion below
[6] See multi agency section below

police forces in England and Wales.  After the incident is recorded a decision then takes place on whether the incident should be converted to a crime.  The incident to crime conversion rate in England and Wales was 50 per cent in 2017/18, but this figure varies nationally (it was 51 per cent in Essex) (ONS, 2018).

Attrition continues as victims progress through the criminal justice system, with a number of the crimes resulting in no further action, having no suspect or reaching an out of court disposal, such as a caution.   Only 93,590 defendants were prosecuted in 2016/17 and of these 76 per cent were successfully prosecuted[7].  The level of attribution is one of the reasons thought to be behind the low levels of reporting (Flood and Pease, 2009), with victims not believing that the CJS will provide redress.

*Surveys*

At the international and national level there are two main models for collecting survey data on domestic abuse.  The first is through generic crime surveys and the second through more specialised violence against women surveys. The former are generally linked to crime codes, meaning that they are more aligned with data collected in the Criminal Justice System (CJS), whereas the latter collect more information on the act of violence that has been committed and are usually based on a modified form of the Conflict Tactics Scale (CTS) (Walby et al., 2017).

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[7] Due to the different agencies and methodologies involved in collecting the data and the elapsing time, it is not possible to provide a denominator for this figure.

The CTS was developed by (Straus et al., 1980) as part of the New Hampshire's Family Violence Research Programme to measure the rate of violent acts between married couples (Walsh, 2018). It was formed on the basis of two nationwide surveys in the US (Natarajan, 2007). The revised Conflict Tactics Scale (known as CTS2) was introduced in 2000 and used 39 questions. Respondents were asked paired questions to report the number of times in the last 12 months that they have been victims and the number of times they had perpetrated various behaviours to resolve conflicts with their intimate partners. There are a number of questions on five different behaviour types; Physical Assault, Injury, Psychological Aggression, Sexual Coercion and Negotiation. However, methodologically the CTS and CTS2 have been heavily criticised for only capturing actions and not harm and intention, and therefore creating the impression that the violence shows gender symmetry (Walby et al., 2017)[8].

The most wide-reaching survey in the UK is the Crime Survey in England and Wales, formerly known as the British Crime Survey (BCS). In terms of coverage the survey invites around 50,000 households with a response rate of around 75 per cent (ONS, 2013) and it covers all 42 police forces in England and Wales. The questions on domestic abuse in the CSEW have evolved over time. They began in 1982, with face to face questions in the main interview. However, low levels of disclosure, owing to the face to face nature, led to the development of a separate model on Intimate Personal

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[8] A further discussion on gender is below.

Violence, where questions, based on a modified version of the CTS, are asked on a computer, rather than verbally[9].  This new module, which was introduced in 2001, did increase the number of respondents disclosing abuse tenfold (Flatley, 2016), however methodologically it has received criticism, which will be discussed further below.

The main benefit of survey data is that it helps capture the extent of domestic abuse and the number of people who are reporting it to the police and other agencies.  Whilst crime surveys are thought to give a more accurate estimate of the extent of domestic abuse than recorded crime data, they are still believed to underestimate the number of victims.  There are, however, several problems with crime surveys identified in the literature.

One of the key debates that has stemmed from the use of victims' surveys to explore the nature and extent of domestic abuse has been around gender.  Feminists argue that domestic abuse is an asymmetrical crime, with men largely perpetrating the abuse and women being the victims, whereas victimologists argue that the crime shows symmetry, with men and women being both victims and perpetrators (Gelles and Straw, 1979; Straus et al., 1980; Straus, 2017).

Dobash and Dobash (2004) highlighted the issue of definition and measurement of violence.  They suggested that family violence research would be more likely to find symmetry in the gender of perpetration as all violence and aggression is treated equally using CTS.  This method does not

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[9] There are still some questions on domestic abuse in the main survey as well.

examine the motivation of the aggression or the harm caused, but rather just focuses on the act (Walby et al., 2017).

Johnson (2006) states that unless surveys are able to distinguish between intimate terrorism and violence resistance then results will show different levels of gender symmetry in abuse depending on what is asked and where the survey is asked.   Graham-Kevan and Archer (2003) sampled a general population and found 33 per cent was intimate terrorism, whereas it was 88 per cent in a sample from a shelter.

Repeat victimisation is higher for women and they are more likely to be killed or seriously injured (ONS, 2018; Walby and Allen, 2004; Walby and Towers, 2017).  Removing repeat victimisation and severity from analysis reduces gender asymmetry.  This has been an issue identified in the CSEW where repeat victimisation was being capped at five incidences (Farrell and Pease, 2007; Walby et al., 2014).  Research found that removing the cap increased the number of violent offences by 60 per cent, when compared to the published results where the cap had been implemented (Walby et al., 2014). More recently the concerns raised by (Walby et al., 2014) have been addressed and the cap has finally been replaced, with data from 2019 onwards using a crime specific imputation method, based on the 98th percentile, to set a cap for each crime type, rather than using the arbitrary limit of five incidents (ONS, 2019).

Women have also been found to have higher levels of fear of domestic abuse and are more likely to experience coercive control (Dobash and Dobash, 2004; Hester, 2013; Myhill, 2017, 2015).  Analysis of the National Crime

Victimisation Survey (NCVS) in the US found women are more likely to need protection than men, are less likely to regard the issue as private or to view it as a trivial issue. The main inhibitor to women reporting their abuse was fear of reprisal from the perpetrator (Felson and Pare, 2007).

Another problem is that interviews using the IPV computer based module are only conducted with people between the ages of 16 and 59, which leads to a lack of representation for both youngest and oldest victims (Groves and Thomas, 2014).  Following two independent reviews of the BCS in 2006 the BCS was extended to children aged 10 to 16, but only as experimental statistics and the question on domestic abuse was removed after piloting as it became clear that it was difficult for some children to differentiate between parental discipline and abuse.  Issues were also found around truthfulness and disclosure when the parents were in the same room (Groves and Thomas, 2014).  Separate surveys, such as the United Kingdom Study of Abuse and Neglect of Older People (O'Keeffe et al., 2007), have been used to gain information about older people's experiences of abuse, but with a different methodology and approach the results are not comparable.

Coverage issues have also been a problem for both the CSEW and BCS. The questions are only asked to people in their own homes, so this excludes hard to reach victims, who may be living in alternative accommodation, such as refuges, hotels, travellers' sites, prisons, or for those living with friends or homeless (Mooney, 2000; Walby and Allen, 2004).

Another issue across all surveys has been the accuracy of responses given in self-completion interview techniques.  Gadd et al. (2003) conducted some

additional research following the Scottish Crime Survey in 2000. They managed to re-contact and interview some of the men who had disclosed abuse in the original survey. Two-thirds confirmed the accuracy of their record, but 28 per cent refuted the record and claimed not to have been forced or threatened by a partner, the remainder neither confirmed nor denied their record. The reasons given for the inaccurate reports varied but included that the men had been assaulted by a stranger in a public place, had been attacked by their girlfriend's other partner, had been involved in verbal altercations with a friend or other incidents that had happened at home, but would not be classified as domestic abuse (such as being frightened by trick or treaters) (Gadd et al., 2003).

Another problem identified with self-completion questionnaires is that the victim may not self-identify their experiences as domestic abuse or as a crime (Walby and Myhill, 2001). They may not recognise everyday coercive control as abuse or there may be elements of self-blaming, which mean it is unlikely that they will report the abuse. They are also less likely to report the abuse if the perpetrator is at home (Groves and Thomas, 2014).

*Local crime surveys*

An alternative to national and international surveys has been local crime surveys. Harne and Radford, (2008) suggest in-depth local surveys, such as the Islington Crime Surveys and the North London Domestic Violence Survey (NLDVS) offer a better estimate of the true extent of the crime, but these surveys are very expensive to complete, so have not been carried out in many areas. The NLDVS was conducted in 1993 and it had a sample size of

1000 and individuals were randomly selected. The survey used mixed methods and its focus was on women's experiences of violence from husbands or boyfriends (including ex-husbands and ex-boyfriends). The interviews were face to face, but the interviewers ensured that nobody else was at home and if they were they gave call back cards. In the first stage, men and women were interviewed. The second stage was women only and involved filling in a self-completion questionnaire, which was returned in a stamp addressed envelope. Stage three consisted of in-depth interviews with women who had disclosed domestic violence. Mooney, (2000) compared the results of the main 1996 BCS, the 1996 BCS self-completion module and the NLDVS to see the percentage incidence of domestic violence against women in a 12-month period. The results found that the self-completion module only showed a third of the incidences that the NLDVS recorded. Mooney (2000) suggests that this is because the methods of the BCS, which does not ensure anonymity. Other surveys have experienced low response rates to the domestic abuse question. The 1993 Aberystwyth crime survey found a 14 per cent 'no response' rate (with respondents neither confirming nor denying abuse) in the 16-34 age group. The survey was, however, conducted in front of family members, which would explain the interviewees reticence in answering the question (Koffman, 1996).

Despite their limitations, national and local surveys have been very useful in developing more of an understanding of the true extent of domestic abuse. They have also given more insight into some of the reasons why victims do not report their abuse to the police, or in some cases, anybody. The next section will explore the reasons why people do not report.

*Why do people not report?*

The CSEW found that whilst 81 per cent of victims told someone about their abuse, only 21 percent of victims reported their abuse to the police, with women more likely (26%) than men (10%) to report.  As will be discussed in the next section, there are a number of other agencies where victims might disclose and the CSEW found 19 per cent had reported to health services and 29 per cent to other professional or organisational support such as counsellors or therapist, Victim Support, helplines or specialist support services.  But 73 per cent of victims would confide in someone they knew personally, such as family, friends, a neighbour or work colleague (Flatley, 2016).  However, when these support mechanisms prove inadequate than victims are more likely to report to official agencies (Pahl, 2016).

The time elapsing before domestic abuse is reported is also an issue.  On average it takes a high-risk victim 2.3 years and medium-risk victim three years before they get help.  Before getting help 68 per cent of high risk victims have attempted to leave on average two to three times (Safelives, 2015).

There are both personal reasons and societal causes which mean that victims do not tell anyone about their abuse.  Reporting to the police is more likely if the incentives outweigh the costs of reporting (Felson et al. 2007). One of the key incentives to report is protection, particularly when children are involved.  Reporting is also more likely if the assault is serious and there is a weapon involved or an injury is sustained.  Another key reason is the desire for retribution or justice (Felson et al, 2007).   On the other hand, the costs may

be greater if the victim fears retaliation or consequences if they report.  Or the perpetrator may offer remorseful apologies, promising that the abuse will never happen again (Harne and Radford, 2008; Mooney, 2000).  In other situations, the perpetrator may convince the victim that they brought the abuse on themselves or some victims self-silence, by placing their partners needs above their own (Margolis, 1998) or are just too embarrassed to report (Felson et al., 2002).  Victims also find it difficult to leave if they are economically dependent on the perpetrator.  Others just want the violence to stop but would not wish for their partner to be labelled as a criminal (Harne and Radford, 2008).

Despite the work of feminists in raising the awareness of domestic abuse and attempting to bring the offence into the public sphere, societal causes for not reporting still exist, including imbalanced power relations between men and women, the idea of family privacy and victim blaming attitudes (Gracia, 2004). 37 per cent of CSEW respondents did not report their abuse because they regarded it as a private of family matter rather than an issue for the police. Perceptions of others' attitudes lead to fear that family and friends will blame them for bringing it on themselves or that the criminal justice system will not intervene (Felson et al., 2002; Flood and Pease, 2009; Kingsnorth and Macintosh, 2004; Lievore, 2003).  An example of this is marital rape, a type of abuse that is particularly under reported.  One reason for the lack of disclosure has been attributed to the crime not fitting the stereotype of rape, with it being neither committed by a stranger or outside, with victims not feeling they will be believed or seen as a real rape victim (Flood and Pease, 2009).  It is not only the public that have shown negative attitudes to marital

rape.  When rape was first included in the Sexual Offences Act in 1976, legislators were particularly hesitant to include marital rape and excluded if from the legislation for a further 18 years (Groves and Thomas, 2014).

Walklate (2004) identified that a lot of victim blaming attitudes stem from the thought that if things are so bad then the victim would leave and staying in a violent relationship is symbolic of women's irrationality.  The feminist movement on the other hand has asked the question, why does she stay?  Gracia (2004) questions whether it is unreported ignorance or social silence and acknowledges that if it is the later then action is needed.  Those with traditional gender role attitudes have been found to be less likely to report and were more likely to blame themselves and therefore less likely to report it to the police or other authorities (Harris et al., 2005).

 The incentives and costs of reporting were also found to vary depending on gender and the relationship (Felson et al., 2002).  Grady, (2002) suggests that men abused in the home are less likely to report their abuse.  This may be because men and women are socialised to express themselves differently.  Men may be less able than women to reveal the emotional impact that domestic abuse has on their lives (Goodey, 2005).  However, analysis of the BCS and CSEW found that the severity and volume of abuse experienced by women is greater, as is the impact it has on their lives (Walby and Allen, 2004).

Society had constructed women with children as the 'ideal victims' of domestic violence (Nils Christie, 1986).  However, there are certain groups that fall outside the definition of the ideal victim and are therefore even less

likely to report their abuse, particularly to the police.  These groups include

non-EU migrant women have no right to support from state funds (Gill and

Shama, 2007), those involved in criminality, including prostitution (Douglas,

2008; Dutton, 1992) and the travelling community (Harne and Radford, 2008;

Burnman et al, 2004)[10].

Attitudes towards the police have been found to influence reporting. 25 per

cent of CSEW respondents did not think that the police could help.  Others

feared more violence from involving the police, or they did not think the police

would be sympathetic, while others feared or disliked the police (Flatley,

2016).  These concerns are not unsubstantiated, with a report by Her

Majesty's Inspectorate of Constabulary (HMIC) finding gross failings in the

way that the police deal with domestic abuse.  The findings included attitudes

towards the victim that led to them being disbelieved, accused of violence

themselves and even 'chatted up' by the police officer.  Domestic abuse was

often treated as a second-class crime, with police officers having the attitude

that it was only a 'domestic' (HMIC, 2014).

The media has played an important role in bringing the previously private

issue into public debates and discussions.  Several soap operas, including

Eastenders and Radio 4, The Archers, have recently run stories where

characters have experienced abuse (BBC, 2017; Kerley and Bates, 2016).

The Archers storyline coincided with a 20 per cent increase in reporting to the

National Domestic Abuse Helpline, which was particularly significant given the

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[10] Further discussion of those who are even less likely to report can be found in chapter 3.

middle class, who are the main listener group for Radio 4, are thought to be even less likely to report their abuse[11]. The stories reinforced the message that domestic abuse can happen to anyone regardless of their age, class, sexuality, ethnicity or gender. Celebrities, such as Nigella Lawson, have also spoken out about their abuse, in the hope that a high-profile case such as hers will encourage others to escape their abuse. The disclosure had the desired effect, with a spike in recording to domestic abuse helplines following the publication of a photograph of Nigella's husband with his hands around her throat in a restaurant (Scott, 2013).

A new type of activism in the form of digital feminism has grown in recent years. The #MeToo hashtag was used 12 million times in the first 24 hours after the being started by Alyssa Milano, following revelations of Harvey Weinstein's widespread sexual assault (CBS, 2017). The mainstreaming of feminist activism brings with it a shift in the public's willingness to disclose and engage in standing up to sexism (Mendes et al., 2018). Questions have been raised as to whether campaigns such as #MeToo can produce social change. Positively, research has found that participants often gain a feminist consciousness, enabling them to see that issues such as sexual violence are a societal issue. Disclosing on social media is also seen as a first step in reporting to the police (Mendes et al., 2018). However, questions have been raised about whether it is possible for long term social change to take place through social media, with Slacktivism, the commodification of popular feminism, argued to minimalise the chances of change away from the online platforms (Roberts, 2019). Others' question whether individual's whole justice

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[11] There is further discussion of class in chapter 3

needs can be fulfilled in an online platform (Platt and Burton, 2017). It was also observed that #MeToo favours white middle class women, who are more likely to engage in social media, thus excluding disabled and BAME women (Flores, 2018; Wafula Strike, 2018). What #MeToo has aimed to do is not a new phenomenon, but a rather a new space in which to discuss it and a shorter timescale to the activism compared to past campaigns (Platt and Burton, 2017).

What this section has highlighted is that the reporting and disclosure of abuse is complicated by a range of personal, societal and organisational factors. A further complication is that victims will also present to other agencies. In the absence of multi-agency data collection, this therefore adds to the difficulty in gaining a full understanding of the problem. The next section explores the other agencies where victims may present and report and what is already known.

**Multi agency responsibility**

As discussed above, victims of domestic abuse do not always seek a criminal justice response to their abuse. The introduction of the three civil acts in the 1970s raised the profile of domestic abuse amongst other professionals and practitioners. As a result, there are a number of agencies that offer support to victims, some with statutory responsibilities and others without. Whilst having a range of agencies offers victims a number of options on where they can seek support, the downside of this is that some victims become lost in the system (Groves and Thomas, 2014). This has become particularly evident in some of the Domestic Homicide Reviews (DHR), which have found that

victims were known to a number of agencies, but the agencies had not spoken to each other and this resulted in missing links and vital pieces of information, which in some cases could have potentially prevented the ultimate death of the victim (Home Office, 2013)

The range of support agencies also creates an issue for commissioners and for those trying to estimate the full extent of victimisation. Data is collected in some agencies and not particularly well in others, it is not always measured in the same way. Fundamentally, the information is often not shared between agencies, unless victims are under multi-agency arrangements[12]. It is therefore difficult to tell the number of agencies that an individual victim might be engaged with or if they are known to any at all.

To further understand this complexity a brief overview of each of the main agencies that may come across victims of domestic abuse is given below. For each agency there is a discussion of the legislation, guidance or standpoint that the organisation works to and how this may affect what is known about the victims that might access their services. There is then a discussion of the ways in which some of these agencies may work together in particular cases of domestic abuse or in partnership approaches to tackling it.

*Family Courts*

Cases of domestic abuse are not only disclosed in the criminal courts, but also come to light in the family courts. The Family Procedure Rules 2010 cover all proceedings relating to children and it's Practice Direction 12J (PD12J) tells those involved in judicial proceedings how to interpret court

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[12] Discussed more below

rules regarding child arrangements and contact orders where there is domestic abuse (Ministry of Justice, 2017). The Family Justice System has come under scrutiny recently, following recommendations from the All Party Parliamentary Group on Domestic Violence and a Women's Aid report, 'Nineteen Child Homicides' (Womens' Aid, 2016). The recommendations called for amendments to PD12J, after the group and report found inadequate compliance with the Practical Direction. Justice Cobb was asked to review PD12J and a number of amendments were made in October 2017, urging courts of the mandatory requirement and making immediate changes to cross examination of victims but their alleged perpetrator (Family Law, 2017).

Research conducted by Women's Aid and the Children and Family Court Advisory and Support Service (CAFCASS) found that 62 per cent of child custody cases feature allegations of domestic abuse (CAFCASS, 2017). Disclosures to other agencies for those with cases in the Family Courts appear to be higher than those reporting to the CSEW. A recent survey of 76 women, conducted for Women's Aid found that women who had been a victim of domestic abuse and had had a child contact case held in the family court in the last five years, found that 82 per cent said that the police were aware of their abuse, 66 per cent health, 66 per cent domestic abuse services, 58 per cent social services, 50 per cent education services, 37 per cent and 31 per cent housing (Birchall, J and Choudhry, S., 2018). Interestingly, this suggests that when domestic abuse is mentioned in court, that a number of agencies will already be aware of the abuse. It should be noted, however, that this is a very small-scale survey, compared to the national data collected by the CSEW.

A limitation to data about domestic abuse in family court proceedings is in gaining access, with the current sources limited to small studies or surveys.  It had been hoped that CAFCASS data could be used in this research, but the data was not in a format that was easily downloaded from their case management system and would have been very resource intensive, which made CAFCASS unable to commit to this research.  This suggests that it is not routine practice to analyse and evaluate domestic abuse in any quantifiable manner, but it can only be hoped that the recent scrutiny and focus on domestic abuse in the family courts will encourage data to be collected in a more accessible and analysable format in the future.

*Housing*

Domestic abuse is one of the key causes of homelessness, particularly for women (Menard, 2001; St Mungos, 2014).  In 2018 domestic abuse contributed to homelessness for at least one in ten people who required local authority support (Department for Communities and Local Government, 2018), but like police reported domestic abuse the true scale of the issue is unknown (Safelives, 2018).  Housing providers have had a key role to play in providing shelter to victims and they have become a key partner to the MARAC (which will be discussed in more detail below).  As discussed earlier in the chapter, the creation of the House of Commons select committee in 1975 led to three civil law acts.  One of these acts was the 1977 Housing (homeless persons) Act, which gave the housing departments of district and borough councils the statutory responsibility to put a roof over the heads of those fleeing domestic abuse regardless of where they came from within the UK.  This legislation was updated to become the 1996 Housing Act and 2002

Homelessness Act.  The Acts require somebody to be treated as homeless if they are seen to be at risk of violence or abuse in their home (Shelter, 2018).

A link has been identified between reports of anti-social behaviour and domestic abuse, with 40 per cent of tenants who have suffered Domestic Abuse having had complaints made against them for Anti-Social Behaviour (Jackson, 2013).  With other research finding that people experience abuse for an average of three years before engaging with support services (Safelives, 2015), housing providers have found that they are ideally placed to identify domestic abuse and act as a first point of contact.  Key to pushing this work forward has been the Domestic Abuse Housing Alliance's (DAHA), which was set up as a partnership between three agencies (Gentoo, Peabody and Standing Together) aimed at improving the housing sectors response to domestic abuse (DAHA, 2018).  As this work has been gaining momentum while this research has been ongoing, there has been no data available for this research, but there is a lot of potential for future work.

*Health*

Like housing, the NHS offers the first point of contact for many victims experiencing domestic abuse, however, with the vast array of services the opportunities for disclosure and the recording of domestic abuse are variable. A systematic review of victims perceptions and experiences of accessing services by domestic abuse attributed difficulties experienced to inappropriate responses by healthcare professionals, discomfort with the healthcare environment, perceived barriers to disclosing domestic violence, and a lack of confidence in the outcomes of disclosure to a health professional (Robinson

and Spilsbury, 2008). Patient confidentiality also means that a trade-off between trust between the patient and the practitioner and the disclosure leaving the consulting room is often based on whether the practitioner has to report the abuse.  One of the main reasons that abuse would need to be disclosed to other agencies would be if there are safeguarding concerns for a child or vulnerable adult.

The National Institute for Health and Care Excellence (NICE) set out guidelines on aimed to help identify, prevent and reduce domestic abuse. Whilst the guidelines are not mandatory, they encourage health staff to remove obstacles to people disclosing domestic abuse.  One of the key ways they suggest to do this is to ask patients if they suspect abuse and to make sure that formal referral pathways are in place.  The guidelines also encourage partnerships between health services and local authorities, which will include local safeguarding boards for adults and children (NICE, 2016). What is aspirational and what is going on in practice, is however, not clear, and what is apparent is that practice varies considerably(Department of Health, 2015).  There have, however, been moves to bring in specialist support workers in some settings.

Independent Domestic Violence Advisors (IDVAs) were first introduced to support victims during their involvement in the Criminal Justice System.  They predominantly support high risk victims who are at greatest risk of death or serious harm and work with a number of agencies, the perpetrator and any children on a short to medium term basis (Howarth et al., 2009).  IDVA services are now being used in other settings outside the criminal justice system, such as in A&E and maternity services.

*Other agencies*

This list is not exhaustive and there are a range of other organisations where victims may disclose, these include refuges, charities, social care services. The community asset mapping exercise in Chapter Seven also sheds light on other agencies that have not been discussed as extensively in the literature.

*Partnership response*

There are a number of ways in which domestic abuse becomes a multi-agency issue.  Under the Crime and Disorder Act (1998), Community Safety Partnerships (CSP) were setup, with around 300 in England.  Each CSP is made up of representatives from the police, local authority, fire and rescue service, probation service and health (Home Office, 2015).  The CSPs decide the priorities for their area, so domestic abuse could be one of the issues they focus on, however, as it is a local decision they may prioritise other issues. Local areas may also have domestic abuse forums.

Multi-agency working is most likely to be in place for the highest risk victims. Mechanisms through which these victims will be discussed across agencies include the Multi-Agency Risk Assessment Conferences (MARAC) and Multi-Agency Public Protection Arrangements (MAPPA).  The MARAC comprises police, probation, health, child protection, housing practitioners, IDVAs and other staff from specialist organisations.  The aim of the MARAC is to share relevant information across information in order to identify the risks and produce a coordinated action plan to safeguard the victims and any children that may be involved. In the UK there are 270 MARACs, which discuss around 64,000 cases a year (College of Policing, 2019).   MAPPA involves

the police, probation and prison services working with other agencies to manage the risks of violent and sexual offenders aimed at protecting the public in the local area (MAPPA, 2019).

Whilst these arrangements are in place for the highest risk victims, the majority of victims will not have this level of support or have their information shared with other agencies.  This research aims to find the risk factors that will identify potential victims before they reach the critical stage of needing MARAC or MAPPA interventions.

**Context summary**

This section has discussed the key issues that feminists have brought to the attention of the legislators, policy makers and the public.  Whilst considerable work has been undertaken to bring the private issue to the public attention, the issue is by no means resolved and societal attitudes and personal barriers to disclosure mean that we still do not know the full extent of the issue and how the risk of harm varies across the population and space.  Having this information is key if victimisation is to be identified earlier and victims are to be given the support to escape their abuse.  As this chapter has begun to explore, the risk of victimisation, the type and the prevalence of abuse that is reported is thought to vary according to the gender of the victim.  The next chapter adopts an intersectional approach to further investigate how the other risk factors including, age, ethnicity, class and the relationship between the victim and the perpetrator interact and differ.

Structure and outline of the thesis

A summary of the structure of the thesis is now given and a brief description of the contents of each Chapter.  Following this introduction, Chapter Two discusses the literature that is related to analysis chapters.  It begins with the existing knowledge on the spatial distribution of domestic abuse and neighbourhood level predictors, in then introduces the concept of intersectionality, which will be used to explore the predictors at the individual and family and relationship level.

Chapter Three outlines the methodology that the thesis will use, beginning with a discussion about the theoretical framework that will be used before discussing the data and the methods adopted in each empirical chapter.

Chapter four is the first of the empirical analysis chapters.  This chapter uses and intersectional approach to identify the predictors of domestic abuse at the individual and family and relationship level.  A number of regression models are developed that identify the predictors of injury, abuse getting worse and repeat victimisation.

Chapter Five focuses on the spatial analysis of domestic abuse, beginning with the spatial and temporal distributions of domestic abuse, before moving on to the neighbourhood level predictors and risk factors using Geographically Weighted Regression (GWR).

The final empirical analysis is found in Chapter Six.  In this chapter community asset mapping, a strength-based approach is used to explore variations in the GWR model produced in Chapter Five.  The results are explored with sections on neighbourhood composition; collective efficacy and

social capital; churches, community centres and foodbanks; and hidden populations.

Chapter Seven brings together the findings from the three previous empirical chapters to reflect on the collective findings from the thesis. The applicability of the original conceptual model is then discussed, and a causal pathway developed. The chapter concludes with a discussion on the implications of gender.

Chapter Eight concludes with a synthesis of the whole thesis, focusing on how the research questions have been addressed by the different chapters and methodologies. The implications for theory are then discussed and policy recommendations are drawn from the findings. The thesis ends with recommendations for future research.

# **Chapter Two: Literature Review**

This chapter brings together the relevant literature, drawing on the current knowledge, substantive findings, theoretical development and methodological contributions.  The chapter begins with a discussion of the spatial literature, which will inform Chapter Five and Six and concludes with the individual and relationship level literature, which will be relevant to the analysis in Chapter Four.

Spatial Analysis

To date, the focus of research in the UK has been on individual level risk factors of abuse, where variables such as age, gender, ethnicity and repeat victimisation have been considered.  There have been substantially fewer studies that have considered the geographic distribution of victims and the variation of abuse and predictors at the neighbourhood level.  A recent systemic review of neighbourhood studies of interpersonal violence found most research was carried out in urban areas in the US, with no research from the UK (Beyer et al., 2015) and the only study from Europe focused on Spain (Gracia et al., 2014).  Chapter Four aims to address this deficit in the literature, by exploring the spatial and temporal patterns of domestic abuse and the predictors of domestic abuse at the neighbourhood level and their variation over space.  Having this knowledge not only has academic benefits, but in a time of austerity the police and other agencies need more than ever to understand the geographical demand for their services, the varying needs of the population and the interventions that will have the most impact in reducing the harm of domestic abuse.

Spatial and temporal distributions of crime

Over the last twenty years the use of GIS to explore the spatial patterns of crime has expanded dramtically, both in academic research and by researchers working for the police and other agencies (Bottoms, 2007; Chainey and Ratcliffe, 2005; Chainey and Tompson, 2008; Hirschfield and Bowers, 2014, 2014; Johnson, 2017; Newton and Felson, 2015; Santos, 2016; Weisburd et al., 2015).

Spatial analysis operates at both the individual and neighbourhood level. Individual level spatial analysis has classically been linked to environmental criminology, where the 'criminal event must be understood as confluences of offenders, victims or criminal targets and laws in specific settings at particular times and places' (Brantingham and Brantingham, 1991, pg.2). Brantingham and Brantingham (1991) stated that to fully understand crime, information from all dimensions needs to be synthesized and therefore analysis of the location where the crime is taking place is both fruitful and necessary in forming a multi-faceted understanding of domestic abuse. Two classic theories used by environmental criminologists to explain crime at the individual level and to explore crime hotspots are routine activities theory and crime pattern theory (Brantingham et al., 2017; Cohen and Felson, 1979; Felson, 1987; Roncek and Maier, 1991). The opportunity for crime to take place is limited by the interactions of the victim and the perpetrator (the motivated offender) and when they meet in space at the same time (Brantingham and Brantingham, 2013). Having the ability to simulataneously visualise the space and time dimensions of crime, has important implications

for policy, with different potential responses to stable or transient space-time crime clusters (Nakaya and Yano, 2010).

Whilst there is a wide literature applying routine activities theory and crime pattern theory to street crime, there have been a much smaller number of studies that have used it to understand domestic abuse. Felson and Boba, (2010) argue that routine activities theory is still applicable as physical acts still involve tangible victims, whose specific characteristics make them suitable targets for the perpetrator to attack. One such attribute found to make a target more suspectable to domestic abuse was the absence of support from famliy members, described by routine activities theory as capable guardians (Baumgartner, 1993; Felson, 2006). The challenge for this research is capturing this data.

<u>Neighbourhood level</u>

As might be expected, crime is not distributed randomly across neighbourhoods (Brunton Smith et al, 2013; Sampson, 2012; Bottoms, 2007; Sherman et al, 1989; Brantingham and Brantingham, 1981; Shaw and McKay, 1942). As with crime more generally, the CSEW suggests that the distribution of abuse victims is not even, with those living in the most deprived 20 per cent of areas more likely to be victims of domestic abuse than those in the least deprived areas, with 11.1 per cent of women and 4.8 per cent of men compared to 5.6 per cent of women and 3.0 per cent of men respectively (Flatley, 2016).

Of the studies conducted at the neighbourhood level the majority have used social disorganisation theory to explore the sociological influences of

domestic abuse (Ackerson et al, 2008; Frye et al, 2008; Cunradi, 2007; Raghavan et al, 2006; Dekeserdey et al, 2003; Koenig et al, 2003; Browning, 2002).  Social disorganisation theory, originally coined by Shaw and Mckay (1942), studies the relationship between crime and neighbourhood structural and cultural factors.  Crime was found to increase in an area when there was a lack of social cohesion, with three key variables; population exodus; ethnic heterogeneity and low economic status found to be the strongest predictors (Shaw and Mckay, 1942).

A major criticism of Shaw and Mckay's theory was the lack of testing of the measures they theorised (Sampson and Groves, 1989) and it was probable that this was a factor in the subsequent decline in support for the theory over the next thirty years.  One of the first academics to openly criticise the lack of clear discussion on the causal mechanisms of the theory was Ruth Kornhauser in her book 'Social Sources of Deliquency' (Bursik Jr, 1988; Kornhauser, 1978).

Central to Kornhauser's research was the notion of informal social control. It was theorised that disorganisation resulted in a lack of trust and cohesion in a neighbourhood, which reduced the ability for informal control to be exercised over disorderly youths and criminal behaviour, resulting in a higher rate of crime (Kornhauser, 1978; Wilcox et al., 2017).

It was through Kornhauser's work that an interest in neighbourhoods' influence on the rates of crime was reignited.   Her work inspired a number of scholars to attempt to revive social disorganisation theory under the new

branding of 'The Systemic Model' (Bursik Jr and Grasmick, 1993; Hunter, 1985; Sampson and Groves, 1989).

Using the systemic model, Sampson and Groves (1989), were the first to test the causal mechanisms between structural characteristics and crime that had been set out in social disorganisation theory.  They found that the theory successfully predicted self-reported crime, using data from the British Crime Survey (BCS) (Andresen, 2010; Sampson and Groves, 1989).  The research also expanded Shaw and Mckay's model, finding that communities who had sparse friendship networks, unsupervised teenage groups and low participation in organisations had disproportionately high levels of crime, which they believed mediated the effects of neighbourhood level structural characteristics (Sampson and Groves, 1989).  The systemic framework took a fundamental shift away from those perpetrating the crime to the positive influence of good people in the community (Wilcox et al., 2017).

Social disorganisation theory was first conceived for crimes that take place in public spaces, such as burglary and robbery.  Concern was expressed that the theory would not convert to domestic abuse as its private nature means it may be difficult for a community to recognise violence between partners as deviant and intervene (Browning, 2002).  However, others have suggested that factors such as higher levels of disadvantage could impact levels of abuse as it may intensify stress between partners (Ross and Mirowsky, 2009) and increases the likelihood of violence (Pinchevsky and Wright, 2012; Wright and Benson, 2011;).

An alternative theory, the broken windows thesis (Wilson and Kelling, 1982) supports the notion that anti-social behaviour and violent crime are linked (Boggess and Maskaly, 2014), however it has been argued that such theories fail to capture a causal link between crime and anti-social behaviour, and that crime and disorder manifest themselves when neighbourhoods lack collective efficacy (Sampson and Raudenbush, 1999).  It is therefore possible that endogenous or neighbourhood effects could be at work and this needs to be explored further, in order to formulate appropriate policy responses (Dietz, 2002; Mohan, 2003).

Rather than focusing on the individual, where strong personal ties and relationships are needed for self-efficacy, the theory of collective efficacy is that the local community acts as an essential ingredient to achieving social good and control that will benefit everyone (Bandura et al., 1999; Sampson, 2006).  Another related concept is social capital.  Putnam, (2000) explored the multi dimensions of social capital, but argued that perhaps the most important element is the distinction between bridging and bonding social capital.  Bonding social capital reinforces the exclusive identity of homegenous groups (such as church based women's reading groups) whereas bridging social capital is outward looking fostering inclusive identities across social groups (such as youth service groups) (Putnam, 2000).

There is conflicting historic research on the influence of population density on levels of crime within a community.  Shaw and Mckay (1942) hypothesised that urban areas were less likely to have social control, compared to rural and suburban areas and therefore weaker social ties and friendship networks, resulting in lower levels of participation in local activities (Fischer, 1982) and

community attachment (Wirth, 1938; Tonnies, 1887). This in turn, is argued

to have a significant affect on ability of the community to control young

people, which leads to crime and anti-social behaviour (Sampson and

Groves, 1989). Other studies have found little support for the influence of

population density, but rather argue that length of residency in an area is a far

more appropriate measure (Kasarda and Janowitz, 1974). There has been

little research on the influence of population density specifically on domestic

abuse, the CSEW found little difference between the numbers experiencing

abuse in urban and rural areas (Flatley, 2016), whereas another study from

the US found the prevalence was higher in rural areas (Peek-Asa et al, 2011).

The influence of population density on the amount of abuse in an area is

therefore something that should be explored further and modelled.

Previous research has focused on relationships between variables at the

macro level using traditional regression methods including logistic and

multivariate regression (Waller et al, 2011; Reed et al, 2009; Stueve and

O'Donnell, 2008; Raghavan et al, 2006; Lauritsen and Schaum, 2004;

Benson et al, 2003; Van Wyk et al, 2003). What has been absent is a

methodology that accounts for the variation in the strength of coefficients

across the area. Tobler's First law of Geography states that "everything is

related to everything else, but near things are more related than distant

things" (Tobler, 1970: 234). Sampson et al (2002) echo this sentiment with a

call for new analytical techniques which display the connection between

social and spatial processes, a method that factors in the premise that social

behaviour is influenced not only by what happens in the immediate

neighbourhood, but also in the surrounding areas. Understanding how relationships vary across space has clear policy implications, with the possibility of a far more targeted and appropriate response at the local level, rather than a blanket response for a whole jurisdiction. Geographically Weighted Regression (GWR) offers a methodology in which to explore this variation, and this is the approach taken in the present research. GWR has been used to explore a wide range of phenomena, from mosquitos (Lin and Wen, 2011) to obesity (Chalkias et al, 2013; Wen et al, 2010), participation in Higher Education (Harris et al, 2010) and school attainment (Fotheringham et al, 2001). There have only been a small number of studies where GWR has been used to understand crime, with studies of violence (Cahill and Mulligan, 2007), burglary (Chen et al, 2017; Zhang and Song, 2014; Malczewski and Poetz, 2005), theft (Yan et al, 2010) and all crime (Lee et al, 2009). All found that GWR improved the explanatory power of the models by controlling for local variation.

**Geographically Weighted Regression**

In a standard regression model, it is assumed that the value of the coefficient is the same everywhere in the study area and that the relationship between variables is spatially homogenous. In reality, this is not always the case and attributes of spatial units closer together are often more similar than those which are further apart (Fotheringham, 2009). In an Ordinary Least Squares (OLS) regression this causes problems because one of the assumptions made when using a global model is that the observations that are being used are independent. A measure of this is spatial autocorrelation, with positive spatial autocorrelation showing neighbouring spatial units to have similar

values.  It is not only the variables that might exhibit spatial dependence, but also the model's residuals, which might result in inefficient estimates of parameters with the standard errors being too large (Charlton et al., 2009). With GWR estimates of the parameter are made at each data location.  GWR overcomes the issues of spatial autocorrelation as the influence of space is included in the model by using a weighting function, where nearby points have greater weight in the estimate than in points further away.

The chapter has thus far focused on the spatial literature.  To be able to explore the individual and relationship level risk factors of domestic abuse then the existing research, theoretical and methodological developments at these levels also need to be considered.

<u>Individual level</u>

Historically much of the focus of research has been on the relationship between domestic abuse and gender, particularly the role of patriarchy. However, more recent research, predominantly qualitative studies, have increasingly recognised that domestic abuse is a complex issue and other inequalities that shape identity, such as race, class and age need to be considered alongside gender (Almeida and Durkin, 1999; Bograd, 1999; Browne and Misra, 2003; Crenshaw, 1991; Smye et al., 2011; Sokoloff and Dupont, 2005).

**Intersectionality**

A theory that has been argued to address the problems of tautology, dichotomisation and homogeneity, found in the concept of patriarchy, is intersectionality (Patil, 2013), a theory developed by Crenshaw in 1989. Although this was the first time that this terminology was used, it has been recognised that there are earlier examples of work that looked at the relationship between gender, race and ethnicity (Daly, 1989; Ferree, 2009; hooks, 1981).   In Crenshaw's 1991 paper she described the problems with identity politics ignoring intragroup differences (Crenshaw, 1991). Intersectionality is defined as:

*'The view that women experience oppression in varying configurations and in varying degrees of intensity. Cultural patterns of oppression are not only interrelated but are bound together and influenced by the intersectional systems of society. Examples of this include race, gender, class, ability, and ethnicity.' (Collins, 2000)*

There are two strands to Crenshaw's intersectional theory.  The first is the 'identity characteristics', regarding the gender, class and race of individuals. Rather than looking at just gender, by considering these characteristics together a more informed picture of domestic abuse can be made.  The second strand is developing a social structural perspective.  Here the different ways in which women are marginalised through race, class and gender are recognised, identifying that women's experiences vary considerably (Groves and Thomas, 2014).   Walby et al. (2012), in their review of intersectionality also acknowledge the contributions of McCall (2005) and Hancock (2007). Both identify three approaches to intersectionality, McCall's intra-categorical; anti-categorical; and inter-categorical and Hancock (2007) unitary; multiple and intersectional.  McCall (2005) recommends inter-categorical analysis, as

this uses existing categories and engages the larger structures that create inequalities, Hancock (2007) on the other hand commends the fluidity of the intersectional approach.  Strid et al. (2013) believe that recognising intersectionality is particularly important in producing good quality policy that reaches all women and ensures all can access support services.  Their research found three forms of visibility of multiple inequalities; firstly, the naming of multiple inequalities; secondly intersecting inequalities and thirdly the voice in the policy process and the outcomes in society.  The named inequalities around domestic violence policy include class, LGBT, faith/belief, age, disability and marital status (Almeida and Durkin, 1999; Bograd, 1999).  The groups found to be particularly vulnerable were at the intersections of gender, ethnicity and class.  It is argued that intersectionality is one of most important developments in feminist research (Davis, 2008) having eclipsed patriarchy (Patil, 2013) and offering a more nuanced collective framing (Nixon and Humphreys, 2010), which gives a voice to women who have been marginalised (Richie, 2000; Ristock, 2012; Russo, 2002).  However, others warn against the degendering of domestic abuse policy, as intersectionality could then weaken the gender equality project by reducing the visibility of gender.  It is also argued that whilst empirical research needs to understand the connection between inequalities, they should also be named and distinguished separately (Strid et al., 2013; Bowleg, 2008).

To date, the majority of studies using intersectional theory to investigate domestic abuse have used qualitative methods to explore the interaction between gender, race, class and other structural factors.  There are, however, exceptions, such as the quantitative work identifying the corelates of

homicides (Haynie and Armstrong, 2006; Parker and Hefner, 2015) and the work of Sherman and Harris (2015) although not framed as intersectional analysis, found how important it was to include race in their analysis of the Milwaukee Domestic Violence Experiment.

Chapter One has already set out the plethora of debate in the literature over the gendered nature of domestic abuse.  The next sections in this chapter set out the other variables through which an intersectional approach to domestic abuse needs to consider.  This section will only focus on the data that is available in the police recorded domestic abuse data, in an ideal world data on disability, religion and sexuality would also be considered, but this data is not currently recorded.

**Age**

By looking at police statistics and surveys alone the research and data would indicate that young people are more likely to be victims of domestic abuse. The Crime Survey in England and Wales (CSEW) finds that respondents between the ages of 16 and 24 have experienced the highest rate of abuse in the last 12 months (Flatley, 2016).  It must, however, be remembered that surveys such as the CSEW only ask those between the ages of 16-59 the Inter Personal Violence questions, so the extent of abuse in respondents aged 60 and over is not covered (Walby and Towers, 2017).  This therefore leaves a significant gap in our understanding of older victims' experiences of abuse at the national level.

The small amount of research that has been conducted on older victims has found the abuse to be even less likely to be reported (McGarry et al., 2011).

Police recorded incident data and survey results both show prevalence of abuse at its highest amongst younger victims, but research from the National Centre for Social Research and King's College London (O'Keeffe et al., 2007) found that 1 per cent of people aged 65 and over living in private households experienced interpersonal abuse in the past year. This included psychological, physical and sexual abuse.  The proportion of over 65s reporting to the police was however, only 4 per cent, a figure considerably lower than 21 per cent of younger victims in the CSEW.  In contrast 29 per cent reported to their GP and 30 per cent to friends or family, which highlight the need to consider other data apart from police reports.  Analysis of the North London Domestic Violence Survey (NLDVS) found that whilst the prevalence of domestic abuse diminished after the age of 45, it also discovered that older people's recognition of abuse was narrower than younger respondents, particularly the emotional and psychological elements of abuse (Mooney, 2000).

> *'Don't ask him questions about his actions or question his judgement or integrity.  Remember, he is the master of the house and as such will always exercise his will with fairness and truthfulness.  You have no right to question him.  A good wife always knows her place.'*
> (Housekeeping Monthly, 1955).

The narrower definitional of abuse and generational issues are thought to be key contributing factors to older people not reporting their abuse.  With domestic abuse only becoming an issue for public concern in the 1970s, many older victims will have been brought up with traditional attitudes towards marriage and their gender roles (Scott et al., 2004).  The excerpt above from Housekeeping Monthly demonstrates this type of attitudes and expectations.

There was very much a perception that violence in relationships belonged in the private sphere and that police did not get involved in domestics. In some relationships violence has become a routine part of marriage, which may have been going on for years. This coupled with a stigma around divorce and separation and other factors such as dependency on the perpetrator in later life have created barriers for older women to report their abuse or to escape from abusive relationships. Brandl and Meuer, (2000) found that people who are victims of violence that is perpetrated by a stranger would like the perpetrator to be punished, but those abused by someone whom they are in an ongoing relationship would like the abuse to stop but the relationship to continue. There is a desire to seek services to help the perpetrator, rather themselves as a victim (Brandl and Cook-Daniels, 2002). Shame and embarrassment were cited as the main reasons for not telling anyone, this includes the reactions that older children might have. Some women who have left have been estranged by their children who have found the situation embarrassing (Scott et al., 2004). Older women may also find it more difficult to leave an abusive relationship as they are more financially dependent on the perpetrator than younger women, with it more difficult to find employment and to build the resources for retirement (Phillips, 2000; Scott et al., 2004).

The problem for some is not the embarrassment for their children, but the fact that the children are the perpetrators of the abuse, with intergenerational abuse a recognised issue for older people (Brandl and Meuer, 2000; Young, 2014). Research conducted in Canada found that whilst spouses were more likely to be physically abusive, adult children were more likely to perpetrate

financial abuse.  There is also thinking that there might be an intergenerational cycle of abuse, with those who have been victims of child abuse potentially retaliating against their parents when they become adults (Brandl and Cook-Daniels, 2002; Buchanan, 2002).

There is also confusion around the differences between domestic abuse and elder abuse (Kilbane and Spira, 2010; Straka and Montminy, 2006).  This misunderstanding is a contributing factor to this age group being overlooked altogether (Blood, 2004).  Most domestic abuse services are targeted at those aged 18 to 44 and protection services for adults are aimed at the frail elderly and incompetent victims.  The result is a gap in service provision and the people in between are lost in the cracks' (Brandl and Cook-Daniels, 2002).

In addition older victims are not always aware of the services available to them (Beaulaurier et al., 2007) or the services provided are inappropriate. The services that are available may not be adequately set up to deal with physical or psychological needs of older victims.  The service provision is particularly problematic in rural areas (Blood, 2004).

The experiences of older victims of abuse are also thought to vary considerably.  When abuse was divided into Johnson's intimate terrorism and common couple violence[13] the victims of intimate terrorism were found to be older than the victims categorised as common couple violence (Leone et al., 2014).  The location of victimisation has also been found to vary with age,

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[13] See context chapter for a more detailed discussion of Johnson's categorisation

with the elderly much less likely to be victims of violent crime in public places but more vulnerable to violent or sexual victimisation in the home or private places (Goodey, 2005), which may result in the abuse being even more likely to be hidden.  At the extreme end of domestic abuse, the prevalence of homicide-suicide cases amongst those aged 55 and over was found to be between 0.4 and 0.9 per 100,000 population.  The perpetrators are largely male and the need to control the relationship appeared to be a catalyst leading to many homicide-suicides (Brandl and Cook-Daniels, 2002).

The need to take an intersectional approach is supported by Grossman and Lundy (2003) who found that abuse in older people is not uniform and the types of abuse varied and interacted with other factors such as ethnicity.  The lack of research and limited data available on older victims of domestic abuse clearly highlights a gap that needs to be explored further.  With the experiences of older victims being so different from younger victims and the UK population ageing, the need for this research is particularly pertinent.  Without this information services will continue to be provided to known, mainly younger victims.

**Class and lifestyle**

Whilst domestic abuse is thought to happen across the social classes, variation in the type of abuse has been found between the classes.  Surveys have found an inverse relationship between the level of physical violence and class, with those in the lower social classes experiencing more physical violence and higher levels of domestic abuse (Bograd, 1999; Fang and

Corso, 2008; Mooney, 2000; Flatley, 2016; Renzetti, C., 2009). The North London Domestic Violence Survey also found variation in the recognition of abuse by class (Mooney, 2000). All classes were found to have high levels of recognition of physical injury as a type of domestic abuse, but a higher number from the professional classes perceive mental cruelty, threats, actual violence and rape as domestic abuse. However, the lower middle and working class reported having experienced more abuse to the survey (Mooney, 2000). Mooney (2000) questions whether it is class propensity to violence or whether it is different definitions of domestic abuse that lead to different levels of abuse across the classes. The qualitative research following the survey found that there was often a pattern of controlling behaviour before the relationship became physically violent and Mooney (2000) suggests that professional women, who will have more resources may be able to escape the relationship before physical abuse begins. Women in lower-middle and working classes are more likely to have children and may therefore be locked into relationships (Mooney, 2000) and not have economic means to escape (Walby, 2009).

When lifestyle factors are considered feminists argue that patriarchy causes domestic abuse, not drugs, alcohol or stress (Dobash and Dobash, 2004; Women's Aid, 2018b). However, survey data, such as the CSEW, has found that perpetrators of abuse are more likely to use both alcohol and drugs, particularly where the perpetrator is female (Flatley, 2016). A predictive model of domestic abuse from hospital data in the US, also found drug and alcohol misuse to be highly predictive for female victims (Reis et al., 2009).

The term 'Toxic Trio' is used to describe the issues of domestic abuse, mental ill health and substance misuse.  When seen together they are common features of family harm (Coordinated Action Against Domestic Abuse, 2014) and are found by Serious Case Reviews to be risk factors.

**Ethnicity**

The CSEW does not offer a great deal of insight into the ethnicity of victims, as the results reported in the published analysis are only broken into two categories of white or non-white.  The proportions of victims are higher in the white group for both men and women.  The NLDVS did however have a more comprehensive analysis of responses by ethnicity and the results found that there was considerable variation in the prevalence, reporting and understanding of domestic abuse amongst different groups.  When asked about the different categories that they recognised as abuse, such as rape, emotional, physical and psychological abuse, those from African-Caribbean ethnic groups recognised all types of abuse as domestic violence more than any other group.  Those of African ethnicity exhibited the lowest levels of recognition for most types of abuse, particularly rape, where only 55 per cent regarded it as a form of domestic violence compared to 85 per cent amongst African-Caribbean (Mooney, 2000).

Prevalence and underreporting is also thought to be particularly high from women with insecure immigration status who are reliant on being married to stay in the country (Erez and Harper, 2018).  This includes so called 'Male Order' brides and women who marry UK 'sex tourists' from Thailand and Philippines (Harne and Radford, 2008; Narayan, 1995).   Their insecure

immigration status is therefore used by the perpetrator as another element of

control, leaving the woman to fear that if the marriage ends she will risk

deportation (Erez and Harper, 2018).  Another group who are known to under

report are those from travelling communities.  Reasons given for

underreporting are conflicts of loyalties between the communities and the

authorities (Harne and Radford, 2008); more severe and longer suffering for

those who report (Equality and Human Rights Commission, 2009);

ostracization within communities for those getting divorced; and the

normalisation of abuse, with those living in closed communities and not

receiving education being unaware that this behaviour is neither acceptable

or normal (Clark, 2009).  However, more recent research has suggested that

an intersectional approach to understanding travel communities is needed, as

times are changing and factors such as access to education mean that some

traveller women are now being encouraged to leave their abusive partners

(Hamilton, 2018).

Across different ethnicities the context in which abuse is perpetrated may also

vary, for example reported domestic abuse may include forced marriage,

Honour Based Violence and Abuse (HBVA) of Female Genital Mutilation

(FGM) (Women's Aid, 2014).  The role that so-called honour, the shame

brought upon a family, plays in this type of abuse, distinguishes it from other

types of domestic abuse and it is thought to be even less likely to be reported

or reporting is delayed, putting victims at more risk than other forms of

domestic abuse (Harrison and Gill, 2017; Mulvihill et al., 2018).  In these

communities the cultural norm is that problems at home should be resolved

within the family or the community.  The abuse also potentially involves more than one perpetrator, most likely to be the victim's male blood relatives or in-laws (Stewart, 1994; Wikan, 1984).  Older women may also be involved in the perpetration of abuse, although it usually the men who carry out the violence (Ertürk and Purkayastha, 2012).  HBVA has also been found to be perpetrated against young men for refusing to enter into an arranged marriage (Chesler, 2010; Oberwittler and Kasselt, 2011) or those coming out as gay (Bilgehan Ozturk, 2011; Jaspal and Siraj, 2011).  Victims who do seek help from the police have reported an increased feeling of vulnerability and risk of serious harm (Gill et al, 2017).  The government has tried to address this by raising the priority given to victims of HBV/A, FGM and forced marriage in the Victim's Code of Practice (VCOP) in 2015, but recent research has found that more work is still needed to recognise the voices of victims and perpetrator (Gill et al., 2018).  Intersectionality also plays an important part in the levels of abuse perpetrated and reported, with variations in the honour system according to location, ethnicity, regional culture and economic status (Dobash and Dobash, 2000).  The interaction between the victim and the reporting officer also shows intersectional variation with the gender, ethnicity and immigration status of the victim instrumental in the experiences of the victim, with research by Mulvihill et al., (2018) finding only 25 per cent were happy with their reporting experience.

One of the reasons more broadly why underreporting is higher amongst Black and Minority Ethnic (BAME) groups could also be due to a conflict of loyalties when it comes to seeking help in a society where racism continues to be a

problem. The victim may be fearful to exposing themselves or the perpetrator to racism when reporting to what may be perceived as 'white authorities' (Walklate, 2004).

**Relationship**

Much of the literature focuses on domestic abuse between intimate partners or ex partners (for example Dobash and Dobash, 2004; Hoyle, 2012; Johnson, 2006; Walby et al., 2014; Walby and Towers, 2017). The police data, however, also includes abuse that takes place between family members, such as parent and older child (and vice versa), siblings and other family relationships. Being able to break the data down into the different relationships will add insight and enable profiles to be built of each of the relationships, rather than making the assumption that they all have the same risk factors. Walby and Towers, (2018) advocate the need to mainstream the relationship between the victims and the perpetrator into the analysis of violent crime.

Research has already found that victims who leave their partner are not automatically safe (Crown Prosecution Service, 2014), in fact they are significantly more likely to experience abuse when compared to those whose marital status is single, with a three-fold increase for men and almost double for women. Leaving or trying to end relationships was a precipitating factor in 45 per cent of cases in which men kill female partners (Block, 2004). These statistics further emphasise the need to understand the risk factors by the type of relationship.

Another relationship that requires further analysis is that between parents and children. As discussed above in the age section, abuse perpetrated against older people is often carried out by an adult child. Abuse between young adult children, who are still living at home, is also a major concern for family support agencies and something that is recognised as being under researched, compared to domestic abuse amongst partners (Galvani, 2010). A report 'Supporting families affected by substance use and domestic violence' found the following:

*'The predominance of child to parent abuse in this study highlights an area of domestic violence and abuse which is far less researched and recognised than its adult counterpart, partner violence. While there is some recognition of child to parent abuse as part of teenage tantrums and struggles for independence, there is almost no recognition of domestic violence and abuse towards parents'*
          (Galvani, 2010)

The report also found that a resistance to subjecting children to criminal justice system and not being able to walk away was leading to under reporting of domestic abuse in these relationships (Galvani, 2010).

Siblings are another relationship where there in a dearth in the domestic abuse literature. Whilst being recognised as the most common form of child abuse, further research is needed to explore the relationship between gender, age and sibling abuse (Button and Gealt, 2010). For the sibling abuse to be domestic abuse the victim needs to be over the age of 16 and the perpetrator older than 10.

Chapter summary

This chapter has set out the literature that is relevant to the theoretical framework that will be explored in next chapter. There are still a number of

questions that remain unanswered when looking at the spatial distribution of domestic abuse. Firstly, does domestic abuse cluster in certain geographic areas? Secondly, so these clusters remain static, or do they change over time? Finally, can neighbourhood variable predict domestic abuse.

As a feminist theory, intersectionality still focuses on gender as the central oppressor, but also recognises that the experiences of victims will vary according to their age, ethnicity, class and the relationship between the victim and the perpetrator. There has been a discussion of what is already known about each of the variables independently, but what is needed now is analysis that considers the way in which they intersect and interact with each other.

The chapter has recognised that most of the existing research that has adopted an intersectional approach has been qualitative and that there is a paucity in quantitative approaches to understanding the intersections between the different oppressors and also the predictors at the neighbourhood level. The empirical chapters therefore seek to address these gaps in the knowledge by identifying the profiles of those who report their abuse to the police, the risk factors that lead them to becoming repeat victims and to understand the neighbourhood factors that increase the risk of vicitimisation.

# Chapter Three: Methodology

This chapter introduces the research framework that will be tested and developed in the empirical chapters. It will discuss the data that will be used and the methods that will be employed to test the theoretical models.

**The research framework**

As a geographer by background, with a career as a social researcher, it was a natural choice to want to explore the research problem using interdisciplinary methods and theory. The ecological model set out by Beyer et al (2015), illustrated in figure 3.1, provides an ideal framework through which to conduct this research, as it recognises the multi-faceted nature of domestic abuse, with the individual characteristic nested within the interpersonal and family layer, which in turn sits within the neighbourhood and community dimension. To be able to challenge the final layer, the policy, systems and society then a thorough understanding of the first three tiers is needed. To do this a number of methods need to be considered. Some of the methodologies have never been used with domestic abuse data before, so the research has deliberately set out to test the methods, to see whether their applications are suitable for analysing domestic abuse and whether they can add to the knowledge and understanding of this crime type.

*Figure 3.1: The ecological model of domestic abuse (Beyer et al., 2015).*
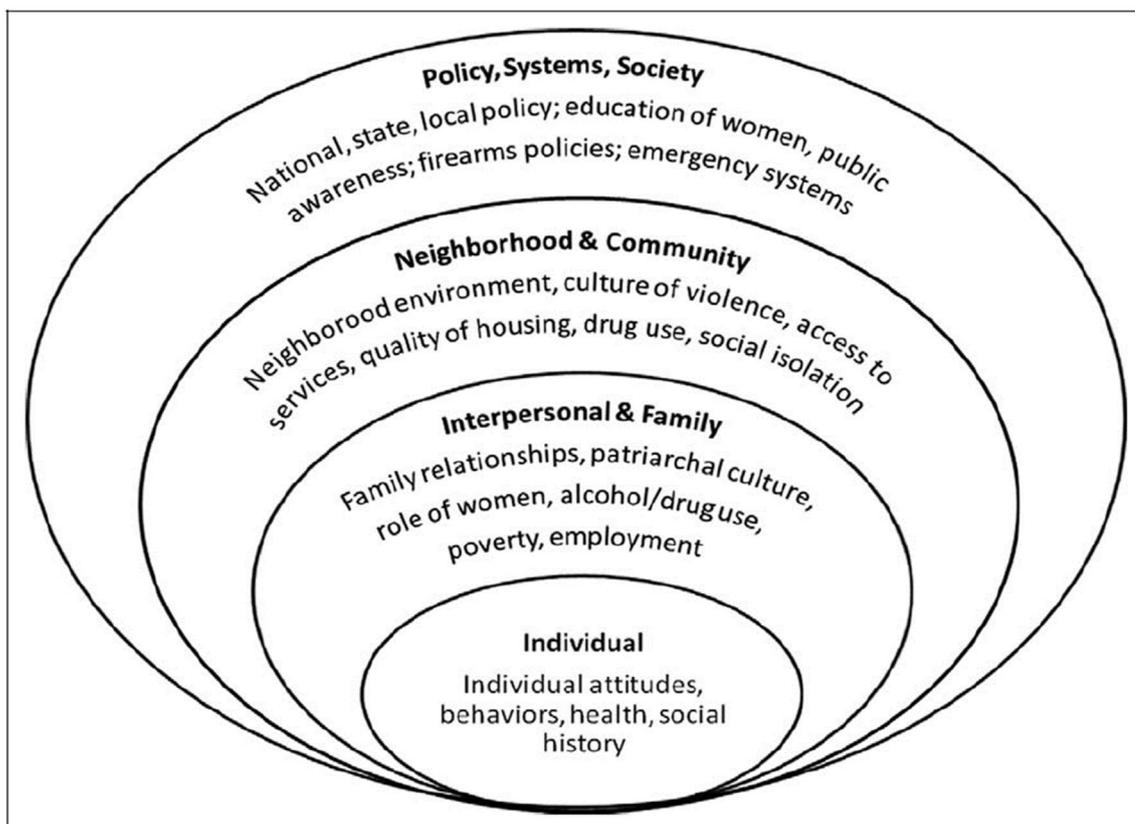


A detailed discussion of each methodology will follow later in this chapter, but below is a discussion on why the three main methodologies were chosen and the value that they could potentially offer in predicting domestic abuse.

**Individual level**

As discussed in the previous chapters, the majority of existing research into domestic abuse has been conducted at the individual level.  Most of these studies have been qualitative and therefore in-depth but drawing on a lower sample size than can be studied using quantitative methods.  Of the quantitative studies the majority have used victim surveys, such as the CSEW (ONS, 2018; Walby and Allen, 2004; Walby and Towers, 2018) or

international surveys, such as the National Family Violence Surveys in the US (Straus, 1979)[14]. As discussed in Chapter One, the survey data is believed to be more representative of the true picture of domestic abuse, with the CSEW finding that only 21 per cent of victims have reported their abuse to the police (Flatley, 2016)

This study, however, needs to draw on police data, as this is the data that is currently being used by Essex County Council. The survey data from the CSEW, is not available to Essex County Council at the individual level and even academic researchers can only use anonymised LSOA level data, due to the sample size and confidentiality issues. In order to understand whether the profile of those who do not report to the police is the same as those who do, detailed analysis of those known to the police needs to be conducted first. The national CSEW data, available online, will be used as reference to compare the trends in the police data to the survey data.

Police data was requested from Essex Police. After drawing up and signing a data sharing protocol[15] data from November 2011 to December 2014 was securely transferred to the university. This particular time frame was used as the police had moved to a new database system in November 2011, and therefore for the data to be comparable it was decided that this should be the start data. The end data coincided with when the data was requested.

As this part of the analysis was aspatial, then social statistical methods were considered the most appropriate and the software used to carry out the analysis was Stata. It is recognised that other statistical packages such as

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[14] A more detailed discussion of this previous research can be found in chapter two.
[15] See ethical approval section below.

SPSS and R could also be used to conduct this analysis, but Stata was selected for its multi-processing capability, which with a large dataset is an important consideration.  It also offers multiple imputation, which was needed to work with missingness within the police data.

The police data was also used for the spatial analysis and neighbourhood analysis.  Due to the spatial component alternative software had to be considered, which will now be discussed.

**Spatial and neighbourhood analysis**

With a research framework that considers the importance of neighbourhoods, then an appropriate methodology that considers the spatial element of domestic abuse is needed.  Geographical methods, particularly Geographical Information Systems (GIS) have been used to study crime and social processes for the last 30 years (and even longer in hand drawn map form). They have not, however, been used widely to explore domestic abuse in the same way that they have for crimes such as burglary[16].  Statistical packages such as R and SPSS do now have a spatial element, but the Spatial Statistics packages in ArcGIS, such as Spatial Analyst offer a broad range of tools applicable to this research, including various regression techniques, space time modelling and tests of spatial autocorrelation.  The university also holds a site licence for ArcGIS, so this seemed the logical software to use to conduct the spatial analysis.

Essex Police data was also used in this analysis.  However, as the data section below explains in more detail, the data was aggregated to the Lower

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[16] See chapter 5 for further discussion.

Super Output Area (LSOA) level and additional datasets joined to the dataset for the neighbourhood level analysis.

Without survey data (which is not available at this level of geography) the concepts of collective efficacy and social capital are very difficult to measure using quantitative methods. What is needed is a methodology to explore collective efficacy within the neighbourhoods of interest.

Another aim of this thesis is to see whether the profile of victims who report to the police, is the same as those who do not. The CSEW found that only 21 per cent of victims reported their abuse to the police, however the survey did find that 81 per cent have told someone, with the highest number telling a relative or family member (55 per cent) (Flatley, 2016). Whilst it is difficult to obtain information from relatives, there are other official agencies and professionals where CSEW victims sought support, including health (19 per cent), legal professionals (5 per cent), government agencies (10 per cent), counsellors (19 per cent), Victim Support (6 per cent), helplines (3 per cent), specialist support services (4 per cent) and other organisations (5 per cent) (Flatley, 2016)

It had originally been planned to run the GWR model again to see whether the profile of police reported domestic abuse exhibited the same predictors as those who report to a different agency. Unfortunately gaining access to data from other organisations was not possible, despite several attempts. It is nevertheless useful to discuss the data that is collected by these agencies as access may be possible in the future.

The NHS do collect data on violence in Accident and Emergency, but it is not specifically domestic abuse and the data collection quality varies across hospitals (Department of Health, 2015).  Hospitals also ask pregnant women using maternity services a question around domestic abuse.  It is also recognised that victims might disclose to their General Practitioners (GPs) (Bradbury-Jones et al., 2014).  However, gaining access to this data was not possible and it is not collected in a comparable geography to the police data, with no defined catchment areas for hospitals and GPs.  However, the Department of Health report does list hospitals where data is collected and readily shared, so future research could benefit from testing this model in a different geographical area.

Another national agency that collects data on domestic abuse is Children and Family Court Advisory and Support Service (CAFASS).  CAFCASS provides support and advises what is best for the child in divorce and separation court cases and in care proceedings (CAFCASS, 2017).  Everyone who approaches CAFCASS for support is asked a risk questionnaire and if they disclose domestic abuse, then they will be asked the DASH questions.  The manager of Essex CAFCASS estimated that 80 per cent of clients reported domestic abuse.  Initially CAFCASS agreed to share their data for this research, but unfortunately, they did not have the resources to extract the data (which was not in a straight forward database).  In the future, if resources become available, this is potentially a rich source of information on a potentially different profile of victims.

Housing providers are beginning to collect data on domestic abuse that is taking place in their housing stock.  Nationally an organisation known as the

Domestic Abuse Housing Alliance (DAHA) had been advocating for an improvement in the housing sectors response to domestic abuse (DAHA, 2018).  In 2018 over 200 organisations have signed up to Chartered Institute of Housing (CIH) Make a Stand campaign, where providers pledge to make a commitment to supporting those experiencing domestic abuse (CIH, 2018).  In Essex they have only just started to record domestic abuse on a multi organisation database.  This means that unfortunately the data is not available for this research but will be in the future.

Other agencies, such as refuges, Victims Support and the Citizen's Advice Bureau (CAB) were approached and requests for access to their data were made.  Unfortunately, however, there was either resistance to sharing the data or the data was not collected in a way that could be modelled.

The final empirical chapter therefore needed a methodology that had the potential to capture other ways in which victims might be getting support, whether collective efficacy had an impact on reporting or the level of abuse and whether there are other reasons why the model may not predict as accurately in some areas.  One potential way to capture all of this information was through an assessment of community assets within and that serve the neighbourhood.  Before discussing the method it is useful to explain how community asset mapping, a relatively recent development, has come about and what it might offer over existing methodologies.

**Community Asset Mapping**

Much of the focus in social work and related disciplines for the last century has been in the labelling and treatment of social problems (Langer and Lietz,

2014). This model was adopted from medicine in 1915 and developed into

the needs assessment in the 1970s (Altschuld, 2014; Langer and Lietz,

2014), which aimed to identify what an organisation was doing wrong in order

to aid them in making changes to rectify the issue (Altschuld, 2004). Whilst it

was argued that organisations needed to know what they were doing wrong in

order to change their practices, criticism of the overly negative and problem

oriented approach led to the development of Asset Based Community

Developed  (ABCD) in the 1990s (Altschuld, 2014; McKnight and Kretzmann,

1996). ABCD is a strength-based approach to community development which

looks at postitive elements in a communities by discovering both the tangible

and intangible assets (Mathie et al., 2017). It aims to link micro level assets

to the macro level environment (Rowland, 2008) to ascertain the positive

impact that they have on a group of people (Altschuld, 2014). The approach

was pioneered by Kretzman and McKnight, (1993) who set out three groups

of assets; Individuals, associations and instituions. Figure 3.2 shows the

types of assets in each of these groups. Rowland, (2008) also extended

Kretman and Mcknight's groups to includes phyical assets and connections,

identifying the importance of treating relationships as an asset as being

particulary valuable in measuring the concept of social capital.

*Figure 3.2: Types of assets within the community (Brighter Futures Together, 2017).*
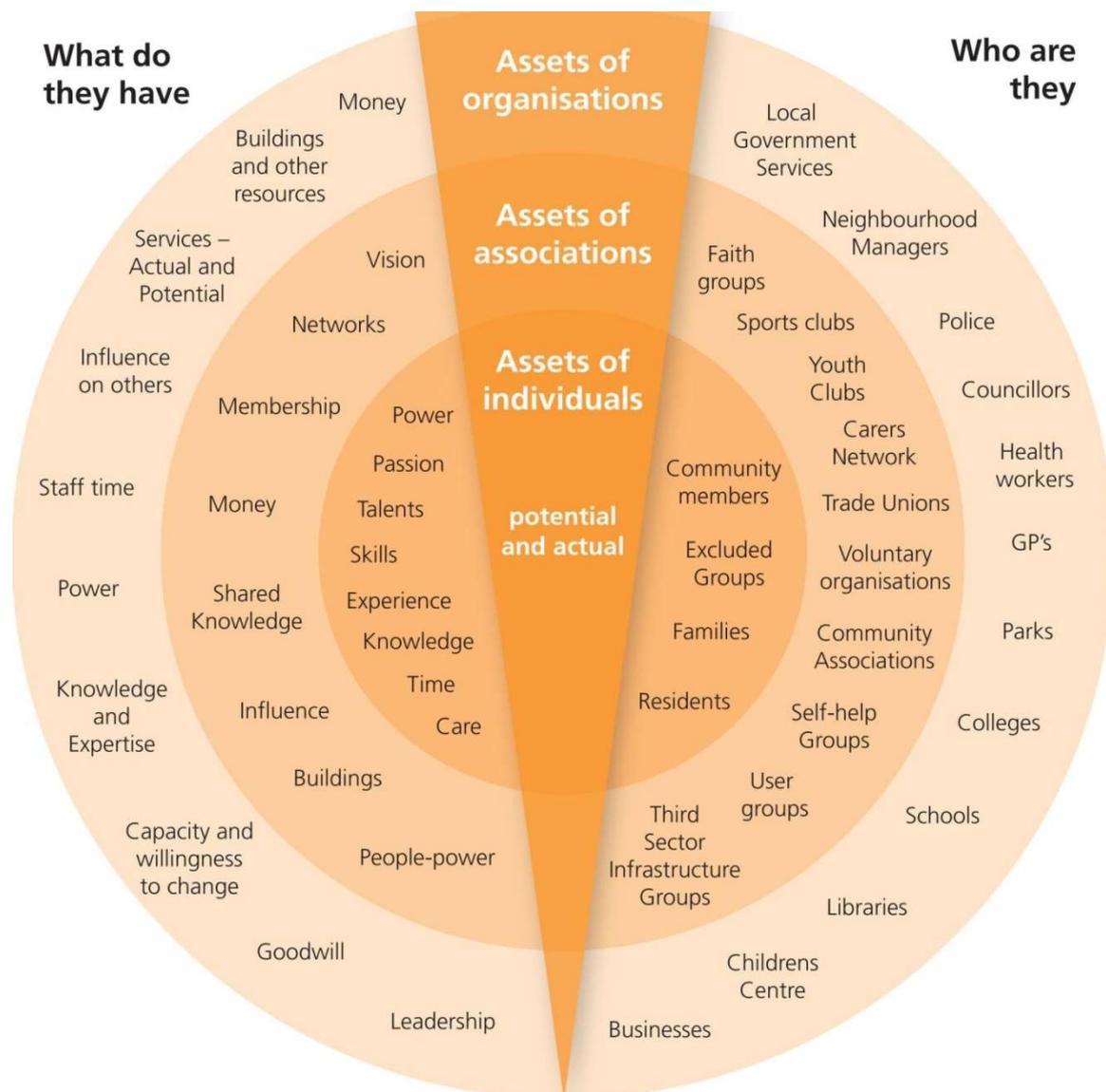


Whilst the ABCD approach was successful in harnessing the strengths in the community, it was argued that needs should still be assessed (Hansen, 1991). A potential solution came in 2000, when a hybrid approach, which combined the needs assessment with asset based approaches was

introduced and was particularly popular in the US (Altschuld, 2014).

However, in times of austerity many government agencies in the UK, such as

the NHS and local government, have adopted a commissioning based

approach to service delivery, and the commissioning cycle is still based on

assessing need rather than strengths.  This is illustrated in figure 3.3, where

assessing need is a key component influencing the design of services.

*Figure 3.3: Commisioning Cycle (National Audit Office, 2017)*
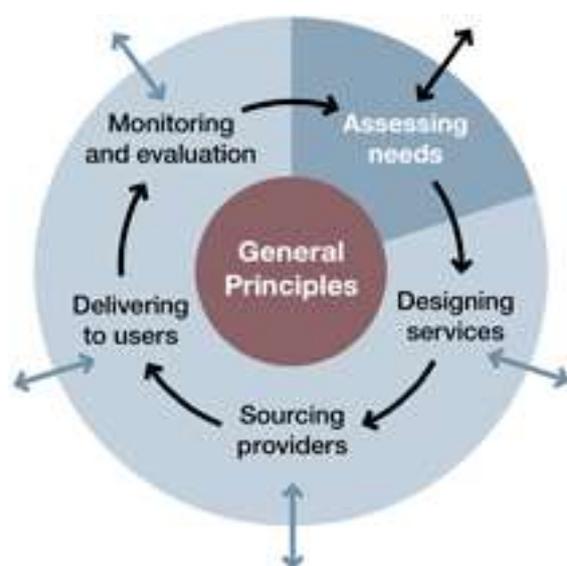


The needs assessment has tradionally used more quantitative methods to

assess the problems in communities through hard data and surveys, whereas

the asset based approaches have resorted to qualitative measures, such as

interviews and focus groups.  One of the methodologies to come out of ABCD

has been Community Asset Mapping (CAM).


CAM is a process where "participants make a map or inventory of resources,

skills and talents of individuals, associations and orgnanisations" (Brighter

Futures Together, 2017).  As a methodology CAM has been used by local

communities and local agencies, but it has rarely been employed in academic research or taught as a research method (Goldman and Schmalz, 2005; Lightfoot et al., 2014).  The methodology has been used most widely in the US, but there has been recent evidence of its use by local government and intiatives in the UK (Brighter Futures Together, 2017; Glasgow City Council, 2013; Preston City Council, 2016; Waverley Borough Council, 2017).

Existing research that uses CAM to understand neighbourhood level domestic abuse has not been identified, but (Altschuld, 2014) discussed the importance of the metholodogy in assessing existing assets to measure what a community already has and to leverage this to reduce crime.  Whether this methodology is appropriate to identify and prevent domestic abuse will be tested in this research.

An issue that has been identified with CAM is the lack of research that evaluates the effectiveness of this strength based approach as a methodology (Lietz, 2009).  To evaluate good practice and build theory a larger evidence base is required (Ennis and West, 2010; Rapp et al., 2006). The next chapter therefore contributes to expanding the evaluation of the methodology and increases the evidence base.

Ennis and West, (2010) also articulated concern that a strengths based approach is only internal looking and to really understand the structure of society in the way that Giddens, (1984) theorised with structures and agents, analysis also needs to look externally to their role at the macro level.  To overcome some of these concerns this research therefore adopted a hybrid approach by using the existing assessment of community need, the

quantitative predictive model, to identify areas that either fit the model, or over or under predict the amount of abuse in an area.   A CAM exercise has then been conducted in a sample of these areas.   Due to the exploratory nature of the CAM exericise there were no set research questions, but a broader aim to identify the assets and strengths in the neighbourhoods and to investigate whether collective efficacy plays a part in the amount of abuse that is reported to the police.

Data

**Individual, family and relationship**

*Essex police data*

The data used in this analysis came from the Essex Police Protect domestic abuse database.  This is a separate database recording only domestic abuse, both incidents of domestic abuse and those that were converted to crimes. The dataset recorded details of the incident location, the date and time, details about the age, gender, ethnicity and address of both the victim and the perpetrator and the relationship between the victim and perpetrator.

Between November 2011 and December 2014 there were 88,136 incidents of domestic abuse reported in Essex.  During this time there were 46,871 victims, with 34 per cent of victims reporting more than one incident.  Table 3.1 lists the variables that were recorded for each incident.  Victims are also asked 27 questions as part of the Domestic Abuse, Stalking and Harassment and Honour Based Violence (DASH) risk assessment.  This risk assessment is a tool that was developed nationally in 2009 and is based on good practice and risk factors identified by Domestic Homicide Reviews (Richards, 2016).

Essex police provided two spreadsheets, one with the incident data and the

other with the DASH answers. The spreadsheets were combined using the

incident number, which was recorded on both spreadsheets. The DASH

answers are all binary variables, with a yes or no response[17].

*Table 3.1: Police incident data variables and variable names given*

*for this analysis*

| Variable name | Variable detail |
|---|---|
| Drug related | Officer completed binary variable which states whether an incident is drug related or not. |
| Alcohol related | Officer completed binary variable which states whether an incident is alcohol related or not |
| Child witnessed | Officer completed binary variable which states whether a child witnessed the incident |
| Risk | Every incident is assigned a risk of standard, medium or high. It is based on the DASH risk assessment, or initial call referral if a DASH is refused |
| Victim age | Victim age in years |
| Victim gender | Victim gender, for the purposes of this analysis Male or Female (3 incidents had transgender victims) |
| Victim ethnicity | Victim defined ethnicity using police IC codes |
| Perpetrator age | Perpetrator age in years |
| Perpetrator gender | Perpetrator gender |
| Perpetrator ethnicity | Perpetrator defined ethnicity |
| Relationship between victim and perpetrator | Relationship between victim and perpetrator grouped into relationship types (are recoded to six broader groups) |

**Data cleaning and coding**

The data from Essex Police was recorded on two different spreadsheets, one

with the incident data, and the other the DASH responses. The datasets

were joined using the Vlookup function in Excel and based on the incident

number. All text fields with binary responses (yes and no) were converted to

numerical fields. Calculations for the number of DASH answers were made

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[17] A full list of the DASH questions and their variable names can be found in Appendix 1

and a new field, Risk Score was created. To control for the change in policy regarding asking DASH assessments to standard risk victims the year of the incident was calculated and a new 'Year' field created using the date field. A new binary field was created which captured whether or not a DASH risk assessment had been completed. The relationship type between the victim and perpetrator was re-coded into six broader relationships. Where the relationship was child or parent there was evidence that some of the incidents had been mis recorded, with the perpetrator in the victim relationship field and vice versa. To overcome this another field was calculated that identified the age difference between the victim and the perpetrator and all incorrect entries were reassigned manually. The dataset was then brought into Stata where the age variable was re-coded into age groups and dummy variables created for gender, ethnicity, relationship and risk classification. There was, however, more difficulty in coding the ethnicity variables to align with the census groupings as the domestic abuse lead officer told me that the officer will complete the ethnicity field based on the appearance of the victim, using the IC codes. Therefore, unlike the census data, the ethnicity if not self-defined. This needs to be considered in the ethnicity analysis.

**Missing DASH data**

Approximately half of the data had no DASH risk answers linked to the incident data. The pattern of missingness is monotone, with all responses to these variables blank if the questions were not asked or answered. The data manager at Essex Police confirmed that it was quite common for a victim to refuse to answer the questions. It was also not an essential requirement for the risk assessment questions to be filled in for standard risk until 2013, so as

table 3.2 illustrates the number of incidents with no DASH answers was much

higher in 2011 and 2012.

*Table 3.2: Percentage of domestic abuse incidents with no*

*associated DASH risk answers*

| Year | % with no DASH answers |
|------|------------------------|
| 2011 | 64.7 |
| 2012 | 58.5 |
| 2013 | 43.9 |
| 2014 | 45.0 |

N= 88,136

A difference of proportions test (prtest) was conducted to compare risk score,

age, gender, ethnicity and Output Area Classification (OAC) for those victims

who did and did not complete DASH questions.  The results found that the

pattern of missingness was not completely random, with there being

statistically significantly different proportions of those completing a DASH

when individual factors were considered.

*Table 3.3: Variables by proportion with and without a DASH*

| Variable | % risk score | % no risk score |
|---|---|---|
| High risk * | 79.45 | 20.55 |
| Medium risk * | 66.79 | 33.21 |
| Standard risk * | 34.35 | 65.65 |
| Age 15-34 | 50.16 | 49.84 |
| Age 35-59 | 50.24 | 49.76 |
| Age 60+ | 49.66 | 50.34 |
| Female * | 53.43 | 46.57 |
| Male * | 37.90 | 62.10 |
| Offender male * | 53.32 | 46.68 |
| Offender female * | 38.32 | 61.68 |
| White * | 50.26 | 49.74 |
| Non-white* | 48.48 | 51.52 |
| Rural Residents* | 54.88 | 45.12 |
| Cosmopolitans* | 46.83 | 53.17 |
| Ethnicity Central* | 46.04 | 53.96 |
| Multicultural Metropolitan* | 49.00 | 51.00 |
| Urbanites* | 50.82 | 49.18 |
| Suburbanites* | 54.27 | 45.73 |
| Constrained City Dwellers* | 47.14 | 52.86 |
| Hard Pressed Living | 50.03 | 49.97 |
| All incident total | 52.85 | 47.15 |

* Pr test results with $p<0.05$, N=88.136

Table 3.3 shows that a higher proportion of those who did complete a DASH form were female, high risk, medium risk, white, had a male perpetrator, and in the Rural Resident, Urbanite or Suburbanite OAC supergroup. All of these were statistically significantly higher, compared to those who did not complete the DASH. Variables that were not statistically significantly different were age (across all categories) and the Hard Pressed Living OAC supergroup.

To ensure the geographic concentration of incidents missing a DASH are evenly distributed, hotspots using kernel density estimation were mapped for those who did and did not complete the DASH. Figure 3.4 and 3.5 demonstrates that the data was concentrated in the same locations. Although the distribution of those who completed a DASH is slightly more dispersed, particularly close to Southend, the maps do not show any dramatic difference in police completion of the DASH across the force. To confirm this standard deviation ellipses were created to summarise the spatial characteristics of the two distributions. As figure 3.6 demonstrates the central tendency, dispersion and directional trends are very similar between those who and do not complete a DASH. If there were large inconsistencies in the way in which teams of officers were encouraging victims to fill in the DASH this would result in a different pattern, but there is no evidence of this.

*Figure 3.4 Kernel density estimation of hotspots of incidents where*

*a DASH was completed*
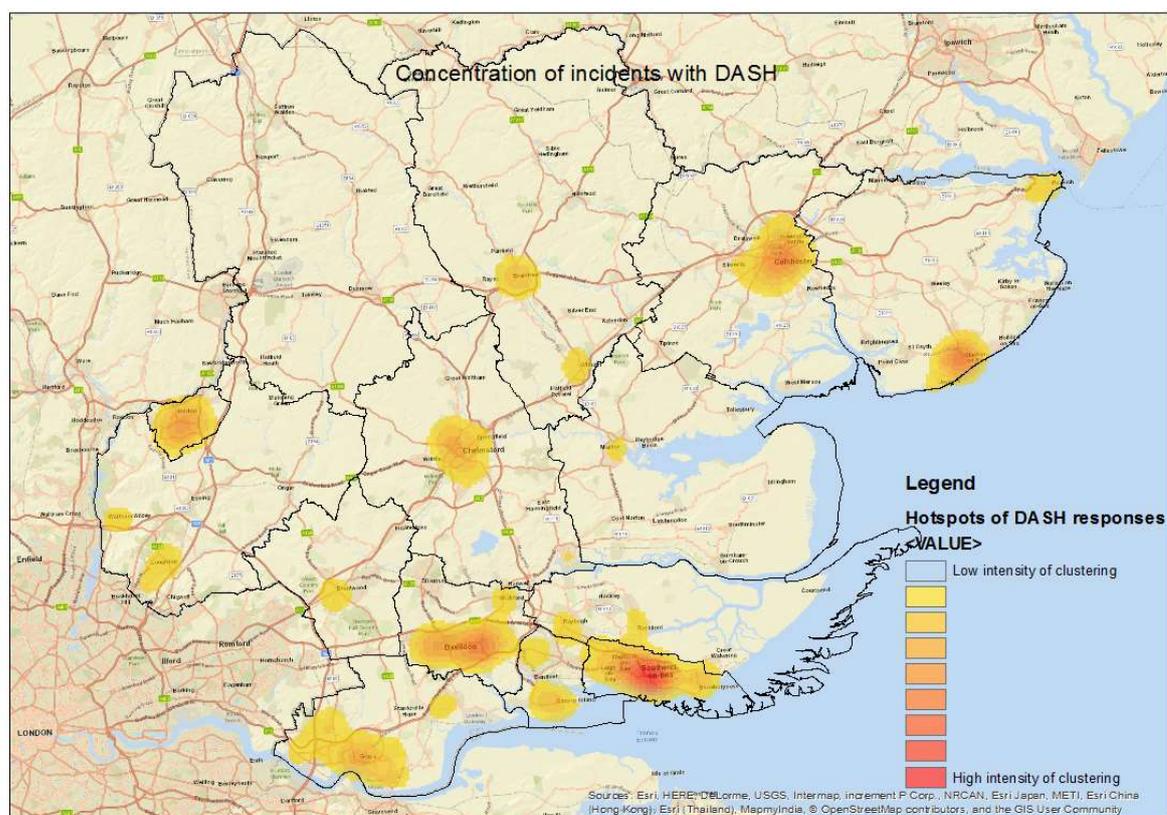


N = 44,084

*Figure 3.5 Kernel density estimation of hotspots of incidents where*

*a DASH was not completed*
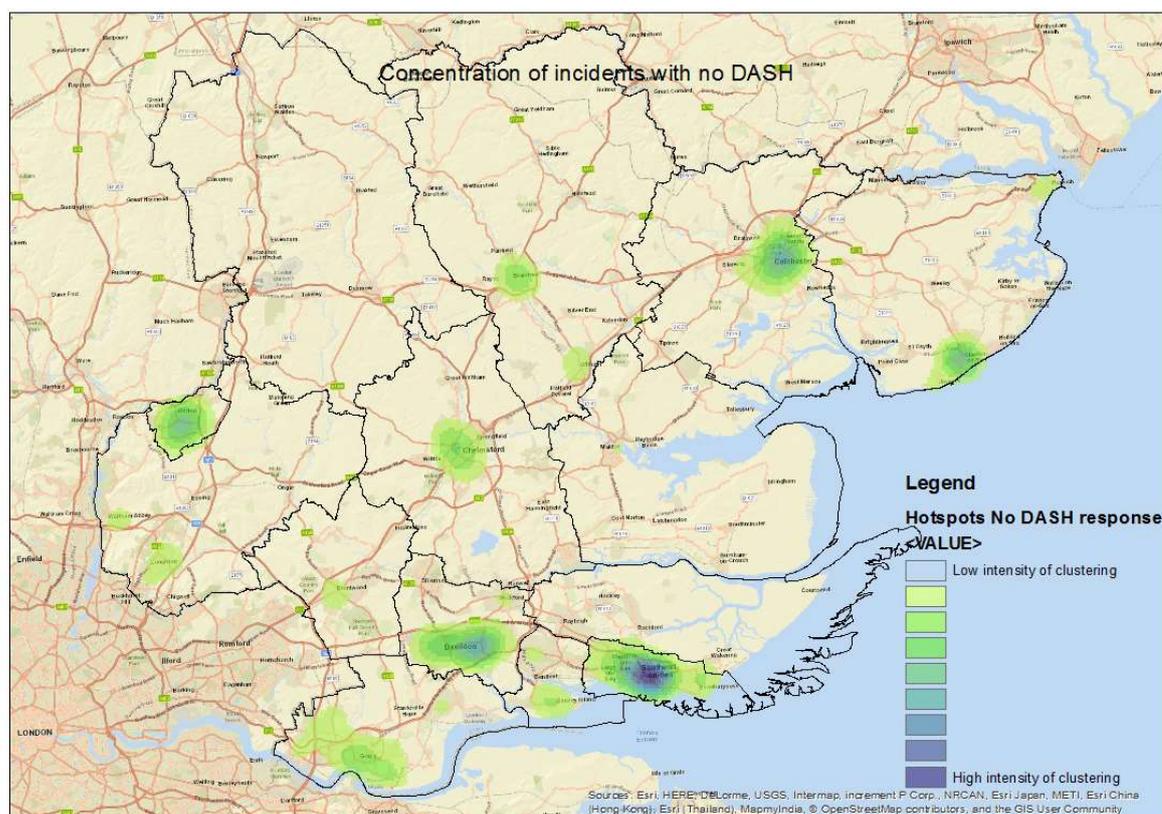


N= 44,084

*Figure 3.6 Standard deviation ellipses of incidents with and without DASH data*
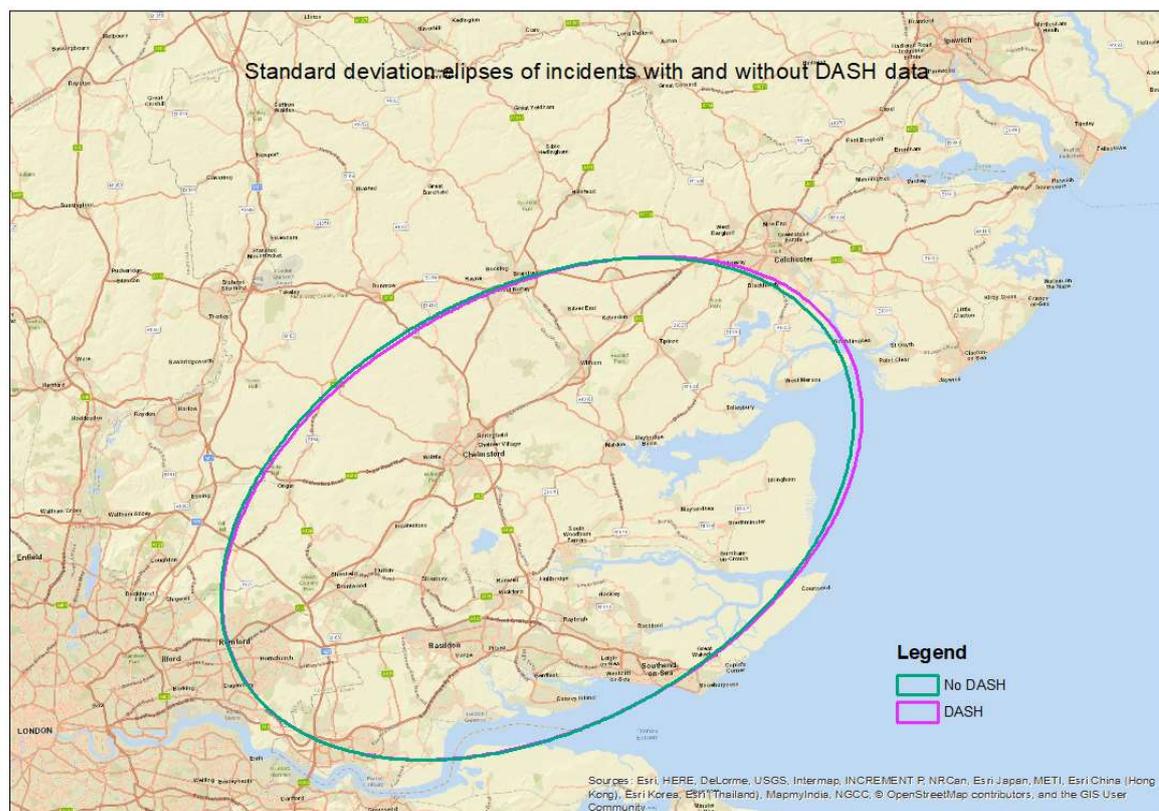


N= 88,136

Another research study in Essex reported that there might be times when the victim refuses to complete the DASH risk assessment and that officers might complete part of the form based on things that they see at the incident, such as a woman being pregnant or if the victim has sustained a physical injury (Jenner, 2018).  The police database does not record if someone else completes part of the form, the assumption is that if any question is completed it was reported by the victim.  This therefore presents a problem if the officer reports one of the DASH variables, as it suggests that the victim

only said yes to one of the questions and answered all the other questions as no, when in fact they have not answered any questions.

*Figure 3.7 number of respondents to DASH questions by risk*



Number of 'yes' responses to DASH questions
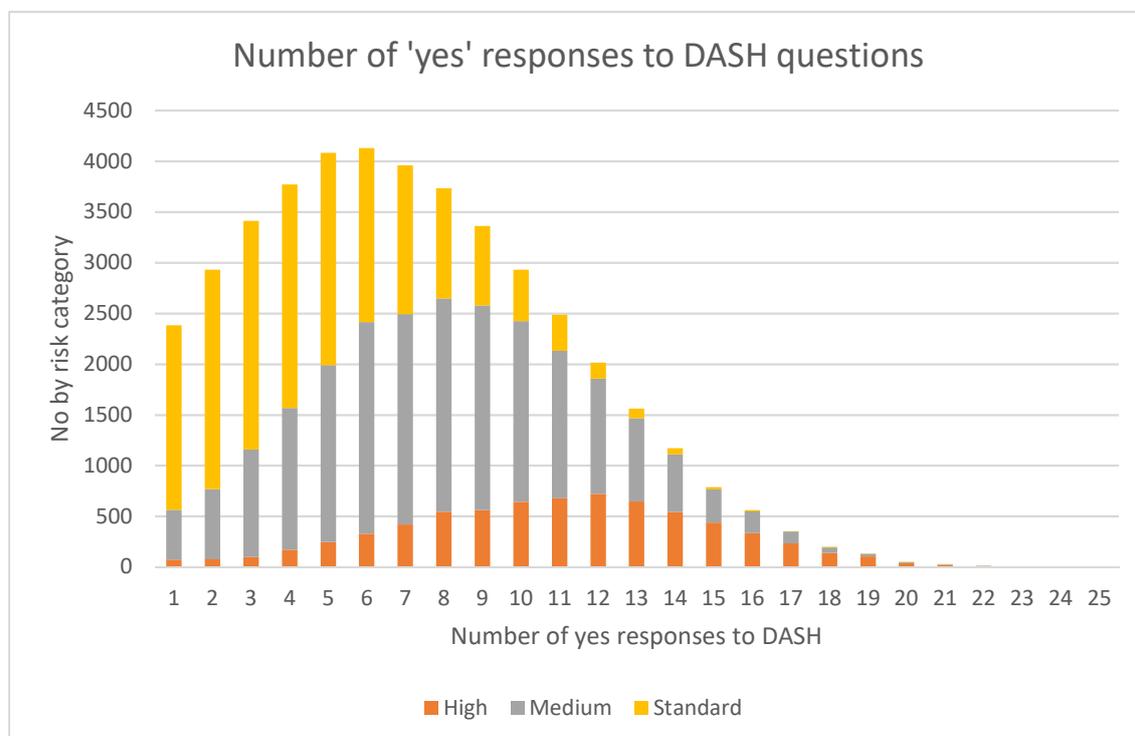
N= 44,052

Figure 3.7 shows the risk assigned to the incident and the number of DASH questions that were answered.  Generally, for an incident to be classified as high risk you would expect the victim to have answered yes to 14 or more questions (to meet Multi Agency Risk Assessment Conference (MARAC) referral criteria), or for there to be evidence of escalation, with more than three incidents reported in the last year or concern over the safety of a child. If the victim refused to answer the DASH then the risk assigned by the initial call from the Domestic Abuse Referral Unit will be used instead.  Therefore, those who are only shown to have answered one or two questions, but are categorised as medium or high risk, may well have had DASH scores

completed by attending officer and the victim refused to answer the

questions.  If victims are classified by the attending officer as high risk, a

further risk assessment is likely to be carried out by a more experienced

member of staff in the dedicated domestic abuse unit (Day et al., 2018).  To

investigate this further table 3.4 shows incidents where only one answer was

recorded by the risk the incident was assigned.  The number of incidents that

are classified as high risk, where only injury is reported in the DASH, is

particularly high, suggesting that it is likely that the officer has reported this

rather than the victim.  Other variables such as being separated or where the

perpetrator has been in trouble with police may have been picked up in

conversation with the victim or already known to the police and reported by

the officer through the DASH.  This issue highlights the need for officers to be

able to appropriately report information about the incident.  There needs to be

a separate box where the officer can state whether the response was from

the officer or the victim.  The Safer Lives DASH form has this option (Safer

Lives, 2016), but Essex Police have yet to adopt this option.  These caveats

need to be considered in this analysis.

*Table 3.4: Incidents where only one answer was recorded as 'yes' on the DASH and the risk assigned to the incident for the 10 answers with the most responses*

| DASH answer | Standard | Medium | High | Total |
| --- | --- | --- | --- | --- |
| Separated | 408 | 59 | 4 | 471 |
| Police Trouble | 228 | 85 | 6 | 319 |
| Injury | 125 | 143 | 41 | 309 |
| Drug alcohol mental health | 172 | 35 | 1 | 208 |
| Frightened | 135 | 38 | 7 | 180 |
| Pregnant | 138 | 18 | 3 | 159 |
| Depressed | 105 | 13 | 1 | 119 |
| Financial | 96 | 13 | 2 | 111 |
| Child not perpetrators | 80 | 21 | | 101 |
| Child conflict | 72 | 5 | | 77 |

N= 2383

The responses were also checked to make sure that all the questions were being answered consistently and that questions towards the end of the DASH did not have a lower response rate.  There was no evidence of this, with the completion of questions equally distributed.

To overcome the issues of data missingness multiple imputation was used. Imputation replaces missing data with substituted data values, which means that all of the data can be used in the analysis, rather than only using complete records (Stata, 2016).  Further details of the multiple imputation process are details below

**Statistical analysis**

Summary and descriptive statistics were calculated in Stata using the whole dataset.  Logistic regression for the dependent variables Injury and Worse used the Stata MI command to impute the data.  Due to the binary nature of

the data the MI chained algorithm was selected. Twenty imputed datasets were used with each regression model. Due to the large number of variables, the nestreg command was used to find the optimal variables for the model using the Wald statistic.

As class is not directly measured by the police data a proxy needed to be found. The Output Area Classification (OAC) 2011 uses demographic, household composition, housing, socio-economic, and employment data from the census to classify Output Areas (approximately 125 households) into three levels of hierarchy: supergroups, groups, and subgroups (ONS, 2014[18]). For this analysis the eight supergroups and were used. Using the OAC 2011 seems appropriate for the dataset that is being analysed, but if this analysis is being repeated with later data then researchers would need to be mindful that the classification is based on 2011 census data. There are alternative classifications, such as Mosaic from Experian and ACORN from CACI, however these datasets need to be purchased and therefore make the research more difficult to replicate.

The OAC risk score was calculated using the following formula:

OAC risk (i) = [O(i)/E(i) x 100

Here O(i) is the number of domestic abuse incidents observed in each OAC and E(i) is the expected number of domestic abuse incidents. The expected number were calculated by working out the risk for the whole area (number of incidents divided by the number of Output Areas) and then multiplying this by

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[18] See Appendix 2 for a full description

the number of OAs in each OAC group. The risk was standardised so that a risk score over 100 was above average.

**Repeat analysis**

One of the difficulties in finding predictors of police reported domestic abuse is that we only know about known cases. There is no baseline for comparison with those who do not report their abuse to the police. Therefore, we need to find a proxy measure. The best proxy available is to look at repeat victimisation. The rationale for this is that it is likely that the more serious incidents or escalating abuse would have a greater chance of being reported more than once. Of course, the caveat to this could be that a victim has a bad experience with the police and will not report to them again.

Before analysing repeat victimisation, a definition of what a repeat incident is was constructed. The police do not state whether an incident is a repeat within the incident data, but the reliability of this field was reported to be questionable. The data was divided into three time periods; December 2011 – April 2012 was the pre-evaluation period; May 2012- June 2014 the evaluation period; and July – December 2014, the post evaluation period. The number of incidents across the whole time period including the pre and post evaluation period was calculated for each victim who reported an incident during the evaluation period. This allowed a six-month window either side for a repeat to occur. If more than one incident was reported the incident was classified as a repeat. A dummy variable was then created stating whether or not the incident was a repeat.

The DASH questionnaire consists of 27 questions, all of which have a binary yes or no response.  To aid the interpretation of results and to identify underlying concepts, a tetrachoric bivariate correlation was run.  Following this an exploratory factor analysis identified whether underlying concepts or themes are inferred, but not directly measured by the responses.  New variables using summated scores were then used in the regression model, rather than the 27 DASH variables[19][20].

Spatial Data

**Data**

The Essex Police data, described in the individual section above, was also used for the neighbourhour analysis.  The dataset recorded three addresses, the address of the incident, the address of the victim and the address of the perpetrator.  In this analysis, the address where the incident took place has been used.  Whilst the focus of this chapter is on the risk factors associated with victimisation, so arguably the victim address should be used, the police force acknowledge that the victim and perpetrator address are not as reliable as the incident location.  Reliability issues include not having up to date address information for those involved in the incident and also the fields not

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[19] See introduction

[20] One of the issues created by using the latent variables from the factor analysis was that the multiple imputation command will not run with the factor analysis.  Unfortunately, due to the monotone missingness this also meant that a confirmatory factor analysis using Structural Equation Modelling (SEM) could not overcome this issue.  A trade-off therefore had to made between potential bias and reduced sample size from using listwise deletion and being able to interpret the results more easily using latent variables.  As the full dataset had been used in the earlier analysis with the imputed data and the results when compared to using the listwise deletion method were very similar, it was decided to investigate the repeat data without using any imputation, but including the summated values created in the exploratory factor analysis.

being completed as regularly as the incident location. Only 75 per cent of incidents had useable victim address coordinates, compared to 96 per cent of incident locations. Where both incident and victim coordinates were available 81 percent were recorded at the same location. The period of this analysis was from November 2011 to December 2014, which was the time from which a new database was introduced.

The spatial analysis was carried out using ArcGIS desktop 10.3.1. and the spatial statistics calculated in the Spatial Analyst extension. Logarithmic transformations were also calculated in ArcGIS.

**Address coding**

Before the analysis was conducted the address data was coded. There were two sources of geographic reference in the data, the postcode or a police recorded grid reference. Every postcode was assigned a grid reference (based on the postcode centroid), if the field was missing the police assigned postcode was used, if this was blank the address provided in the incident record was matched to a postcode and a grid reference. If the address information was insufficient then the record was disregarded from this analysis. There were 91,396 records in total, of which 3.6 per cent had no useable geographic reference or the address was outside the force, leaving 88,135 records for this analysis.

**Defining a neighbourhood**

A problem with neighbourhood level analysis is defining the geographic areas that are to be analysed. One of the issues with aggregating data is the Modifiable Areal Unit Problem (MAUP), where changing the boundaries can

alter the observed patterns and relationships (O'Sullivan and Unwin, 2003).

The analysis used 2011 census Lower Super Output Areas (LSOAs), as this

is the lowest level of granularity available for the deprivation data (around

1,500 people per LSOA). Using administrative boundaries does have

implications for research and policy, as it is unlikely that this is the way that

residents will define their neighbourhood (Sampson et al., 2002), but whilst

using geographically weighted regression does not solve the MAUP, it

removes the issues of trying to model continuous spatial processes without

acknowledging the connection between areas and making assumptions that

the relationships between variables are non-stationary by using global models

(Fotheringham et al., 2001).

**Calculating hotspots**

Another way at looking at the concentration of abuse is to map the hotspots,

areas with relative intensity of clustering. The Getis-Ord GI* statistic identifies

areas of significant spatial clustering of both high values (hot spots) and low

values (cold spots). The statistic relates every feature to its neighbouring

features. To be significant a feature not only has to have high or low values,

but it has to be surrounded by other features with high or low values. The

local sum for a feature and its neighbours is compared proportionally to the

sum of all features. A z score result for each feature highlights those areas

that have statistically significant differences, where the difference is too large

to be as a result of random chance.

*Figure 3.8. The Gi\* formula, ArcGIS, (2015)*

$$G_i * (d) = \frac{\sum_j w_{ij} \ (d) \chi_j - W_i^* \bar{x}^*}{s * \{ \frac{[(nS_{1i}^*) - W_i^{*2}]}{n-1} \}^{1}/_{2}}, \quad \text{for all j, } x_j \neq 0$$

**Space-time analysis**

The Knox and the Mantel tests are two methods in which to calculate space/time interaction. The Knox test uses a two by two matrix to state whether pairs of data are close in time and close in space, not close in time but close in space, close in time but not close in space or not close in time and not close in space. In this analysis the median distance and time values were used to assign each pair of incidents to one of the four cells. The number of observed pairs in each cells is then compared to the expected number if there was no relationship between closeness in distance and closeness in time. The difference between the actual number of pairs in each cells and the expected number is measured using the chi-square statistic. As the observations are not independent a Monte Carlo simulation of Chi-Square values was run 1000 times to create a distribution of simulated index values (Knox and Bartlett, 1964).

The Mantel Index calculates the correlation between distance and time intervals for pairs of incidents (Mantel, 1967). As with the Knox test, the observations are not independent, so randomisation is needed and this is done through running 1000 simulations of confidence intervals around the index.

Due to the volume of data it was not possible to run the tests for the whole-time period, but the dataset was broken down into 38 separate monthly

datasets and the Knox and Mantel tests were run for each month.  Where there was significant space time interaction the data was mapped to identify the emerging hotspots.  The emerging hotspot analysis in ArcGIS identifies new, intensifying, diminishing, and sporadic hot and cold spots.  This emerging hotspot analysis overcomes the potential issue of cutting the data into monthly time frames as it takes a reference point in time (in this case the month identified by the Knox or Mantel test) and using a Space Time Cube (where the data is aggregated into space-time bins) to determine whether the bin count value at a location, in space and time, is part of a statistically significant hot or cold spot using the Getis-Ord GI* Statistic for each bin.  The emerging hotspot analysis uses data from the whole-time period to look at space and time clustering at a particular time point.

**Model variables**

*Table 3.5: Dependent and independent variables*

| Variable name | Mean | SD | Range | |
|---|---|---|---|---|
| | | | Minimum | Maximum |
| Dependent variable | | | | |
| Domestic abuse rate (per 1000 population) | 50.51 | 39.44 | 3.47 | 405.77 |
| Victim rate (per 1000 population) | 16.25 | 13.38 | 1.39 | 132.57 |
| Independent variables | | | | |
| Anti-Social Behaviour rate (per 1000 population) | 30.60 | 31.05 | 3.50 | 386.74 |
| BAME (%) | 6.56 | 5.83 | 0.47 | 46.75 |
| Young people aged 15-24 (%) | 11.74 | 3.88 | 3.99 | 76.88 |
| IMD income score | 0.13 | 0.08 | 0.014 | 0.564 |
| IMD health score | -0.37 | 0.76 | -2.536 | 2.752 |
| IMD education score | 24.39 | 16.30 | 0.711 | 98.358 |
| IMD employment score | 0.10 | 0.06 | 0.012 | 0.568 |
| IMD barriers score | 21.68 | 9.38 | 1.785 | 57.29 |
| IMD living environment score | 14.09 | 10.73 | 0.45 | 71.692 |
| Burglary rate (per 1000 population) | 18.26 | 11.68 | 0 | 87.63 |
| Criminal damage and arson rate (per 1000 population) | 7.99 | 7.40 | 0 | 68.41 |
| Population density | 32.63 | 26.24 | 0.3 | 145.0 |

N=1077

**Dependent variables**

The dependent variable for the first model was the domestic abuse rate per

1000 population by LSOA.  The rate per 1000 population is the measure that

the Home Office use to compare police force areas.  This was calculated by

aggregating incident data into LSOAs using ArcGIS and converting to a rate

per 1000 population using mid-year 2014 census estimate data (to standardise the data). The rate of incidents, rather than rate of victimisation has been used to factor in the repeated nature of domestic abuse as it measures the increasing threat of harm (Walby et al., 2017) and the response required from the police. The data showed a skewed distribution so a logarithmic transformation was carried out, which normalised the data, in order to satisfy the assumptions necessary for GWR.

The second model brings in repeat victimisation and measures the number of repeat victims per 1000 population by LSOA, rather than the number of incidents. Studying repeat victimisation will factor in potential interjurisdiction difference in crime rates caused by one victim reporting multiple incidents (Mukherjee and Carcach, 1998). Brimicombe, (2016) found that the repeat victimisation flags used by the police are unreliable, with inadvertent errors and a lack of consistency. Essex Police also reported that this field is not reliable and always completed. Therefore, a methodology, similar to the rolling month approach that Brimicombe used was adopted. The only marked difference was that a six-month time window was used, rather than a year. This was to optimise the amount of data that could be used in the analysis (to ensure that counts were not too low at the LSOA level) and was informed by research from the British Crime Survey that suggested that domestic abuse victims experience on average 20 incidents a year (Walby and Allen, 2004), therefore suggesting six months should be sufficient. The data was divided into three-time periods; December 2011 – April 2012 was the pre- evaluation period; May 2012- June 2014 the evaluation period; and July – December 2014 the post-evaluation period. The number of incidents across the whole-

time period including the pre and post evaluation period was calculated for each victim (using the unique victim identifier) who reported an incident during the evaluation period.  This allowed a six-month window either side for a repeat to occur.  If more than one incident was reported the incident was classified as a repeat.  The number of repeat incidents was then calculated for each LSOA and converted to a rate per 1000 population.  As there were a small number of LSOAs that did not experience any repeat victimisation, it was not appropriate to use a natural log transformation to normalise the data, so an inverse hyperbolic sine function was used in Stata instead.  The number of incidents that each victim experienced is shown in table 3.6.  One victim had experienced 128 incidents within the time frame.  The median number of incidents was two.

*Table 3.6: Number of incidents experienced by each victim*

| Number of incidents | Number of victims |
|---|---|
| 1 | 23752 |
| 2 | 5511 |
| 3 | 2205 |
| 4 | 1132 |
| 5-9 | 1526 |
| 10-19 | 240 |
| 20+ | 22 |

N=58,904

**Independent variables**

Anti-Social Behaviour (ASB)

Essex police ASB data for 2014 was aggregated and converted to a rate per 1000 population at LSOA level. The rates were log transformed to aid interpretation.

*Indices of Multiple Deprivation*

The English Indices of Deprivation 2015 provide a relative measure of deprivation at small area level across England (LSOA) (Gov.uk, 2016). Areas are ranked from least deprived to most deprived on seven different dimensions of deprivation and an overall composite measure of multiple deprivation. The domains used in the Indices of Deprivation 2015 are: income deprivation; employment deprivation; health deprivation and disability; education deprivation; crime deprivation; barriers to housing and services deprivation; and living environment deprivation. The crime domain was excluded from this analysis as crime data was another variable in the Vulnerable Localities index. Each score was log transformed to aid interpretation.

*Vulnerable Localities Index (VLI)*

The VLI is a measure of community cohesion used to identify residential neighbourhoods that require prioritised attention for community safety and has been used to understand issues such as riots. Analysis of reporting for other crime types has shown there to be a slight increase in reporting in areas where there is increased social cohesion and lower levels of reporting in

areas where there is the highest level of socio-economic disadvantage (Tompson, 2011).

It is a composite measure that is calculated using six variables, and can be applied in any country where access to accurate data on these variables exists. The six variables are: Counts of burglary dwelling, counts of criminal damage to a dwelling, income deprivation score, employment deprivation score, count of 15-24 year old and educational attainment.  For this analysis the data was disaggregated into the separate variables and log transformed to aid interpretation.

*Black, Asian and Minority Ethnic (BAME) population*

The proportion of the population from BAME populations in each LSOA was calculated using 2011 census data.  The results were log transformed to aid interpretation.

*Population density*

Persons per hectare were calculated from 2011 census data and the area using GIS tools.  The results were log transformed to aid interpretation.

**Geographically weighted regression**

In matrix form the formula for estimating the beta coefficients for OLS is:

$Y = X\hat{\beta} + \varepsilon$

where the vector of parameters that will be estimated, β, is constant over space.  This is estimated by:

$\hat{\beta} = [X^T X]^{-1} X^T y$

The GWR equivalent is:

β̂(ui,vi) = [XTWiX]-1 XTWiy

where β̂(ui,vi) is the estimated beta values for a sub region of the whole study area centred at location i and W(i) is a matrix of weights specific to location i such that observations nearer to i are given greater weight than observations further away (Harris, 2016; Charlton and Fotheringham, 2009; Fotheringham et al, 2002).

CAM

**Neighbourhood definition**

As recognised in the previous section, using LSOAs to define neighbourhoods is not ideal and the areas rarely reflect the true way in which residents would visualise their community.  The areas were designed for a different purpose, administering the census, so boundaries cut through neighbourhoods and can be quite large in rural areas (Dietz, 2002).  Nonetheless, for the purposes of this research (and in other published studies) they are the lowest level of geography that is available for modelling the other datasets that act as important predictors.  The method was useful for identifying areas to visit, but I built in flexibility by considering assets outside the LSOA boundary but focusing on those that the residents who lived in the neighbourhood would use.

Table 3.7 lists the ten areas that were selected, four were LSOAs where the neighbourhood model accurately predicted the amount of police recorded domestic abuse, three where it under predicted and three where it over predicted.  LSOAs were selected using the standardised residuals, with those

with high and low values and those close to zero stratified by the volume of incidents (between November 2011 and December 2014), with areas with a range of volumes selected. Figure 3.9 shows the geographical distribution of the CAM areas.

*Table 3.7: LSOAs selected for CAM with summary statistics (from Essex Police domestic abuse incident date November 2011 to December 2014).*

| Prediction | LSOA code | Town | Standardised residual | Number of incidents |
|---|---|---|---|---|
| Under | E01021277 | Laindon | 1.98 | 125 |
| | E01022093 | Thaxted | 2.26 | 71 |
| | E01021708 | Colchester | 2.60 | 74 |
| Accurate | E01021596 | Chelmsford | -0.30 | 181 |
| | E01021592 | Chelmsford | -0.008 | 191 |
| | E01022082 | Saffron Walden | -0.016 | 37 |
| | E01033722 | Colchester | -0.023 | 140 |
| Over | E01015896 | Southend | -1.73 | 198 |
| | E01022025 | Clacton | -1.88 | 536 |
| | E01021995 | Frinton | -2.91 | 11 |

*Figure 3.9: Map of locations for CAM visits*
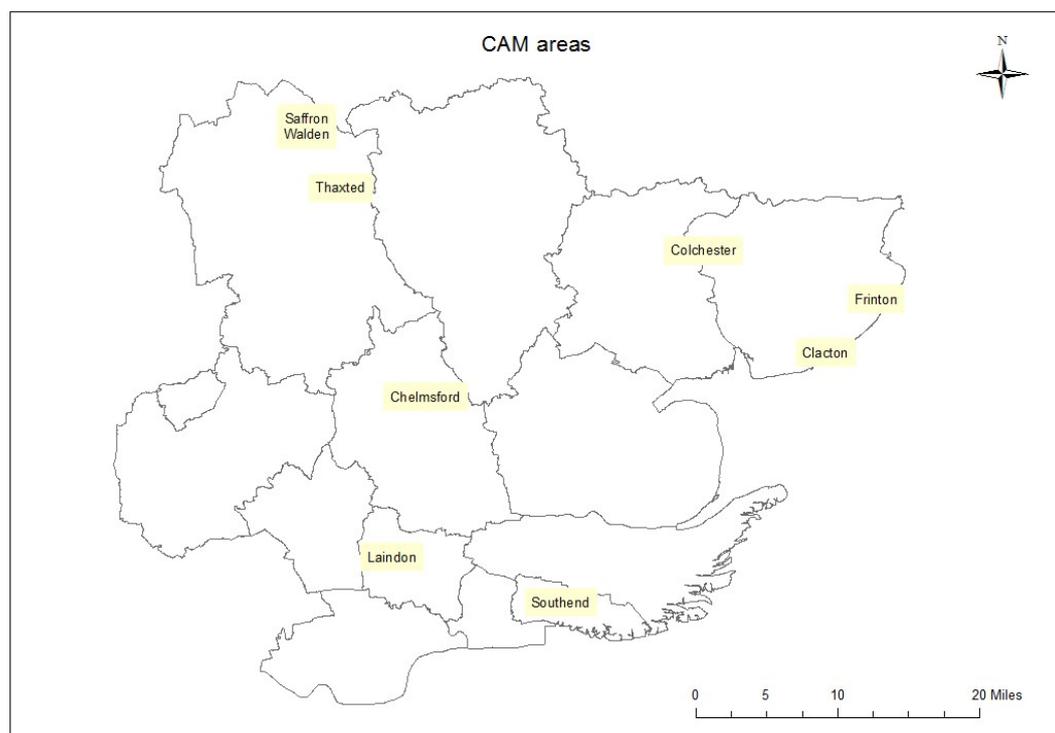


Local gatekeepers were indentified by exploiting existing contacts and searching for suitable members of the community, such as those who ran community centres or local agencies.  The criteria was someone who had a good knowledge of the particular neighbourhood who was willing to spend at least two hours walking (or driving in more dispersed areas) around the neighbourhood.  If no response was received or there was difficulty in finding someone another neighbourhood with a similar standardised residual and volume of domestic abuse was found.  There were only a few areas where no one could be identified and this was largely down to the time of the year that the exercise was completed (June to September 2017), with staff shortages due to holiday being an issue.  Interviewees included community centre chairs, a social work student, a council employee and a housing manager.

Before each visit a map of the area was sent to the interviewee and a copy of

figure 7.1. They were asked to think about assets that residents who lived in

the LSOA would use. The assets did not have to be within the LSOA, but

ones that residents might use. For the purposes of this research, assets were

defined as associations or organisations that local residents might use or

engage with.

**Defining the information to be collected**

A survey was designed in Survey123 for ArcGIS and completed in an iPhone

app, which recorded information about the asset and its location[21]. A

photograph could also be taken at each location. Each asset mapping

exercise started with an interview, where the purpose of the research and visit

was explained to the interviewee. The interviewee was asked about their role

in the community, how long they had known the area for, whether they

worked or lived in the area and any other relevant connections that they had.

The interviewee was then asked to guide me around the area, if necessary, I

prompted them to ask about particular assets that might be relevant, such as

churches, community centres, third sector agencies and informal groups. If

the asset was open and it was appropriate, we went inside and tried to speak

to a member of staff to gain more information about the service that the asset

provided. I explained that whilst my research was on unreported domestic

abuse, I was keen to learn about the positive assets in the community, rather

than just focusing on need. If the situation arose and it was appropriate (not if

clients were present) I asked where they would refer victims who disclosed

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[21] See Appendix 6 for the Survey123 questions.

abuse.  Any leaflet or material available about the assets was also collected

and details of any additional materials, such as website were recorded.  If the

asset was closed, then any available information was recorded and follow up

internet searches or telephone calls were made to find out more about the

asset. After each visit I uploaded the survey information to ArcGIS to produce

a map of all the assets from the selected areas.

**Ethical consideration**

Before the research began a data sharing protocol was developed and signed

between Essex Police and the university.  This allowed access to anonymised

point level police data, but full address data was available for the victim,

perpetrator and location of the incident.  Agreement was reached with the

police that no maps that could disclose the location of victims would be

produced, so only aggregate data is displayed in this thesis at a high enough

resolution to avoid disclosure.  Details of the age, ethnicity, whether there was

a child present, whether the incident was drug or alcohol related and the date

and time of incident were shared, along with linked DASH data where it

existed[22].  All data was stored securely and will be deleted on competition of

this research.

The research follows the ethical guidelines set out by the British Sociological

Association (BSA).  Ethical approval was sought and was granted by the

Research and Enterprise Office at the university to conduct the Community

Asset Mapping exercises.  Any information thought to disclose confidential

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[22]  A more thorough discussion of this data can be found in Chapter Four

information, such as the name of the church where a Victim Support counsellor is based, has not been published.

This chapter has introduced the theoretical framework that the thesis will be testing and developing, it describes the data that will be used and the methodology that will be used in each empirical chapter.  The next three chapters will focus on the results and findings from each empirical enquiry, beginning with the analysis conducted at the individual and family and relationship level.

# Chapter Four: Individual level - Analysis

Introduction

Having introduced the concept of intersectionality and the existing literature

on the individual characteristics of domestic abuse in Chapter Two, this

chapter tests the theory and identifies the risk factors and interactions to form

profiles of domestic abuse victims who report to the police.  The analysis

focuses on identifying the predictors of repeat victimisation, escalating abuse

and the injury.

Results

One of the key questions of the thesis is whether the profile of known victims

is the same as those who do not report to the police.  In order to be able to

answer this question a profile of known victims needs to be built.  Below are

the results of the different victim characteristics, followed by the model

results, where the relationships between the variables are investigated.

**Age and Gender**

Overall the proportion of incidents with female victims was 77.8 per cent.  The

proportion with a male perpetrator was a very similar 78.0 per cent.  The

mean age of victims is 35.6, compared to 34.4 for perpetrators.  Figure 4.5

shows the proportion of incidents that were reported by the age and gender of

victims.  The profile of victims is quite different to that exhibited for all CSEW

crime, with domestic abuse victims more likely to be female across all age

categories, with particularly pronounced differences in those aged 16 to 44.

Victims aged between 16 and 34 were over four times more likely to be

female.  Those over 45 were still twice as likely to be female, however the overall volumes of victims in this age range were much lower.

*Figure 4.5: Age and gender of all domestic abuse victims reporting to Essex Police (2016)*
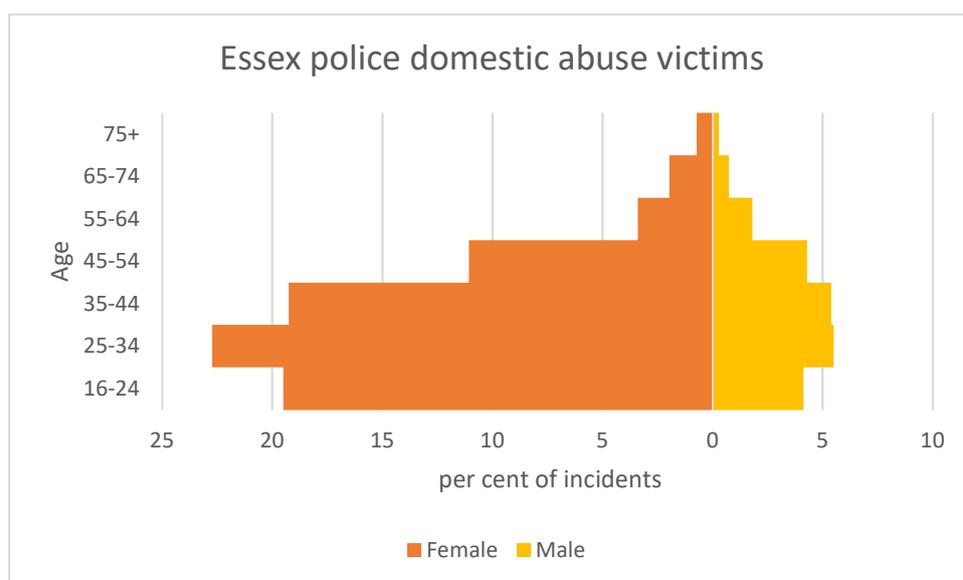


Figure 4.6 shows the national distribution of domestic abuse reported to the CSEW.  Like the Essex Police data, the majority of victims are under the age of 45, however, there is a reduction with age in these years, with the highest number of victims aged 16-24 (with five times more female victims in this category).  What is different in the CSEW data is that the victims over the age of 45 are more likely to be male than female.  The group where this is most pronounced is those over 75.

*Figure 4.6: Age and gender of all domestic abuse CSEW victims reporting to the CSEW (2016)*
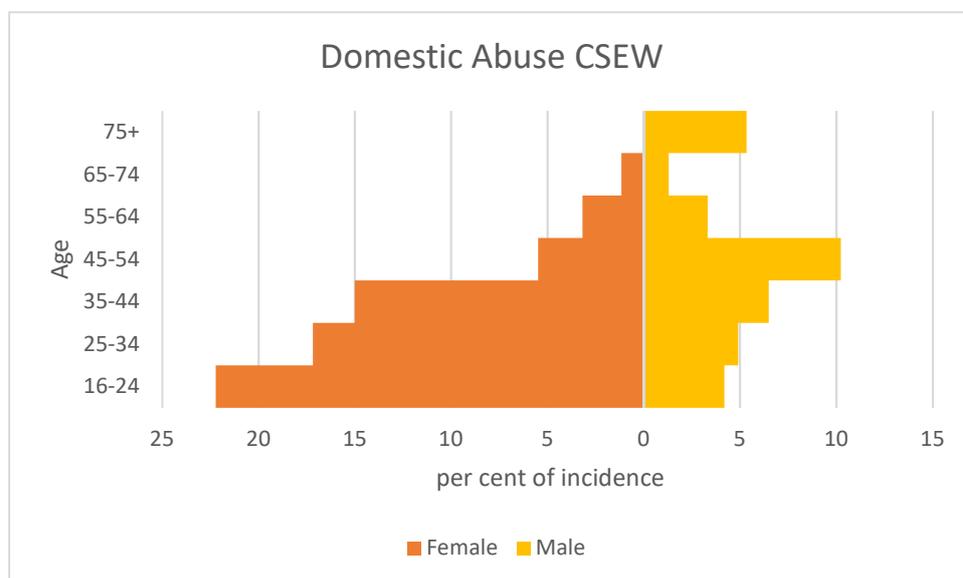


The profile of Essex police perpetrators in Figure 4.7 reflects the victim profile, with much higher numbers of male perpetrators and the number decreasing with age. What is interesting is an increase in the number of female perpetrators over the age of 75.

*Figure 4.7: Age and gender of all domestic abuse perpetrators reported to Essex Police (2016)*
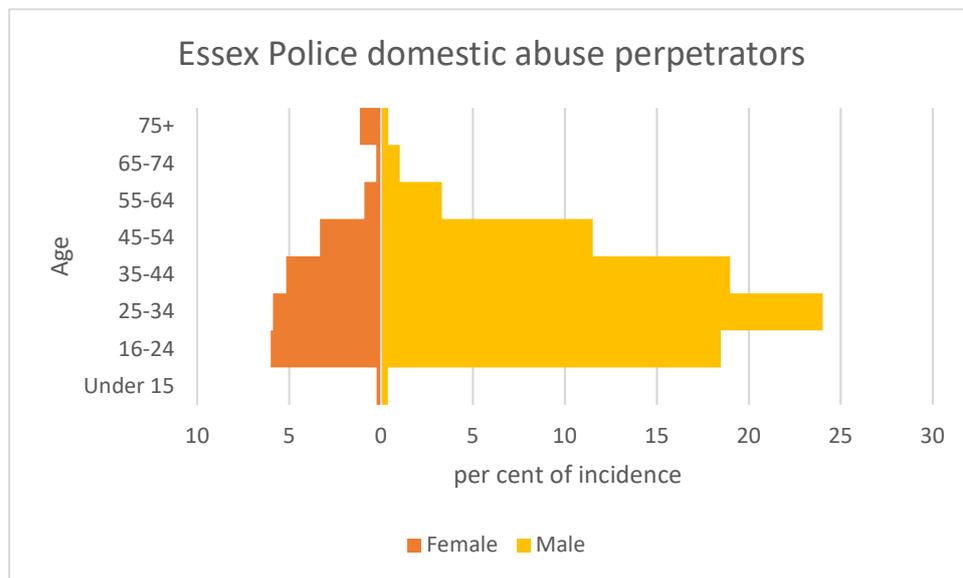


The unique profile of domestic abuse victims is particularly evident when compared to other crimes. All CSEW crime in Figure 4.8 exhibits a more typical pyramid pattern, with a more balanced distribution between males and females, although there are more male victims in all age categories apart from those aged between 55 and 64. The number of victims also reduces more evenly with age, unlike domestic abuse, which does not start to reduce until 45.

*Figure 4.8: Age and gender of all CSEW crime victims reporting to the CSEW (2016)*
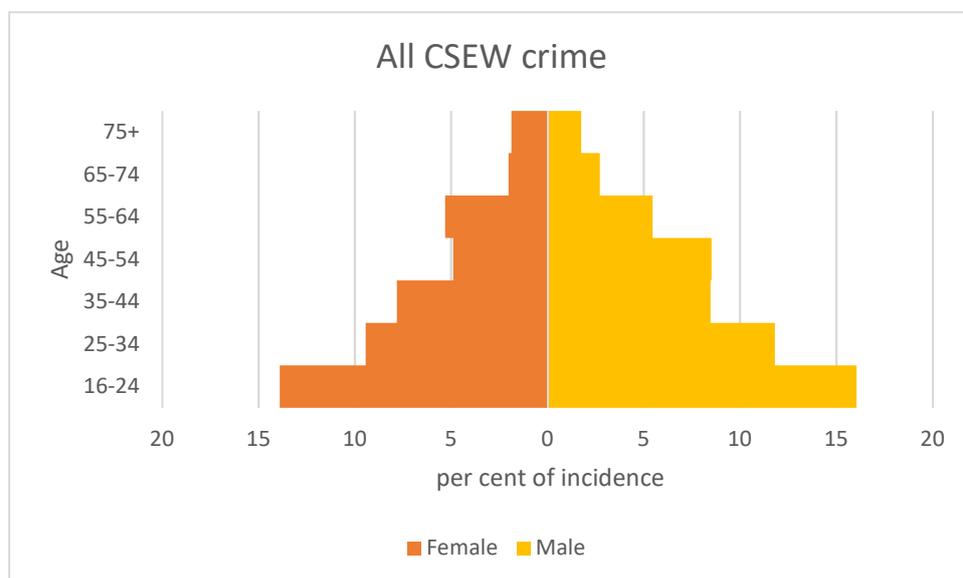


When compared to all violent crime reported in figure 4.9 to the CSEW (which will include domestic abuse), the profile, like all CSEW crime shows more male victims than female victims in each category and a reduction in volumes for each age range, apart from a big increase in the proportion of female victims aged 55-64.

*Figure 4.9: Age and gender of all violence victims reporting to the CSEW (2016)*
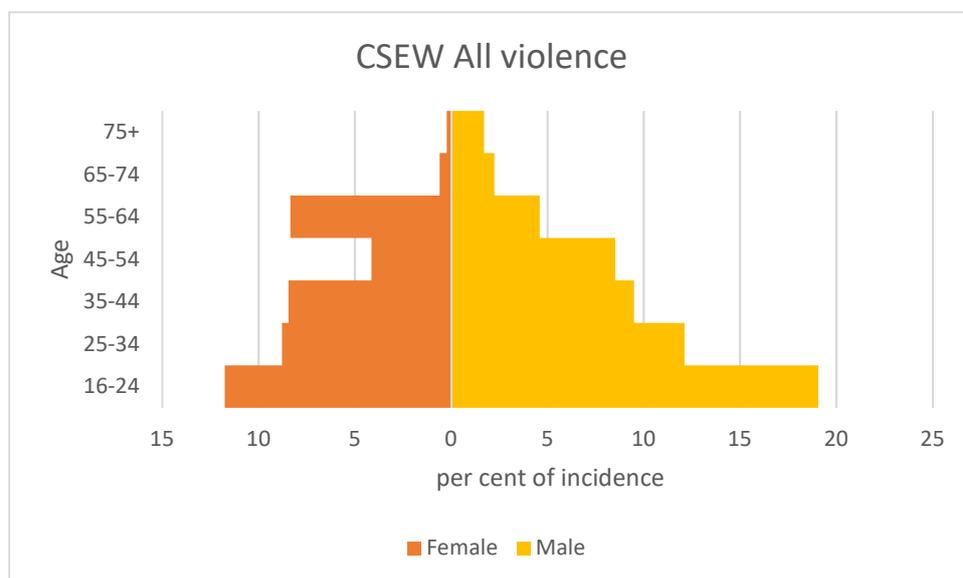


**Ethnicity**

Table 4.5 shows that victims classified as White European experienced 94 per cent of abuse, followed by those recorded as Black/African/Caribbean/Black British and Asian.  When comparing the proportions of incidents by ethnicity to the percentage of the population of Essex in each of the groups, the proportion of incidents reported by those in black/African/Caribbean/black British group is higher than the proportion of this group in the population.  Those in the Asian/Asian British group, however, report a lower percentage than the proportion of the group in the population.

*Table 4.5: Ethnicity of victims and 2011 population breakdown of Essex by ethnicity*

| Ethnic group | % incident | % population |
|---|---|---|
| White | 94.06 | 93.24 |
| Mixed/multiple ethnic group | 0.03 | 1.60 |
| Asian/Asian British | 1.87 | 2.74 |
| Black/African/Caribbean/Black British | 3.61 | 2.01 |
| Other ethnic group | 0.43 | 0.41 |
| Total | 100.00 | 100.00 |

N= 86,342

**Class**

Table 4.6 highlights the variation in risk of incidence by OAC supergroups. Although there are only 58 Output Areas in the 'Ethnicity Central' Supergroup in Essex, this group is found to have a risk score three times higher than the average for Essex.  The Super group is described as being located in inner urban areas, with higher representation of non-white ethnicity that the UK average.  Residents are more likely to be young adults, renting and living in flats, with slightly higher divorce or separation and a lower proportion of dependent children.  Unemployment is higher than average and those who are employed are more likely to work in accommodation, information and communication, financial, and administrative related industries (ONS, 2014).

*Table 4.6: OAC Supergroup standardised risk score*

| OAC Supergroups | Number of output areas in Supergroup | Standardised risk score |
|---|---|---|
| Ethnicity Central | 58 | 319.4 |
| Constrained City Dwellers | 591 | 198.8 |
| Multicultural Metropolitans | 335 | 188.1 |
| Cosmopolitans | 122 | 182.7 |
| Hard-Pressed Living | 988 | 123.8 |
| Urbanites | 1449 | 87.7 |
| Rural Residents | 482 | 48.4 |
| Suburbanites | 1641 | 44.2 |

N=5,666

Figure 4.10 shows the geographic distribution of the groups across Essex. The second most at risk group is the 'Constrained City Dwellers', this group has ten times the average number of Output Areas in Essex and is almost double the average risk score. Described as having fewer people aged 5 to 14, but more over the age of 65, the areas are more densely populated than the UK average. Unlike the 'Ethnicity Central' supergroup, this group has a lower number of non-white ethnic groups and a lower proportion of households with no children. Housing is often in social rented flats and overcrowding is more prevalent.

*Figure 4.10: Location of OAC Supergroups in Essex.*
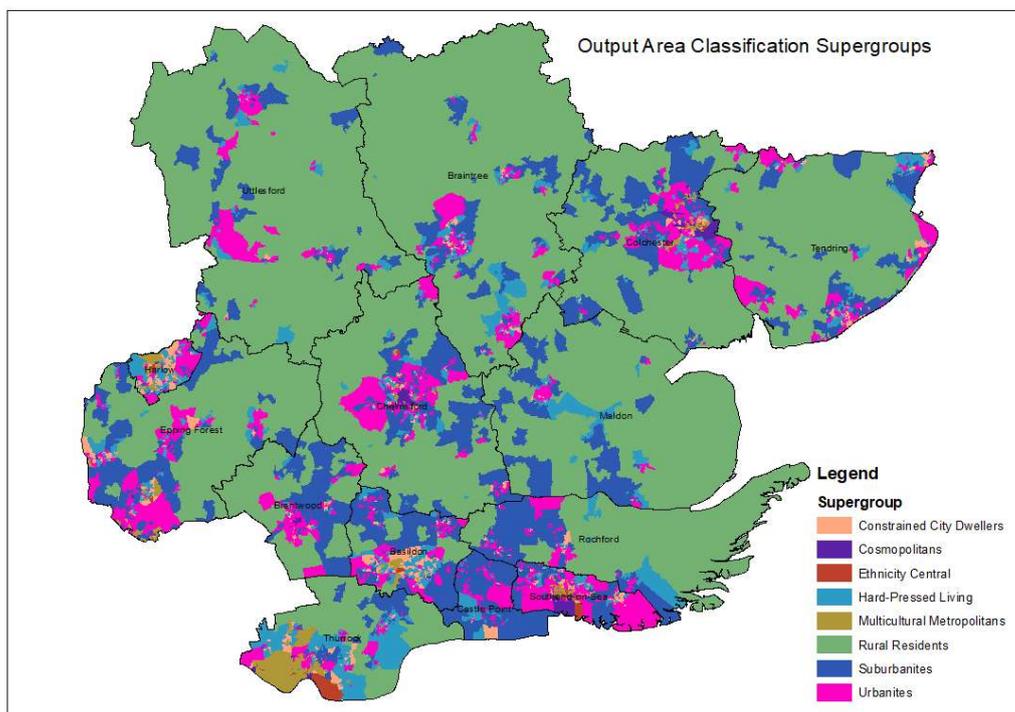


N=5,666

Rural Residents and Suburbanites are the supergroups with the lowest risk, with half the average risk score. These groups are synonymous with the middle class, with high levels of home ownership, education, marriage and civil partnerships and a generally older population.

## Relationships

When the incident age and gender pyramids are broken down into the relationship between the victim and the perpetrator the profile of the victims changes quite dramatically, particularly in family relationships, rather than the intimate relationships. Figure 4.11 shows that when the victim is a parent, they are most likely to be aged between 35 and 54 when female and 45 to 54 when male. The difference between the genders is greatest in these middle age ranges.

*Figure 4.11: Age and gender of victims who are parents*



Parent
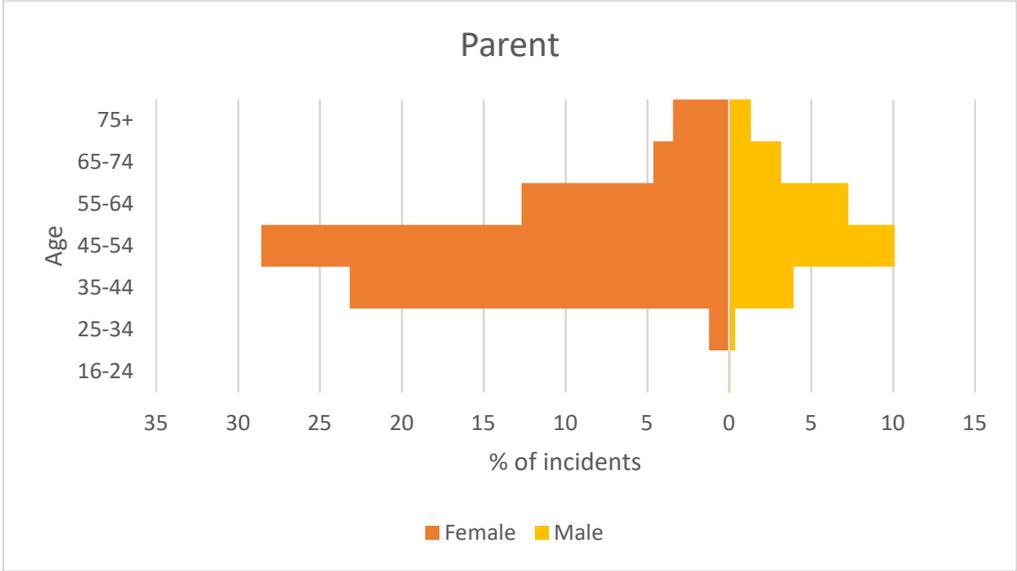
N = 8,881

Figure 4.12 and 4.13 show that partners and ex-partners have a similar age and gender profile to the overall incident figure (figure 5 in previous section).

*Figure 4.12: Age and gender of victims who are partners*
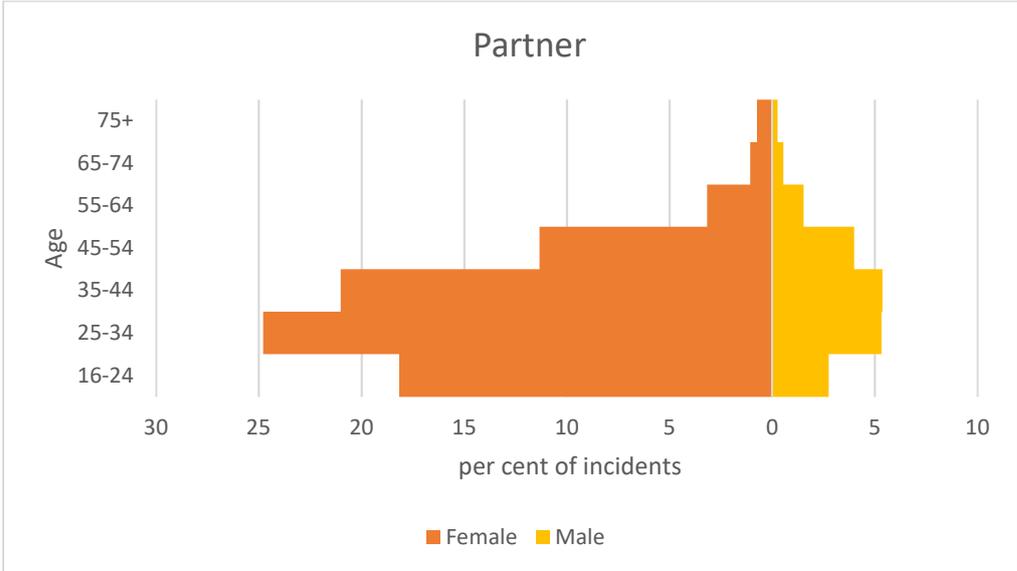


Partner

N = 22,190

*Figure 4.13: Age and gender of victims who are ex-partners*
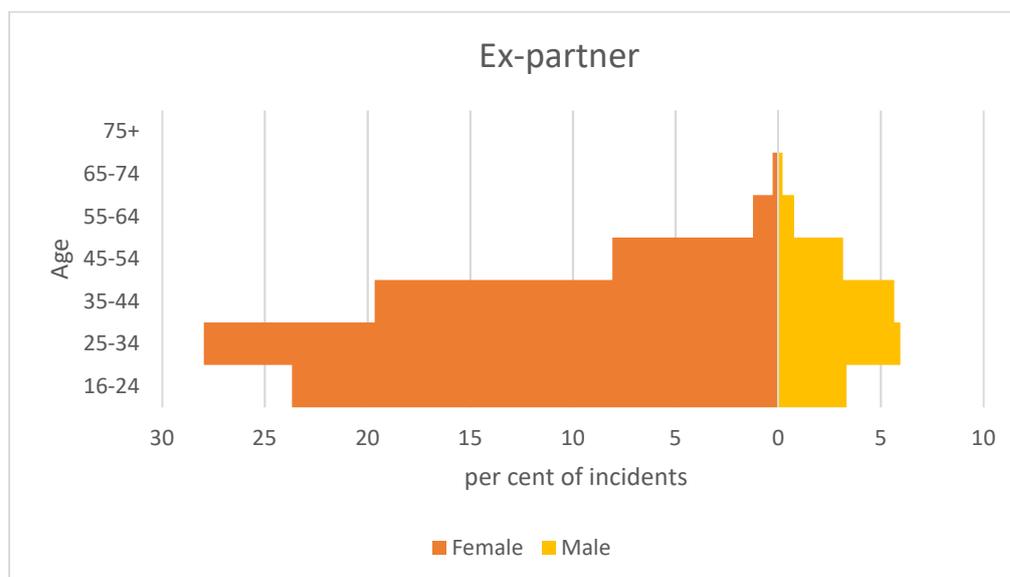


N=41,172

Figure 4.14 demonstrates that siblings are the closest to displaying gender symmetry and the age distribution is more pyramid like, with more victims in the younger age ranges and fewer incidents as the victims get older.

*Figure 4.14: Age and gender of victims who are siblings*
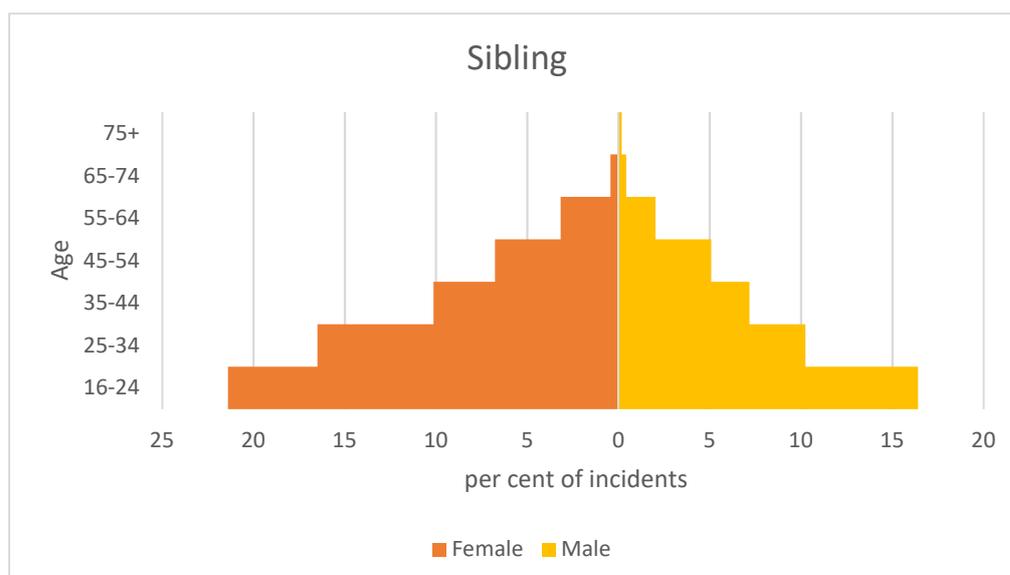


N= 3,282

Figure 4.15 shows that perhaps not surprisingly, the number of victims in the younger age ranges is high when the victim is the child and the perpetrator the parent.  This is particularly marked in the 16 to 24 age range, when the child is more likely to live at home.  Victims are more likely to be female, but the numbers of male victims is also much higher in the youngest age range.

*Figure 4.15: Age and gender of victims who are children*
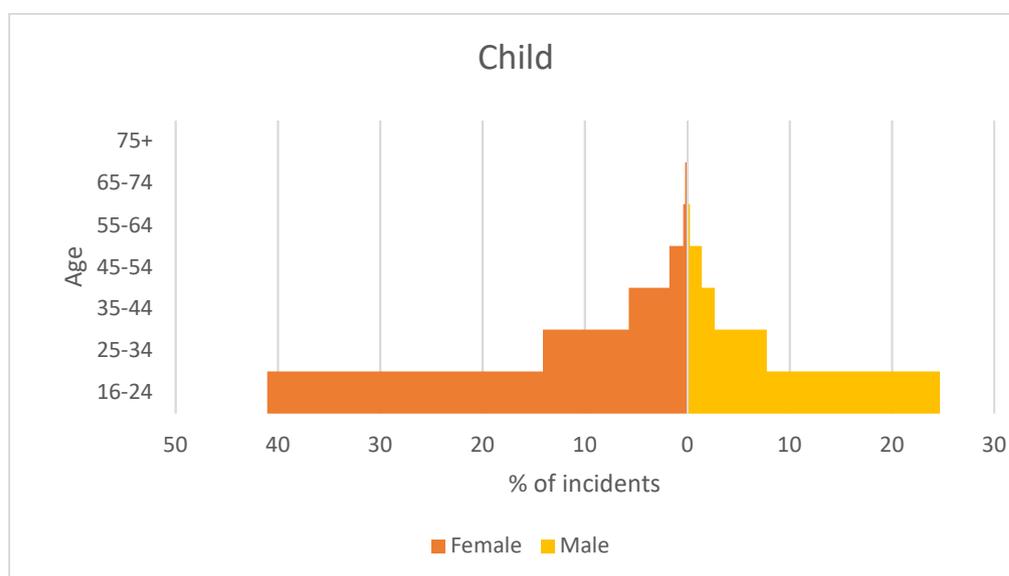


N= 733

Figure 4.16 finds that all the other relationships, such as grandparents and other family members still have more female victims, but there is less of a distinction in age, compared to some of the other figures.

*Figure 4.16: Age and gender of victims who have other relationships.*
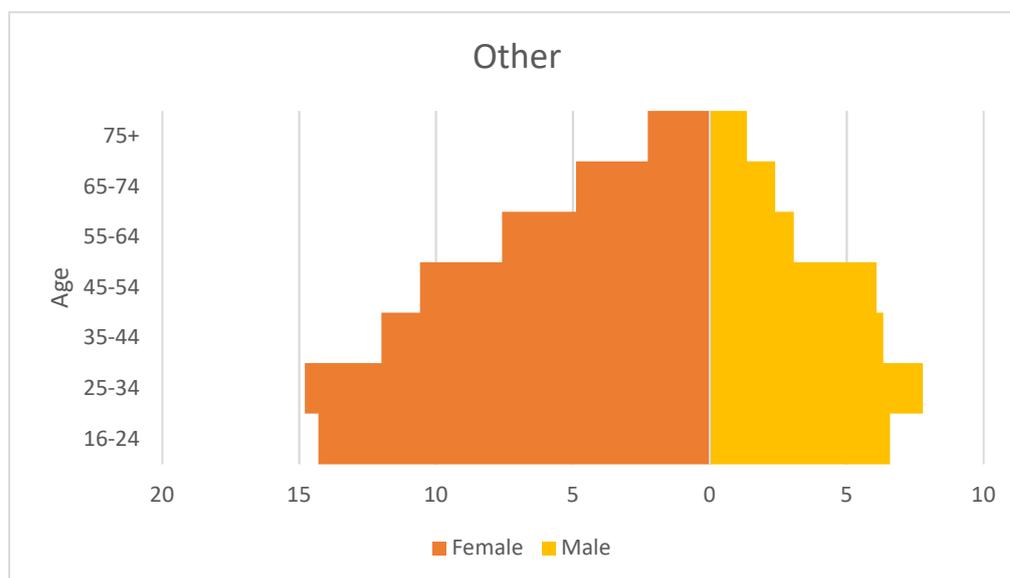


N = 4,856

**Severity of abuse**

The results of the logistic regression showing the predictors of reported injury can be seen in table 4.7.  The results demonstrate that even with half of the DASH answers missing, listwise deletion and multiple imputation generate very similar results, with the same statistically significant variables.  For the purposes of discussing these results the imputed results will be used.  Overall the odds of an incident with injury are 10.63 times higher if the incident is categorised as high risk rather than standard risk and 4.61 times higher for medium risk.  This result is not surprising given that in most cases the risk category is allocated according to the number of positive responses to the DASH questions, with over 14 yes responses indicating high risk. Interestingly the odds of injury are 2.6 and 1.31 times higher if the incident is regarded as alcohol related or drug related respectively, however the odds of

injury are reduced to 0.69 if the perpetrator has had problems in the past year leading a normal life because of drugs (prescription or other), alcohol or mental health. The alcohol and drug related field is completed by the office, whereas the drugs, alcohol and mental health question is part of the DASH risk assessment. Overall it is not suggested that the perpetrator has a long-term problem, but that the presence of alcohol and drugs at the time of the incident increase the odds of injury.

Variables that increase the odds of injury are being isolated, a child not being the perpetrators, the abuse getting worse, controlling behaviour, having a weapon, attempting to strangle the victim and a child having witnessed the incident. Conversely the odds of injury are reduced if the victim is female, both the victim and perpetrator are older, the victim and perpetrator have separated, there is conflict over child contact, there has been harassment, the victim is afraid of another person, the perpetrator has also abused animals, attempted suicide or has been in trouble with the police.

*Table 4.7: Logistic regression of predictors of Injury, Essex Police,*

*2014*

| Dependent variable | | |
|---|---|---|
| Injury | | |
| **Independent variable** | Listwise deletion method (OR) | Multiple Imputation (OR) |
| Frightened | 0.97 | 0.98 |
| Isolated | 1.29* | 1.29* |
| Depressed | 1.06 | 1.04 |
| Separated | 0.87* | 0.83* |
| Child Conflict | 0.56* | 0.55* |
| Harassment | 0.51* | 0.50* |
| Pregnant | 1.00 | 1.00 |
| Child not perpetrators | 1.14* | 1.15* |
| Abuse more often | 0.96 | 0.96 |
| Worse | 1.95* | 2.01* |
| Control | 1.08* | 1.09* |
| Weapon | 1.47* | 1.45* |
| Strangle | 1.68* | 1.66* |
| Other person | 0.86* | 0.84* |
| Animal | 0.79* | 0.79* |
| Drug Alcohol Mental Health | 0.70* | 0.69* |
| Suicide perpetrator | 0.77* | 0.74* |
| Police trouble | 0.66* | 0.61* |
| Drug related | 1.29* | 1.31* |
| Alcohol related | 2.58* | 2.60* |
| Child witnessed | 1.36* | 1.36* |
| Victim female | 0.60* | 0.57* |
| Victim age group | 0.75* | 0.75* |
| Offender age group | 0.97* | 0.98* |
| High risk | 11.70* | 10.62* |
| Medium risk | 4.89* | 4.61* |
| Year | 0.93* | 0.94 |

N = 85,979 * P<0.05

**Escalation of abuse**

Table 4.8 identifies the variables that increase the odds that incidents have got worse.  Given the similarity in the questions, it is not surprising that the odds of the abuse getting worse are increased by 7.57 when victims also respond that the abuse happens more often.  Having received an injury doubles the odds of the abuse getting worse, being classified as high risk increases the odds by 1.81 and medium risk by 1.48 (compared to standard risk).  Being frightened also increases the odds by 1.72.  Other variables that also increase the odds include being isolated, depressed, suffering harassment, having a child who is not the perpetrators, having being threatened to be killed, experiencing controlling behaviour, being abused by another person, the perpetrator hurting other people, experiencing financial abuse, the perpetrator having had problems in the past year in leading a normal life because of drugs (prescription or other), alcohol or mental health, the victim being older and the perpetrator slightly younger than average.

The only statistically significant variables that decreased the odds of abuse getting worse included the victim being female and the perpetrator having tried to strangle the victim.

One of the complications of the models predicting injury and escalation is that they comprise a lot of variables, which results in it being difficult to interpret the results due to controlling for so many variables simultaneously.  The next section takes a different approach by trying to reduce the number of variables to understand the latent constructs that groups of variables represent.

*Table 4.8: Logistic regression of predictors of abuse getting worse;*

*Essex Police, 2014*

| Dependent variable | | |
|---|---|---|
| Worse | | |
| **Independent variable** | Listwise deletion method (OR) | Multiple Imputation (OR) |
| Injury | 2.04* | 1.99* |
| Frightened | 1.71* | 1.73* |
| Isolated | 1.24* | 1.23* |
| Depressed | 1.16* | 1.17* |
| Separated | 1.01 | 1.04 |
| Harassment | 1.19* | 1.19* |
| Child not perpetrators | 1.08* | 1.09* |
| Hurt children | 0.94 | 0.94 |
| Threat hurt children | 1.11* | 1.11 |
| Abuse more often | 7.61* | 7.57* |
| Control | 1.51* | 1.53* |
| Threat Kill | 1.14* | 1.16* |
| Strangle | 0.88* | 0.90* |
| Other person | 1.12* | 1.13* |
| Hurt other | 1.20* | 1.20* |
| Financial | 1.15* | 1.20* |
| Drug alcohol mental health | 1.15* | 1.16* |
| Child witnessed | 1.15* | 1.20* |
| Victim female | 0.90* | 0.92* |
| Victim age group | 1.21* | 1.21* |
| Offender age group | 0.97* | 0.97* |
| High risk | 1.72* | 1.81* |
| Medium risk | 1.43* | 1.48* |
| Year | 1.04* | 1.03* |

N = 85,979, * P<0.05

## Repeat victimisation results

The tetrachoric bivariate correlation on the DASH variables found strong and

moderate correlations between several variables.  The exploratory factor

analysis reduced the number of variables but also allowed the variables to be aggregated to represent a latent concept.  An unrotated analysis found 19 variables that loaded on the same factor, figure 4.17 shows the strength of the first factor with an eigenvalue of 6.2.

*Figure 4.17 Scree plot of Eigenvalues after factor*
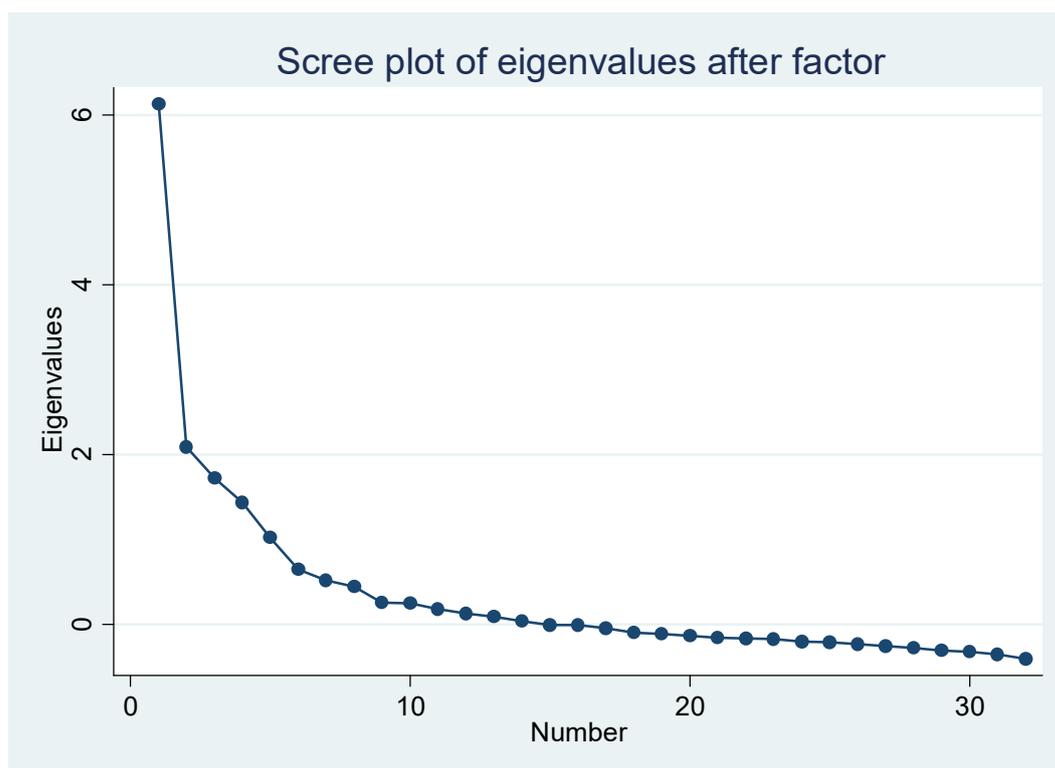


The variables are all physical violence or emotional responses to coercive and violent behaviour.  The variables in this factor are consistent with the 'Intimate Terrorism' category in Johnson's typology of abuse (Johnson, 2000), where behaviour is getting worse.  This category of victim is thought to be the most at risk of serious risk or homicide, so being able to identify those responding to several of these questions is very important.

*Table 4.9. Unrotated factor pattern (Loadings ≥ 0.40)*

| Variable | Factor Loading |
|---|---|
| *Intimate Terrorism* | |
| Frightened | 0.68 |
| Threaten to kill | 0.68 |
| Strangle | 0.63 |
| Control | 0.62 |
| Isolated | 0.58 |
| Hurt others | 0.57 |
| Sexual | 0.54 |
| Weapon | 0.53 |
| Worse | 0.52 |
| Harassment | 0.50 |
| Animal | 0.50 |
| Abuse more often | 0.49 |
| Police trouble | 0.49 |
| Threaten to hurt children | 0.48 |
| Victim female | 0.45 |
| Drugs alcohol mental health | 0.44 |
| Offender male | 0.43 |
| Hurt children | 0.42 |
| Perpetrator attempted suicide | 0.40 |

N= 31,045  Kuder-Richardson = 0.75

An orthogonal and oblique rotation in table 4.10 splits the variables into 'physical violence' and 'coercive control'.  As the oblique rotation finds both factors to be highly correlated (0.53) it seems appropriate to use the factors derived from this rotation.  Although the unrotated analysis in table 4.9 produces an overall factor with both physical and emotional violence, it is beneficial to use two factors as some research suggests that coercive control often accompanies physically violent behaviour, but coercive control may be experienced without physical violence, particularly in the earlier stages of abusive behaviour (Johnson, 2000; Stark, 2006).  Having these two factors separated will enable this hypothesis to be tested.

*Table 4.10. Oblique rotated factor pattern (Loadings ≥ 0.40)*

| Variable | Factor Loading |
|---|---|
| *Physical Violence* | |
| Police Trouble | 0.67 |
| Hurt others | 0.66 |
| Drugs alcohol or mental health | 0.62 |
| Threat to kill | 0.57 |
| Weapon | 0.54 |
| Hurt animals | 0.53 |
| Threaten to hurt children | 0.52 |
| Hurt Children | 0.47 |
| Strangle | 0.43 |
| Kuder-Richardson = 0.64 | |
| *Coercive Control* | |
| Worse | 0.75 |
| Abuse more often | 0.73 |
| Isolated | 0.69 |
| Control | 0.64 |
| Frightened | 0.44 |
| Depressed | 0.42 |
| Harassment | 0.40 |
| Kuder-Richardson = 0.68 | |

N= 31045

On the basis of the explanatory factor analysis a scale was created where the mean score for the 'physical' and 'coercive control' factors was calculated for each incident.  Using the mean to standardise the factors means that the coefficient values can be compared and their influence on each other and other variables modelled.

The number of incidents that each victim experienced is shown in figure 4.18. One victim had experienced 128 incidents within the time frame.  The median number of incidents was two.

*Figure 4.18: Number of incidents experienced by each victim*



Number of incidents per victim
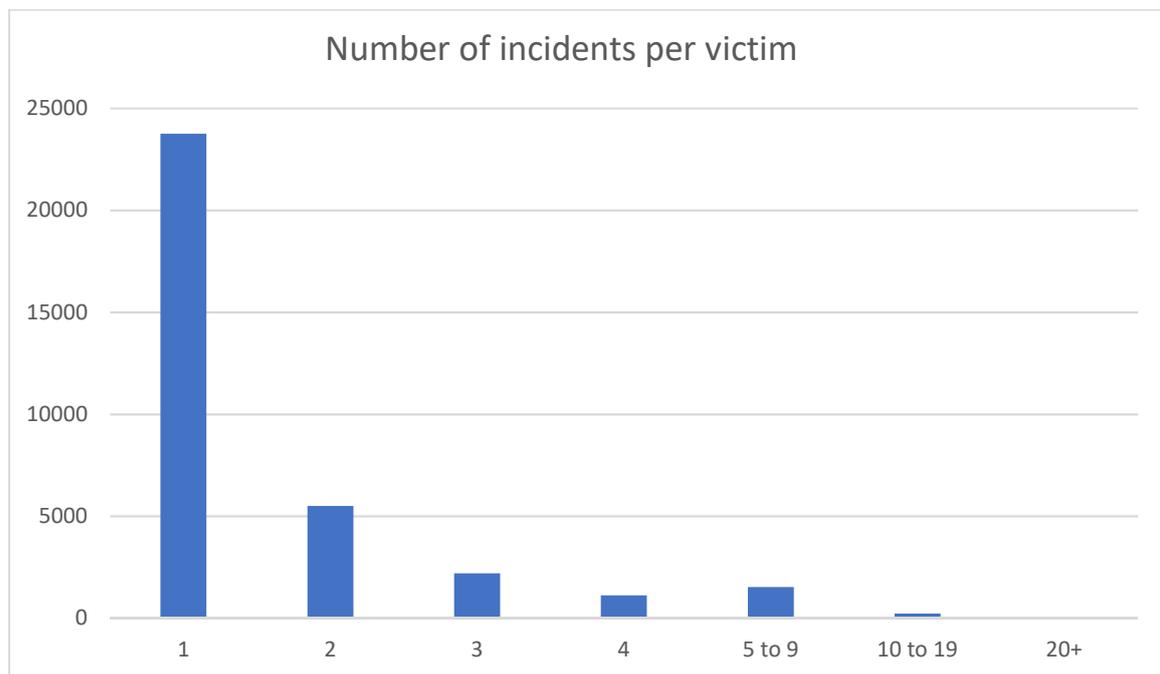
N=58,904

**Repeat incident profile**

Of the 58,904 incidents in the evaluation period 62 per cent were repeats, with 52 per cent female repeats and 10 per cent male repeats.  Whilst the absolute number of incidents with male victims (23 per cent of incidents in this time period) is much lower than the female victims, what is interesting is that proportion of repeat incidents was statistically significantly higher for male victims, with 86 per cent of incidents compared to 67 per cent for females.

Table 4.11 shows that when looking at all incidents in the repeat analysis the odds of the incident being a repeat are 4.45 higher with every one-unit increase in the physical violence scale.  A one-unit increase on the coercive behaviour scale, however only increases the odds by 1.45, demonstrating that overall incidents with physical or threatened violence are more likely to

be reported on more than one occasion by victims. What is particularly interesting is to look at the variation in the odds ratio when the incidents are broken down into the relationship between the victim and the perpetrator. For partners, the odds of a repeat are even higher, at 6.17, for a one-unit increase in the physical violence scale, indicating that physical violence is even more pertinent in patterns of repeat victimisation amongst partners who are still together. The odds of a repeat for ex-partners, parents and other relationships is lower than the overall rate, with odds of 3.53, 3.38 and 2.08 respectively. For children and siblings, the odds ratios for physical violence are not significant, this could be as a result of the relatively low sample size increasing the standard errors. For further analysis of these relationships a larger dataset, over a longer time period is needed.

Interestingly the variation by relationship type for the odds of a repeat based on the score on the coercive scale is less diverse and significant. The highest odds are when the victim is a parent (2.37). The only other statistically significant relationship was ex-partner, with odds just below the average of all incidents (1.41).

*Table 4.11 Logistic regression for predictors of repeat victimisation*

**Dependent Variable**

Repeat victimisation

| | Odds Ratios | | | | | | |
|---|---|---|---|---|---|---|---|
| **Independent Variables** | All incidents | Ex-Partner | Partner | Sibling | Child | Parent | Other |
| Physical scale | 4.45* | 3.53* | 6.17* | 1.34 | 1.35 | 3.38* | 2.08* |
| Coercive scale | 1.45* | 1.41* | 0.97 | 2.10 | 1.12 | 2.37* | 1.47 |
| High risk | 1.50* | 2.10* | 1.23* | 1.12 | 1.82 | 1.51* | 1.17 |
| Medium risk | 1.38* | 1.68* | 1.23* | 1.25 | 1.23 | 1.32* | 1.20 |
| Victim age | 1.00 | 1.00 | 1.00 | 1.00 | 1.02 | 0.99 | 1.00 |
| Victim female | 2.99* | 1.98* | 2.14* | 4.34* | 2.94 | 1.72 | 3.08* |
| Victim age* victim female | 0.99* | 0.99* | 0.99* | 0.98* | 0.98 | 1.00 | 0.99 |
| Offender male | 0.96 | 1.42* | 1.14 | 0.81 | 0.55* | 1.08 | 0.75* |
| White | 1.42* | 1.13 | 1.39* | 1.15 | 2.50* | 1.33 | 1.24 |
| Year | 1.06* | 1.05 | 1.10* | 0.97 | 1.09 | 1.08 | 1.02 |
| Rural Residents | 0.60* | 0.68* | 0.53* | 0.55* | 0.33 | 0.27* | 0.53* |
| Cosmopolitans | 1.04 | 1.14 | 0.87 | 0.56 | 1.57 | 0.94 | 1.11 |
| Ethnicity Central | 0.98 | 1.00 | 0.77 | 1.04 | 1.15 | 0.62 | 1.54 |
| Multicultural Metropolitan | 1.01 | 0.96 | 1.05 | 0.72 | 1.15 | 0.96 | 1.21 |
| Urbanites | 0.88* | 0.85* | 0.84* | 0.93 | 0.71 | 0.84 | 0.84 |
| Suburbanites | 0.73* | 0.77* | 0.67* | 0.72 | 0.44* | 0.39* | 0.73* |
| Constrained City Dwellers | 1.18* | 1.19* | 1.21* | 1.17 | 1.00 | 1.13 | 0.97 |

Note. N= 30,474 (all), 16,485 (ex partner), 8,010 (partner), 1,181(sibling), 733 (child) 2697 (parent) 1588 (other). *P<.05

Overall the odds of repeat victimisation are 1.50 higher if the incident is categorised as high risk rather than standard risk, however when the victim is the ex-partner of the perpetrator this increases to 2.10.  The odds are lower than the overall pattern for partners (1.23) and very close to the overall rate for parents (1.51).  Where the victim is the child, sibling or other relationship the odds ratios are not statistically significant.

Generally being medium risk slightly increases the odds of a repeat incident by 1.38 compared to standard risk. The odds are slightly higher for ex-partners (1.68) and lower for partners (1.32). The rest of the relationships are not statistically significant.

Age is not a significant predictor of repeat victimisation across any of the relationship types. However, when an interaction term is introduced between age and gender, the variable becomes significant for all incidents and for ex-partners, partners and siblings (parents, children and other relationships are not significant). Figures 4.19 to 4.22 shows the interaction between age and gender for these relationships. Overall the risk of repeat victimisation starts much higher for women than men, but declines with age, whereas the opposite pattern occurs for men, with the risk of repeats increasing as age increases. The lines cross at age 90, with the risk of repeats higher for men over this age. With the individual relationships the same pattern is observed for ex-partners and partners, although the lines at the younger age of 80 for partners. The sibling relationship, however, shows a different pattern, with the risks for females decreasing with age, whereas for men the risk of repeats remains the same across all age ranges, crossing at 60 where the risk of repeats is higher for men than women.

*Figure 4.19: Interaction between age and gender for all incidents.*
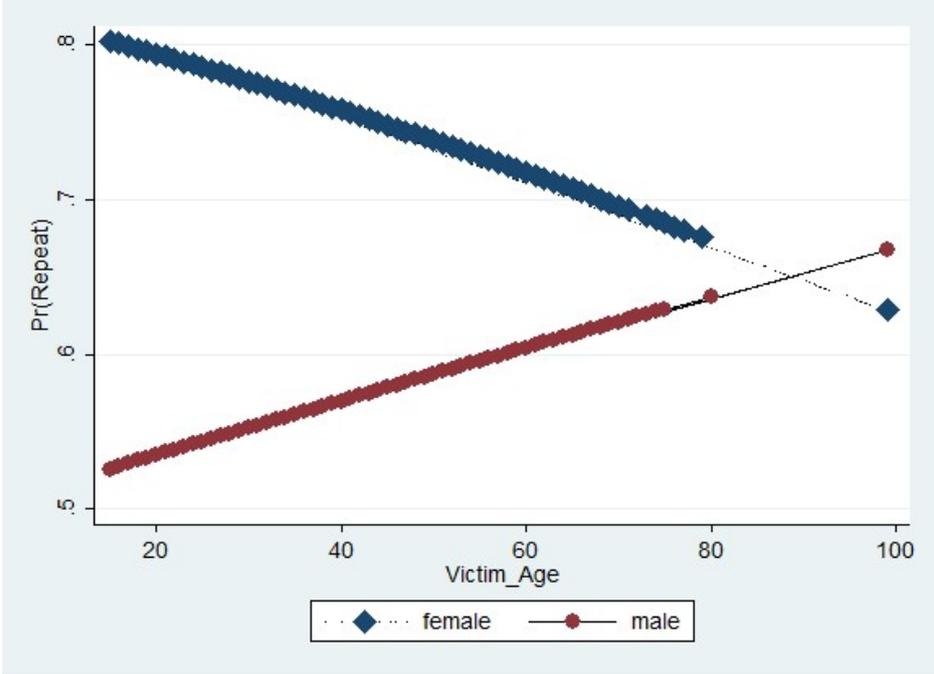


N= 30,474 CI (95%) = 0.978 – 0.983

*Figure 4.20: Interaction between age and gender for ex-partners.*
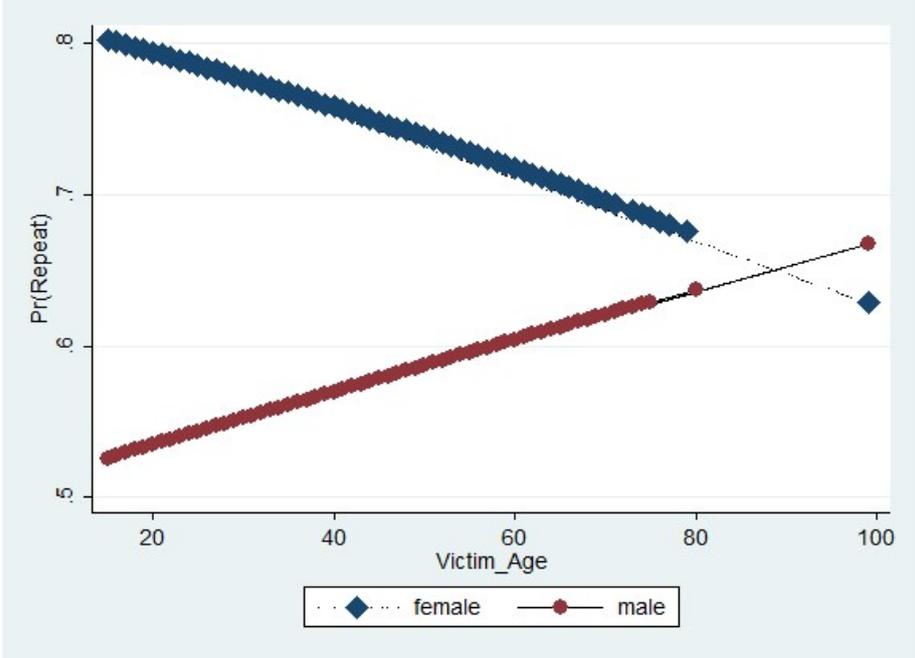


N= 16,485 CI (95%) = 0.977 – 0.988

*Figure 4.21: Interaction between age and gender for partners.*
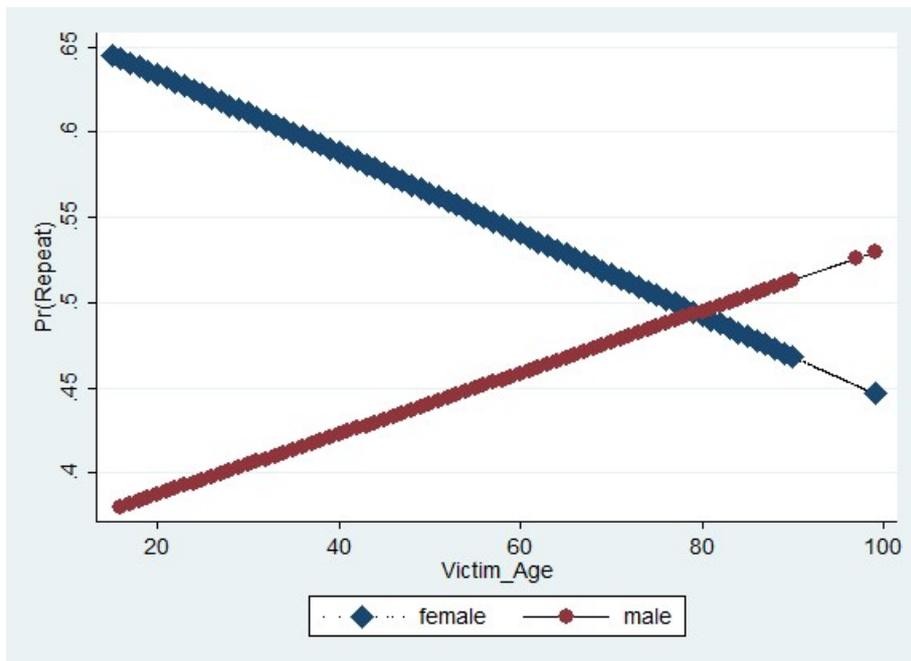


N= 8,010 CI (95%) = 0.978 – 0.989

*Figure 4.22: Interaction between age and gender for siblings.*
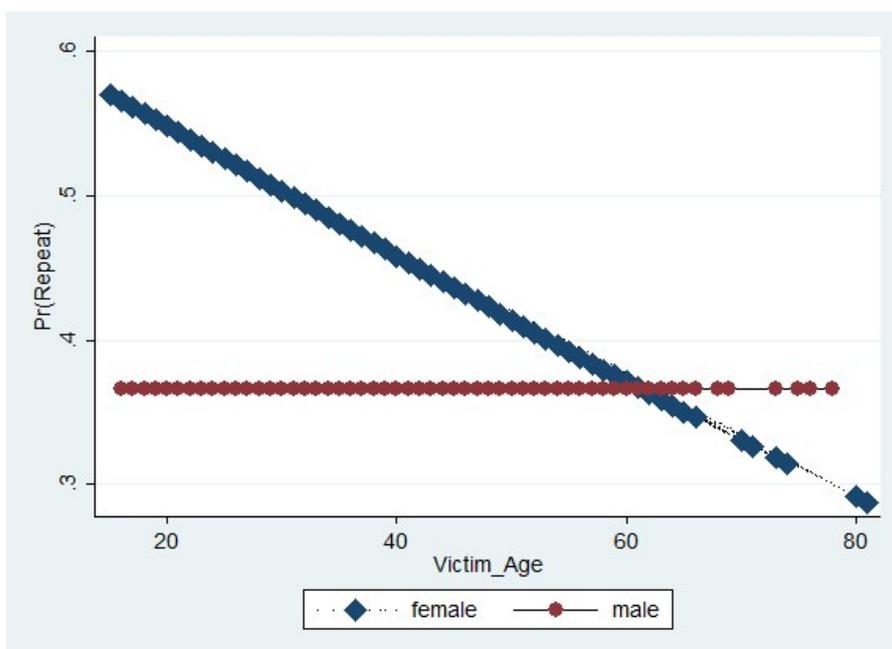


N= 1,181 CI (95%) = 0.969 – 0.996

Table 4.11 also finds that overall the odds of a repeat if the offender is male is not significant.  However, for ex-partners the odds are 1.42, but when children are the victims the odds of the incident being a repeat if the offender is male are only 0.55, meaning that the odds are higher if the female is the offender.  The same pattern occurs for other relationships, with odds of 0.75.  All the other relationships are not statistically significant.

Overall victims are more likely to report a repeat incident if they are white, rather than non-white, with the odds increasing by 1.42.  The odds are slightly lower for a partner at 1.39 and higher for a child at 2.50.  The remainder of the relationships were not statistically significant.  Unfortunately, due to the relatively low numbers of non-white victims in the dataset it was not possible to demonstrate any interaction effect between gender and ethnicity.

By controlling for the policy change in the DASH with the year of the incident finds that for every additional year the odds of repeat victimisation increase slightly by 1.06.  This relationship is only statistically significant for all incidents and those between partners, which increases the odds by 1.10.

For those in the Rural Residents Output Area Classification, the odds of them reporting a repeat incident are significantly lower than those in the Hard-Pressed Living category (the control variable) across all the relationships.  Overall the odds were 0.60, with all the other relationships having similar.  For those in the Ethnicity Central and Multicultural Metropolitan supergroups, there were no statistically significant relationships.  Those in the Urbanities had odds of 0.88 (for all incidents) compared to the Hard-Pressed living (and statistically significant odds of 0.85 for ex-partners).  Suburbanites also had

lower odds with 0.73 overall and all other relationships having similar odds, with the exception of children, who were even lower at 0.44 and siblings who were not statistically significant.  Constrained City Dwellers were the only supergroup to have higher odds than Hard-Pressed Living, with 1.18 overall and very similar results (1.19 and 1.21) for ex-partners and partners (the remainder of the groups were not statistically significant).

Discussion

The results reinforce previous feminist research that states that domestic abuse is a gendered crime (Walby and Towers, 2017; Walby et al, 2014; Hoyle, 2007; Johnson, 2006; Dobash and Dobash, 2004).  However, the results also show that an intersectional approach to the analysis also demonstrated that age, class, the type of relationship between the victim and perpetrator and lifestyle factors also influence the risk of abuse.

On their own the variables show that those who report to the police are most likely to be under the age of 45, female, white, from the lower social classes (in urban areas) and have a male perpetrator.  However, the real added value from this analysis has been analysing the interactions between these variables.

**Victim profiles**

Analysis of the relationship between the victim and perpetrator has found that the profile of victims and the risk factors varies amongst these relationships. The unique profiles that have been identified are discussed below.

*Partners and ex-partners*

The most similar relationship profiles are amongst the partners and ex-partners.  Both relationships demonstrate the greatest degree of gender asymmetry, compared to the other family relationships.  Victims are mainly under the age of 45.  They have higher odds of repeat victimisation when there is physical violence in the relationship, particularly amongst partners who are still together.  Coercive behaviour is only a significant predictor of repeat victimisation for ex-partners, but not at the same magnitude as the physical abuse.  This finding echos that of Walby et al (2018), who advocate the use of the term 'domestic violent crime', rather than Johnson (2005) who said that intimate violence can start with coercive and controlling behaviour before becoming violence.  What these results demonstrate is that victims are less likely to report their abuse to the police until they are experiencing violence.  This does not, however, mean that it is the first incident and although a widely publicised statistic that victim's experience 35 incidents before reporting to the police has been recently branded a 'mythical number' (Strang et al, 2014), it is still widely viewed that victims would not usually report after the first incident. It should also be noted that the time period analysed was prior to the introduction of the new coercive control legislation in 2015.  It would be useful to repeat this analysis with more recent data.

The intersectional approach led to another interesting finding regarding the difference in the risk of repeat victimisation by age and gender for partners and ex-partners.  The risk increases over time for men and reduces for women, with men becoming more at risk than women when over 80.  This could be a result of increased vulnerability to elder abuse with the onset of

health issues, such as Alzheimer's disease (Gordon and Brill, 2001), but having this knowledge is important to support services.

In terms of class, the odds of repeat victimisation are only statistically significantly increased if the victims are in the Constrained City Dwellers groups (compared to the Hard-Pressed Living supergroup).  This is a group who are more likely to be unemployed, live in flats and social rented accommodation and have lower qualifications levels than the national average.  On the other hand, those in the more middle-class Rural Residents, Urbanites and Suburbanites have lower odds.  This reflects previous findings that those in the lower social classes are more likely report abuse, what it cannot explain is whether the middle class still experience abuse but are just less likely to report it to the police (Thomas et al., 2008).  The odds of repeat victimisation are higher for ex-partners when the incident is classified as high or medium risk, which supports the literature (Gondolf & Heckert (2003), Cattaneo & Goodman (2003), Heckert & Gondolf (2004)) that separation puts victims at increased risk.

*Siblings and Children*

The profile of victims who are abused by a sibling or by their parent is quite different to those between intimate partners and parents.  The gender of the victims shows far more symmetry and the amount of reported abuse reduces steadily with age.  There are very few variables that predict a repeat incident. The only predictors that are statistically significant for siblings are the interaction between age and gender, which interestingly sees a reduction with age for females, but the same level of risk across ages for males, and lower

odds for those in the Rural Residents Supergroup. For children the only statistically significant predictors are the odds of a repeat being lower if the perpetrator is male and the odds being over double if the victim is white. The odds are also reduced if the victim lives in a Suburbanite supergroup (compared to the Hard-Pressed Living supergroup).

These patterns raise questions over whether abuse between siblings and children have the same level of severity, potential escalation or the same structural causes. Whereas the concept of patriarchy seems a more plausible explanation for abuse between intimate couples, the different profile of siblings and children suggests a different type of abuse. This relationship warrants further, more qualitative research. The analysis could also be run again with a longer time period to increase the sample size.

*Parents*

Where the victim is a parent, abused by their adult child they have higher odds of repeat victimisation when there is physical violence in the relationship, but also the highest odds of repeats when there is coercive behaviour, compared to any other relationship. Financial abuse, a form of coercive behaviour, has been found to perpetrated by an adult daughter or son in 50 per cent of cases (CPA, 2009). The odds also increase by 1.51 times if the incident has been classified as high risk, which are the only statistically significant odds for familial relationships. This may be because older victims are less likely to report their abuse, particularly when the perpetrator is their child, so they may leave it until the risk has really escalated and they are in grave danger before they or somebody else report

it.  These findings echo the concerns found in recent work on domestic homicides in older people in the UK, where analysis found that 44 percent of murders were perpetrated by children of the victim, which is much higher than the numbers in younger age groups (Bows, 2018).  This group has lower odds of a repeat if the victim is in the Rural Residents and Suburbanites supergroup, demonstrating that the middle class are even less likely to report a repeat incident.

**Ethnicity**

Analysis of victim's ethnicity has been made difficult by the categorisation that Essex Police use.  The IC codes which are based on an officer's perceived view of an individual's ethnicity have also been used for victim's self-identification.  The Inspector in the Force Domestic Abuse Unit reported that it is often the officer who will complete the self-identified ethnicity rather than the victim, so the accuracy of these statistics has to be questioned.   The classification is also very dated and does not use very politically correct language; it is unlikely that someone would identify themselves as 'dark European'.   Also, the classification does not align with the census ethnicity classification, which makes it difficult to identify ethnicities where domestic abuse is more prolific. Some of groupings are very general, which causes problems for analysis.  For instance the North London Domestic Violence Survey found black African and black Caribbean's understanding of domestic abuse were at polar opposites, with black African's having the lowest level of recognition of abuse amongst any ethnicity and black Caribbean the greatest (Mooney 2000).  The way the police have combined these two ethnicities therefore creates an ecological fallacy (Robinson, 1950) and no real

understanding of the individual ethnicities.  The CSEW has used a very crude classification of white or non-white, which makes it very difficult to investigate intersectionality, the interaction between ethnicity and other variables such as gender and class.

What can be seen from looking at just ethnicity is that compared to the population as a whole, there are a higher proportion of incidents reported by black British/African/ Caribbean/other whereas those who are Asian report fewer incidents than their representation in the population as a whole. Caution needs to be taken in analysing these results as it could be that the grouping of IC codes into census groups has misplaced some people into the wrong group.  However, further exploration of ethnicity is important, as it may be a reflection of their willingness or hesitancy in reporting the abuse or it could be that certain ethnic groups are more at the intersections of other groups, such as class and age, which increases their risk of victimisation.

In Essex, the relatively low numbers of people from BAME backgrounds makes it difficult to produce any statistically significant interactions in the regression models.  It would be very interesting to apply the models to other geographical areas with a more diverse population, to really test how ethnicity interacts with other variables.

**Severity and escalation**

The DASH assessment is successful at classifying those with an injury as high risk, as the odds of having an injury are ten times higher if the incident is classified as high risk and over four times for medium risk, rather than standard.  Alcohol and drugs at the time of the incident are significant

predictors of injury, but interestingly having a longer-term alcohol, drug or mental health (which is a separate DASH questions) decreases the odds of injury, but increases the odds of the abuse getting worse.  Injury signifies that the incidents are getting worse.  What the analysis does not do is to see how many other incidents have been reported by the same victim.

Conclusion and policy implications

This individual level analysis has not built a single profile but has recognised that there are several profiles of victims that report their abuse to the police. The most significant finding has been that the relationship between victims and perpetrators reflect different risks and patterns of abuse over the lifecourse.  Recognising these different relationships means that in policy terms different service and solutions could be offered.  For instance, where the victim is a parent and they experience a high-risk incident, the research has found that the risk of a repeat incident is higher, which is not found in the other familial relationships that were explored.  Therefore, a different approach to these victims may prevent further victimisation.  A research paper on this aspect of the research is currently under review with *Policing: A Journal of Policy and Practice*.

Also recognising the different profiles of victims makes the gendered nature of abuse clearer in certain groups, such as partners and ex-partners.  At the moment if all incidents are grouped together the true extent of the gender asymmetry amongst intimate partners is lost.  If the Family Violence surveys analysed by Straus (1979) also included the violence experienced between siblings, then it is not surprising that they were more likely to find gender

symmetry.  The police would benefit from analysing the different relationships separately as well as adapting their response.

At the moment, the risk to the victim is measured using 27 questions.  This analysis suggests that for the purposes of predicting repeat victimisation the number of variables can be collapsed into two scales which measure the latent factors of physical violence and coercive control.  This could really aid more straight forward analysis, early intervention, better protection for the victim and appropriate treatment and sanctions for the perpetrator.

Taking an intersectional approach to this analysis has really added value in seeing the interaction between gender and other variables, particularly age and class.  There are, however, limitations to the analysis, particularly the issues around recording ethnicity.  There are also variables that were not available in this analysis, such as sexuality and disability data.  To really understand the nuances between the intersections the analysis could be complimented with some more in-depth interviews or text analysis of the free text fields recorded in the DASH.

One of the main limitations of this analysis has been data missingness.  Only half of victims had completed a DASH and the data was skewed by inconsistencies with reporting, with it appearing that questions that are meant to be completed by the victim potentially being filled in by a police officer instead.  This issue could be overcome if Essex Police add an additional field that specifies who has completed the question.  In the future the amount of missing DASH forms should reduce, with the new policy to ask all standard

risk victims as well.  The police also need to address the way in which they record ethnicity, the current system is very out of date.

Another limitation is lack of information on those who do not report to the police, this therefore means assumptions have to be made that repeat victimisation is a good proxy for an overall profile of domestic violence victims.  This method is more likely to identify more serious or prolific abuse, which is very useful for predicting riskier abuse, but caution must be taking when drawing comparisons with datasets from other agencies

Referring to the original conceptual model that frames this analysis there are still gaps in our understanding of individual level factors, the police data does not have attitude data or individual's health or social history.  It has, however, identified significant variables and characteristics that can predict repeat victimisation.

This chapter has found that using an intersectional approach to understand both the individual and family and relationship levels has been extremely beneficial in understanding how risk factors are not consistent.  As the conceptual model suggests multiple factors across different levels contribute to domestic abuse.  The next step is to investigate the contextual factors at the neighbourhood level and their variation over space and time.

# Chapter Five: Spatial and neighbourhood level analysis

Introduction

Drawing on the literature review and the analytical techniques discussed in the methodology, this chapter aims to identify where and when domestic abuse clusters spatially and temporally.  It also seeks to see whether there is significant clustering simultaneously in both space and time.  Finally, structural and cultural variables are employed to see whether domestic abuse can be predicted at the neighbourhood level.  These variables include the Index of Multiple Deprivation, variables from the Vulnerable Localities Index, the rate of anti-social behaviour, the proportion of the population that is from a Black, Asian and Minority Ethnic (BAME) population and the population density, all measures identified in Social Disorganisation Theory or measures of community cohesion.  By using GWR I am able to explore the geographical variation in the effects of these predictors and the implications these findings could have on the design of relevant and targeted early intervention policy.

Results

**Spatial distribution**

Figure 5.1 shows the rate of domestic abuse per 1000 population in every Census Lower Super Output Area (LSOA) in Essex.  The areas with the highest concentration of abuse are the red and were found in the urban areas of Southend, Basildon, Harlow, Chelmsford, Colchester, Clacton, Harwich, Thurrock and Canvey Island.

*Figure 5.1: Rate of police reported domestic abuse in Essex*
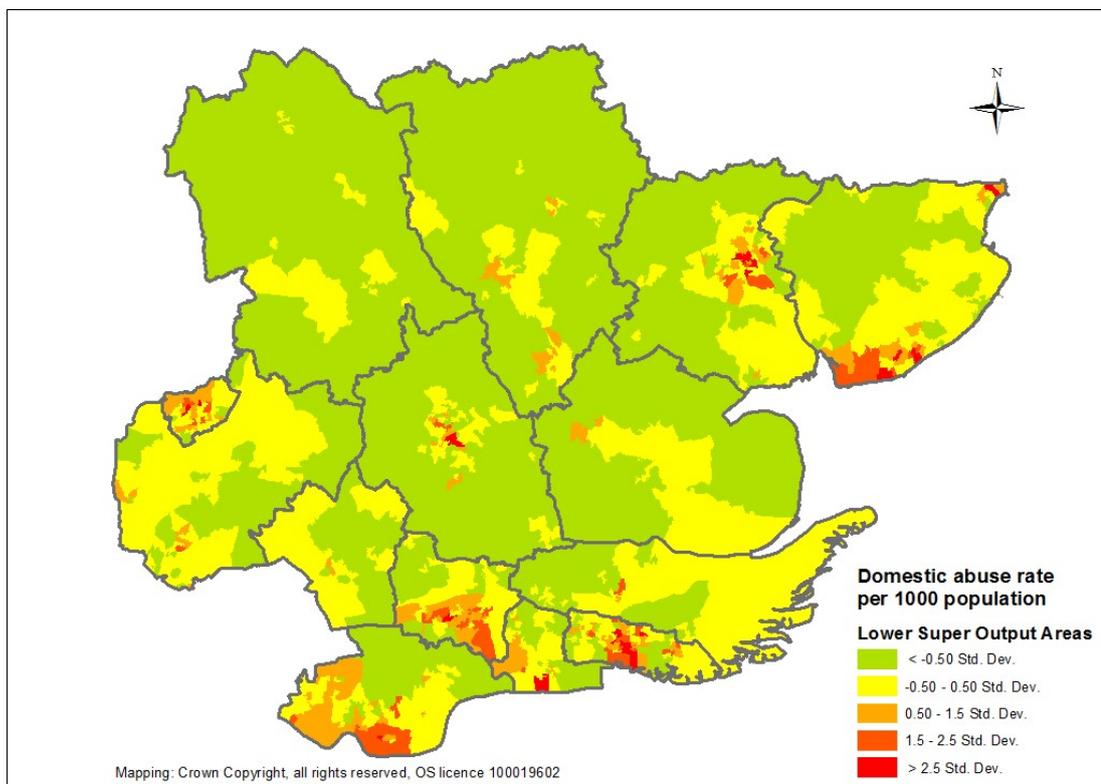


N=88,135 records aggregated to 1077 LSOAs

When the Getis-Ord GI* statistic is calculated and mapped (figure 5.2), it can be seen that there are areas of statistically significant clustering for both low and high values.  There are also areas where there is no significant clustering.  The hotspots were found in Colchester, Tendring, Southend on sea and Thurrock.  Cold spots were particularly prominent in Uttlesford and Brentwood, the most affluent areas of Essex.

*Figure 5.2: Hot and cold spots of domestic abuse in Essex.*
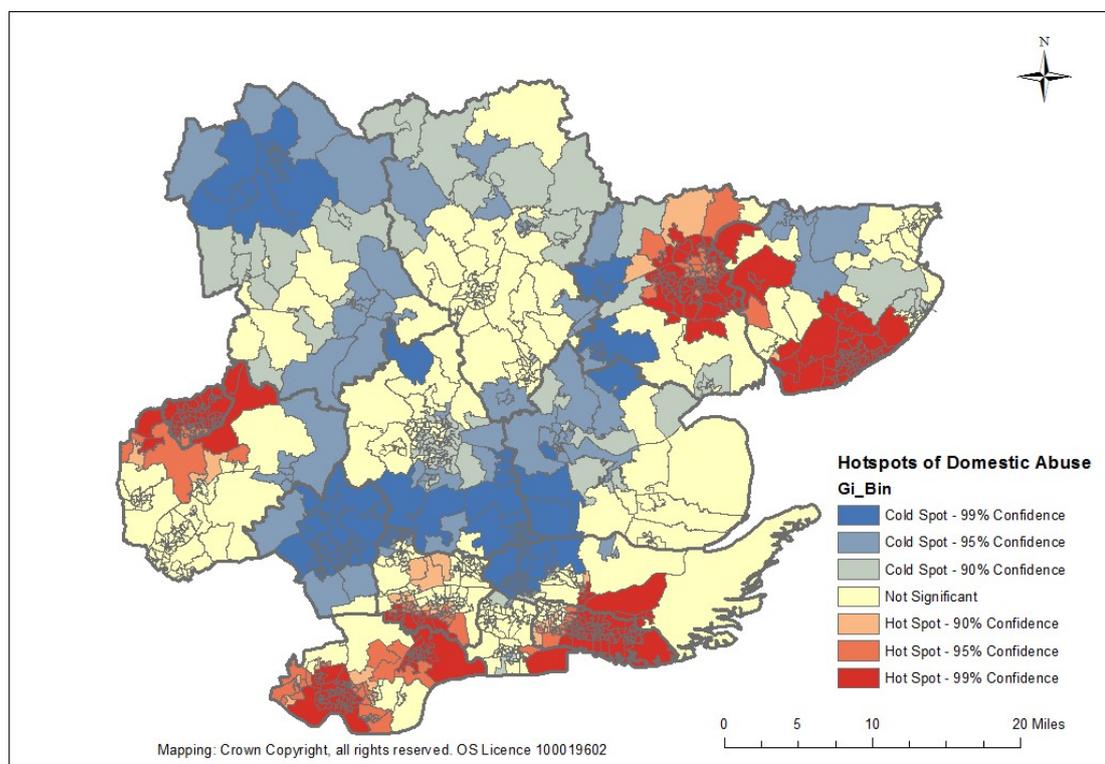


N=88,135 records aggregated to 1077 LSOAs

Figure 5.2 identifies clustering over the whole time period. One thing that cannot be seen is whether the clustering changes over time. Using spatial statistics it is possible to look at both the spatial and temporal patterns at the same time. Before beginning this part of the analysis it is useful to look at the temporal pattern separately, to explore the overall trends that were seen in Essex over the time period

**Temporal distribution**

*Figure 5.3: Domestic abuse by month in Essex, November 2011 –*

*December 2014*
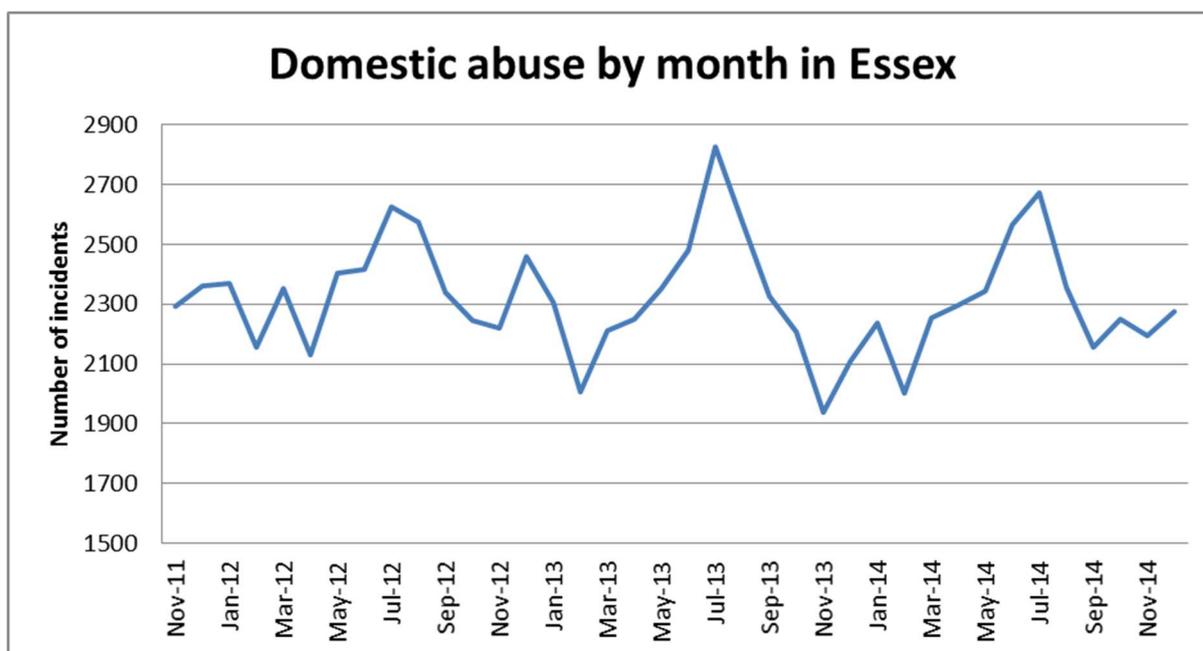


N=88,135 records

Figure 5.3 identifies the seasonal nature of domestic abuse, with incidents

peaking in the summer months in every year of the study period.  The highest

number of incidents were recorded in July 2013.

Whilst the lowest rates were seen in the winter month, a small increase was

seen every December.  This is a pattern also found by Brimicombe and Cafe,

(2012) in their London analysis, where they found a build-up in domestic

abuse over Christmas and a large spike at New Year.  This also highlights the

problem of breaking the data into monthly time periods, with the New Year

spike likely to be split between December and January.

*Figure 5.4: Number of incidents by day of the week*

Number of incidents by day of the week

| Day | Number |
|-----|--------|
| Sunday | 14577 |
| Monday | 12420 |
| Tuesday | 11843 |
| Wednesday | 11625 |
| Thursday | 11570 |
| Friday | 12291 |
| Saturday | 13809 |
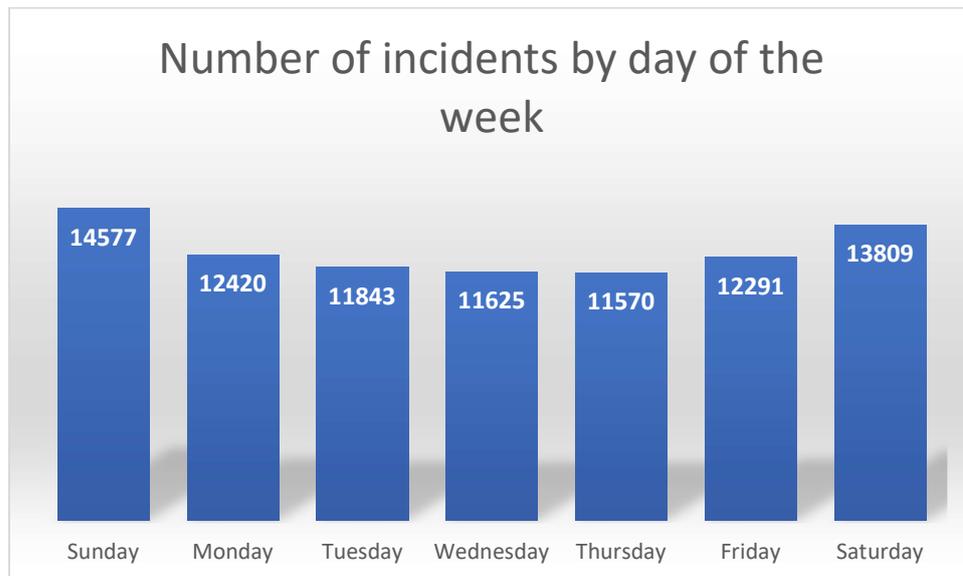
*N=88,135 records*

Brimicombe and Café (2012) also found that the number of incidents increased at the weekend, again this pattern can be seen in Essex across the study period, with the most incidents being recorded on a Sunday (figure 5.4), which is probably more attributed to early Sunday morning.  The pattern in figure 5.5, when incidents are broken down by hour of the day highlights that highest numbers of incident were recorded in the evening and early hours of the morning and the lowest number between 7 and 8am.

*Figure 5.5: Number of incidents by hour of the* day



Number of incidents by hour of the day
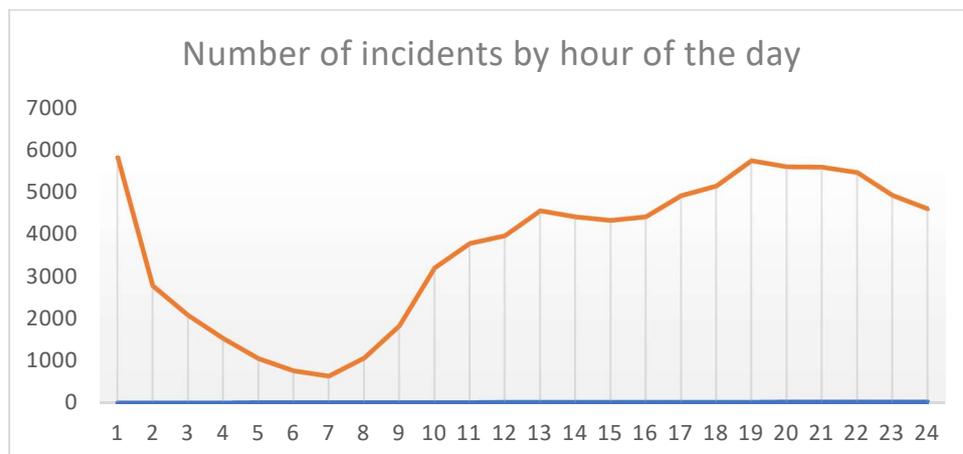
N=88,135

**Space time**

The Knox test found that for the majority of the time period there was no significant space and time interaction.  However, interaction was found in the months highlighted in Appendix 3.  The Mantel test[23] only found one month to have significant space and time interaction.  Intuitively you would expect less space time interaction in a crime like domestic abuse, as unlike a spate of burglaries that may concentrate in a small geographical area over a short period of time, it is not a crime type associated with multiple victims committed by the same perpetrator.  Potential explanations for short term space time cluster good be repeat victimisation or a localised media campaign encouraging reporting.

By mapping the emerging hotspots in the months that are significant it is possible to see where new and intensifying hotspots have developed.  Figure 5.6 identifies that in January 2012 there were intensifying hotspots in and

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[23] See Appendix 4

around Clacton. An intensifying hotspot is a location that has been a

statistically significant for 90% of the time period (and in this case the last

month). The intensity of clustering has shown a statistically significant

increase over time. The Persistent hotspots, which are seen in Clacton,

Colchester, Basildon and Southend, are locations that have been statistically

significant for 90% if the time-step interval with no discernible trend indicating

an increase or decrease in the intensity of clustering of time. In policy terms

these are the areas where a long-term focus is required.

*Figure 5.6: Emerging hotspot in January 2012*
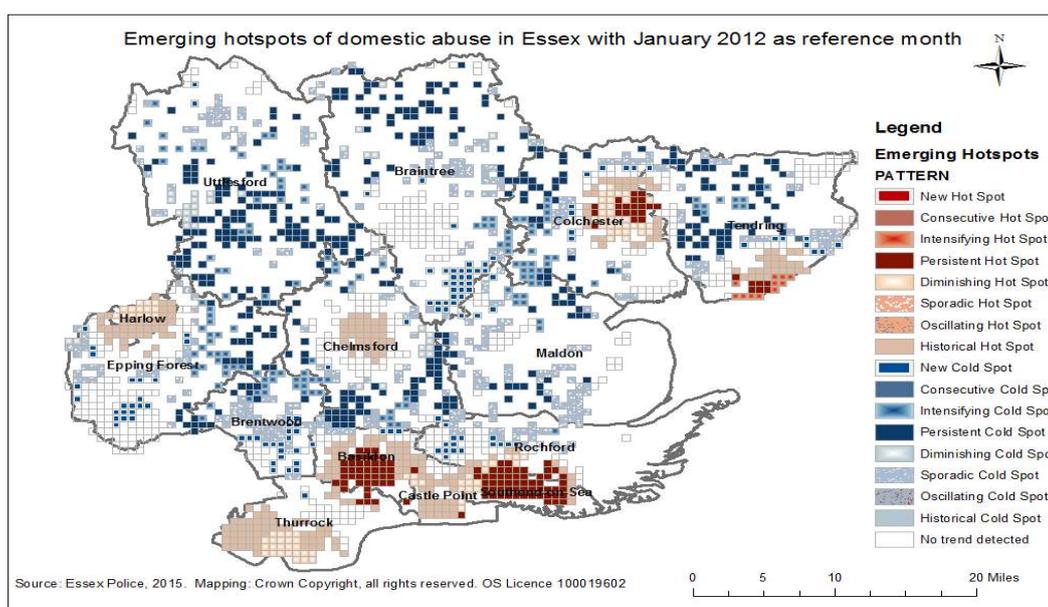


N=88,135

*Figure 5.7: Emerging hotspot in September 2012*
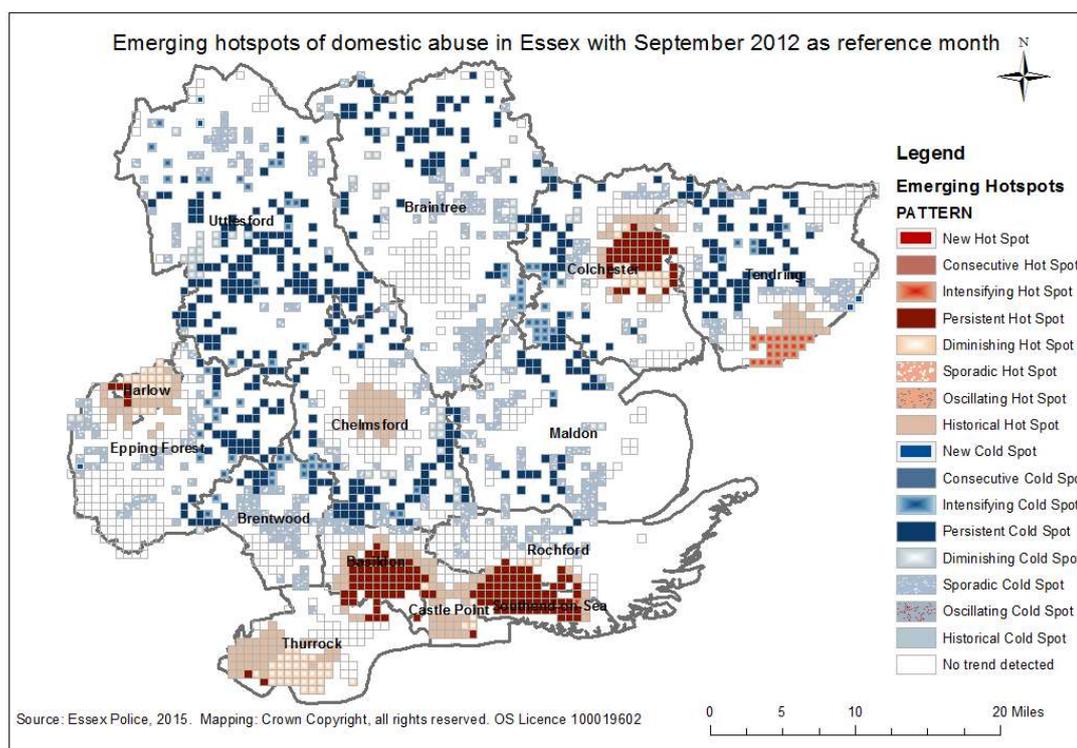


N=88,135

In September 2012, another month where the Knox test identified clustering,

the hotspots in Clacton intensify further (figure 5.7). Areas in Colchester,

Basildon, Southend and Harlow have developed new hotspots.

*Figure 5.8: Emerging hotspot in December 2012*



Emerging hotspots of domestic abuse in Essex with December 2012 as reference month
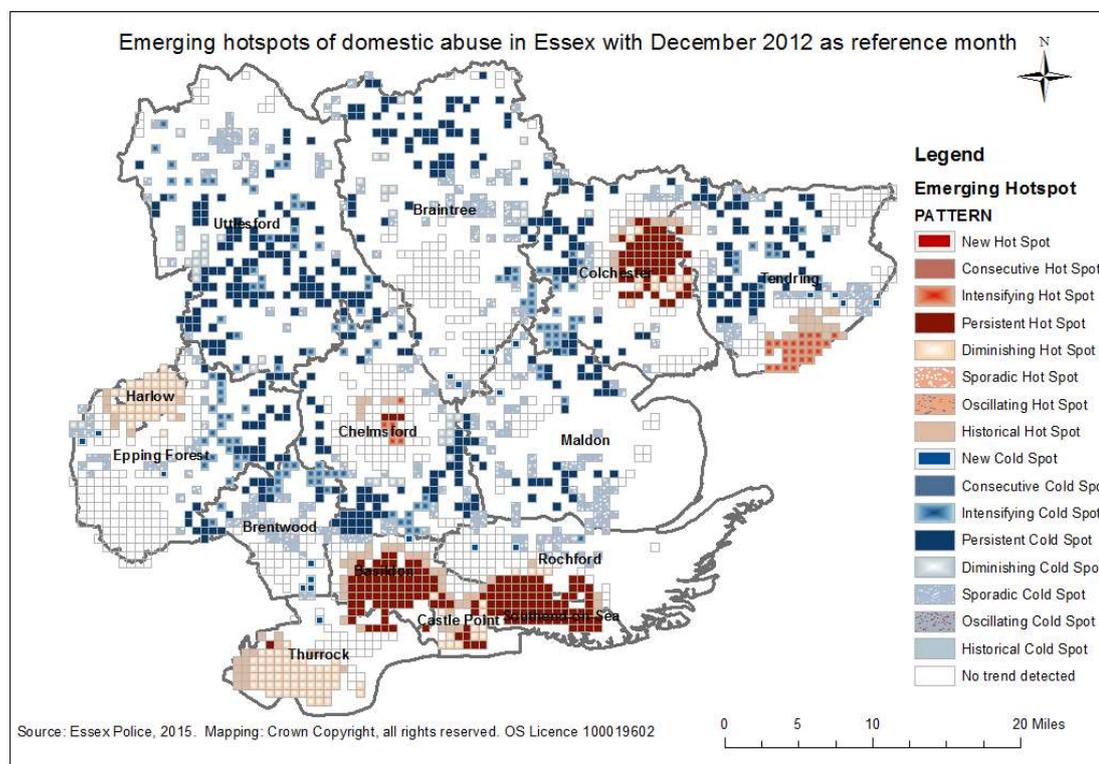
N=88,135

In December 2012, the third significant month, the hotspot in Clacton is still intensifying and also an area in Chelmsford, which had been an historic hotspot, has intensified (figure 5.8). The hotspot in Harlow is diminishing.

*Figure 5.9: Emerging hotspot in May 2013*



Emerging hotspots of domestic abuse in Essex with May 2013 as reference month
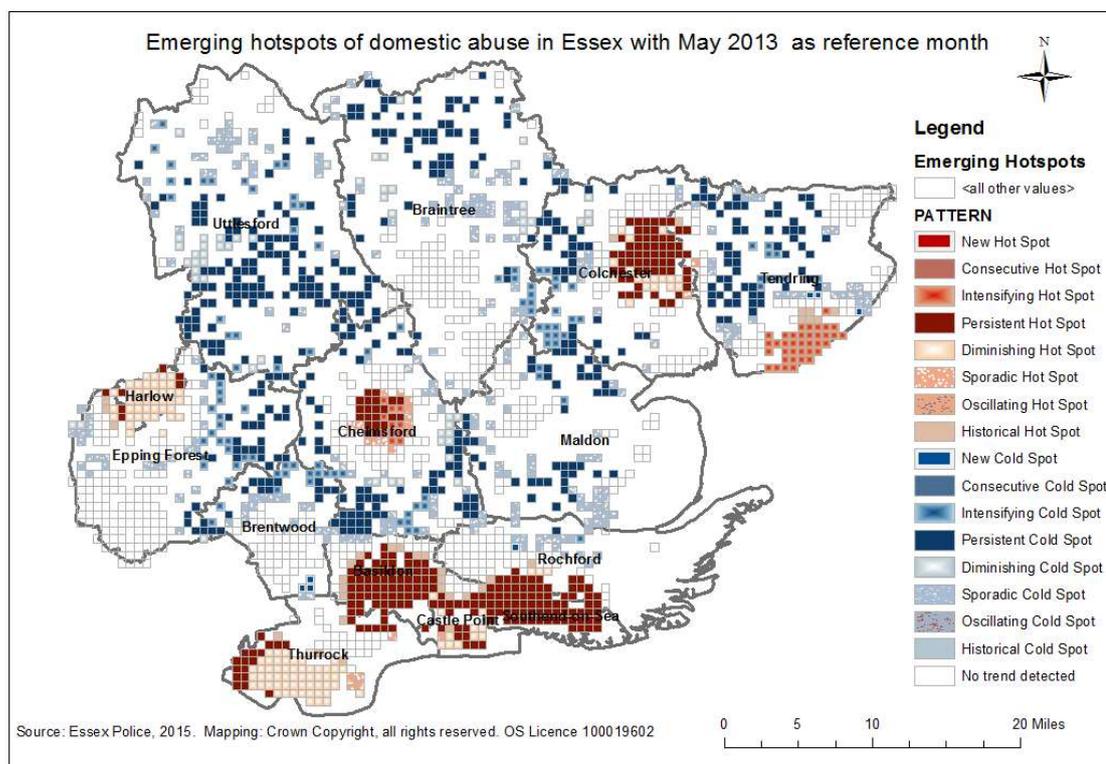
N=88,135 records

Figure 5.9 shows that in the final significant month, May 2013, the hotspot in Clacton is still intensifying and Chelmsford has some areas that are intensifying and other that have become persistent hotspots. West Thurrock is now also developing a new hotspot.

Whilst the value of knowing how historic hotspots have developed may be limited, these methods could be extremely useful in evaluating the impact of particular policy responses or initiatives in an area in the future. There have only been a few months where there has been significant space time interaction, but by using the emerging hotspot analysis it can be seen where the hotspots have emerged or diminished. This analysis has focused on a

longer time period and has only looked as the interaction in space and time over each month. Analysis at different temporal levels, such as over the course of a day or week could have operation benefits if the findings are statistically significant. If this type of analysis was run regularly by the police or partner agencies, projects could be evaluated and effective responses designed when new hotspots emerge.

**Geographically weighted Regression**

Several models were run using OLS and GWR to explore the predictors of the domestic abuse rate at the LSOA level. The initial models looked at individual predictors, to see the value that they had on their own (see table 5.1 for the variables that offered the greatest explanation for the rate of domestic abuse), and then more variables were added (and removed if they reduced the fit of the model). Although the r square values were relatively high by just using one variable, the Moran's I test indicated that the ASB rate and the population density standardised residuals showed negative autocorrelation, indicating a dispersered pattern, with less that a 10 per cent likelihood that the pattern could be a result of random chance. This therefore meant that the models for these variables violate the basic assumption of independence of data that is needed by GWR. The income score, employment score and proportion of BAME on the other hand had Morans I results that were not statistically significant, indicating a random distribution of the standardised residuals.

The Exploratory Regression tool was used in the Spatial Statistics toolbox to add more variables to the models. This data mining tool tries all possible explanatory variables to see which models pass all of the OLS diagnostic

tests.  The tool not only identifies the highest R square values, but reports on all the potential model violations.

*Table 5.1: Coefficient values for the top individual predictors run as separate models with the rate of domestic abuse as the dependent variable.*

| Model | OLS | | | GWR | | | |
|---|---|---|---|---|---|---|---|
| | Coefficient | R2 | AIC | Min | Max | R2 | AIC |
| **Model 1** | | | | | | | |
| Income score (IMD) (log) | 0.80* | 0.63 | 1223.9 | 0.11* | 1.41* | 0.73 | 990.0 |
| **Model 2** | | | | | | | |
| Employment score (IMD) (log) | 1.00* | 0.62 | 1262.9 | 0.13* | 1.79* | 0.74 | 990.4 |
| **Model 3** | | | | | | | |
| ASB rate (log) | 0.77* | 0.61 | 1297.6 | 0.31* | 1.17* | 0.70 | 1185.0 |
| **Model 4** | | | | | | | |
| % BME (log) | 0.44* | 0.23 | 2020.1 | -0.31* | 1.74 | 0.50 | 1657.4 |
| **Model 5** | | | | | | | |
| Population density (log) | 0.20* | 0.16 | 2117.0 | -0.73* | 0.87* | 0.44 | 1809.19 |

Note. N=1077.  *p <.05. Moran's I - OLS: Income Score 0.16 (p=0.000); Employment score 0.20 (p=0.000); ASB rate 0.09 (p=0.000); % BME 0.26 (p=0.000); Population density 0.21 (p=000).  Moran's I - GWR: Income Score -0.01 (p=0.31); Employment score -0.01 (p=0.14); ASB rate -0.02 (p=0.063); % BME -0.014 (p=0.15); Population density -0.18 (p=0.067).  GWR bandwidth (using optimal AIC method) = Income score 47 neighbours; Employment score 37 neighbours; ASB rate 67 neighbours; % BME 42 neighbours; Population density 38 neighbours.

The good of fitness of each model was assessed with the Akaike Information Criterion (AIC), the smaller the value of the AIC, the better the fit of the model to the observed data (Harris, 2016).  When considering the same independent values, the AIC value was higher for all OLS models compared to the GWR models.  Furthermore, the R-squared value either improved or

stayed the same in the GWR models. The GWR model with the best fit had

an r-squared value of 0.82 with independent variables of the ASB rate,

proportion of BAME, population density and income score. Including the

employment score did lead to a higher r-square value in the OLS model, but

the GWR model failed because of multicollinality, a result of a high Variance

Inflation Factor (VIF) caused by adding the employment score variable.

*Table 5.2: Coefficient values for final neighbourhood model (for OLS*

*and GWR)*

| | OLS | | GWR | |
|---|---|---|---|---|
| Variable | Coefficient | VIF | Minimum | Maximum |
| Anti-Social Behaviour rate (log) | 0.32* | 2.31 | 0.137* | 0.433* |
| Proportion BAME (log) | 0.11* | 1.56 | 0.053* | 0.367* |
| Income score (IMD) (log) | 0.52* | 1.90 | 0.288* | 0.723* |
| Population density (log) | 0.08* | 1.28 | 0.019* | 0.147* |
| Intercept | 0.88* | | 1.8122* | 2.2407* |

Note. N=1077. *p <.05. AIC = 638.2 (OLS), 581.8 (GWR). R-square = 0.79 (OLS), 0.82 (GWR).

GWR bandwidth = 248 neighbours (using optimal AIC method). Moran's I = 0.0433 (p=0.000) (OLS), -0.0004 (P=0.95) (GWR)

Table 5.2 gives the coefficient values for the model that demonstrated the

best fit. The coefficients are all statistically significant. For the global OLS

model, income is the biggest predictor of the domestic abuse rate, followed by

the ASB rate, with a 1% increase in the income score seeing a 0.52% and

0.32% increase in the rate of domestic abuse rate respectively, when holding

all other variables constant.

The proportion of BME population and the population density was also a statistically significant predictor, with higher rates of abuse taking place in more densely populated areas.  What is not clear is whether this is because abuse is less likely to take place in rural areas or whether people are less likely to report it due to geographic isolation, which might hide violence and prevents interaction to stop it (Beyer et al., 2015).

The Moran's I score indicates that the OLS model residuals suffers from significant spatial autocorrelation.  However, using GWR overcomes this issue, with the Moran's I score in the GWR model residuals suggesting that the pattern does not appear to be significantly different from random.  The GWR outputs for this model had a condition number that was less than 30, meaning the results are reliable without strong collinearity.  Models were run with smaller bandwidths, but these reduced the model fit, which increased the AIC value and the model condition numbers.  Using just single variables in the model, such as the income score reduced the bandwith (the number of neighbours), but there then has to be a tradeoff with the model fit.  The VIF for each coefficient was small and therefore did not suggest multicollinearity.

The coefficients of the GWR model in table 5.2 were mapped (figure 6.10).  The relationship between the domestic abuse rate and the all of the independent variables was not consistent (stationary) across Essex, suggesting that there are other spatial processes at work, something that is supressed in a global model.  All of the GWR coefficient values were positive, so the relationship is always in the same direction as the global model, but with significant variation in the coefficient values.  The potential process influencing this result could include particular localised policies, variations in

police reporting, reporting to other services, other characteristics of the neighbourhood or variations in wellbeing and community engagement. Further research is needed to investigate these possibilities. Mapping the intercept for the model demonstrates the variability across space, with highest coefficient values in the Uttlesford, Maldon, Rochford and Brentwood and the lowest values in Tendring and Thurrock.

The influence of ASB is stronger in the east and north of the county. When holding all other variables constant, a 1 per cent increase in the ASB rate would see a 0.43 per cent increase in the domestic abuse in the areas shaded the darkest on the maps, compared to a 0.14 per cent increase in the lightest shaded areas. This suggests that further investigation is need into the underlying causes of ASB in an area (as this is not a causal model), to see whether these offer further explanation on the variation in the relationship with domestic abuse across space.

A 1 per cent increase in the proportion of the BAME population saw a between 0.05 and 0.37 percent increase in the domestic abuse rate, with highest coefficient values in the Chelmsford, Brentwood and Basildon areas. Perhaps this is indicative of reporting patterns by different ethnicities, with previous research finding that the recognition of abuse and propensity to report varies by ethnicity, with the black Caribbean population having the highest level of recognition and black African the lowest (Mooney, 2000). Further exploration of this relationship could be useful in designing and targeting campaigns to increase the recognition of abuse and the understanding about where to report in amongst particular ethnic groups.

Overall income is the most influential variable in the model, but it is also the variable that shows the greatest range in coefficient values.  Holding all other variable constant a 1 per cent unit change in the income score sees an increase in of between 0.29 per cent and 0.72 per cent in the domestic abuse rate, with the influence of income highest in the south and south east and lowest in Uttlesford and the south east of Chelmsford.  The areas with the lowest coefficient values are some of the most affluent parts of Essex, which suggests that effect of income on the domestic abuse rate is not as pronounced in the more affluent areas and that other variables have more influence in these areas.  The R squared values are also lower in the centre of Uttlesford and South East of Chelmsford (5.11), which suggests that other processes that are not captured by the model are at play in these areas.

The overall influence of population density is small, with a 1 per cent rise seeing an increase of between 0.02 percent and 0.15 percent in the domestic abuse rate.  The coefficient values are higher in the north east of the county. These are areas that are predominantly rural.

*Figure 5.10: Coefficient maps for domestic abuse rate model*
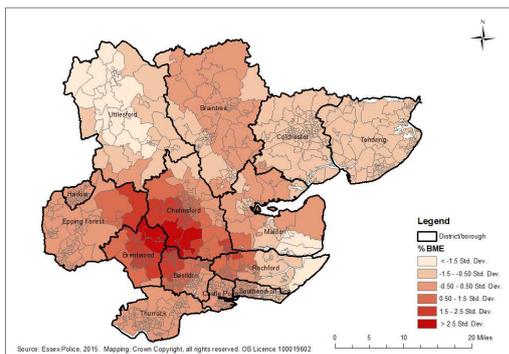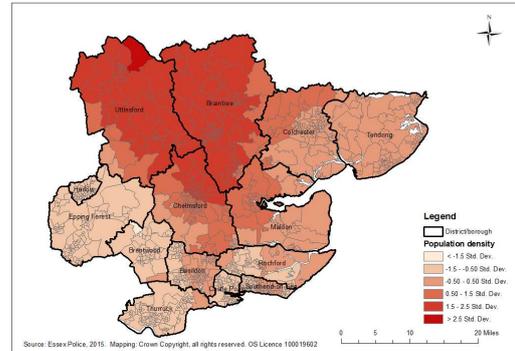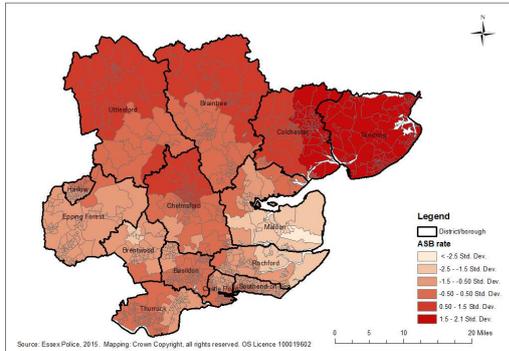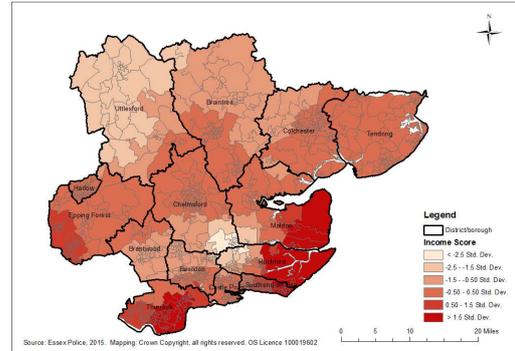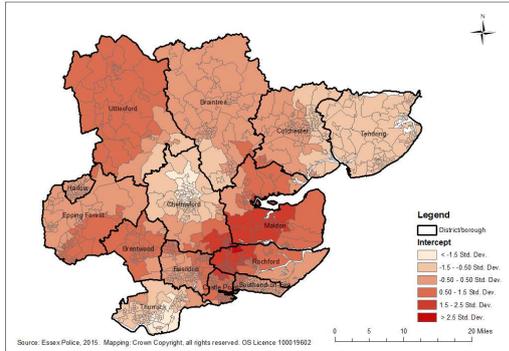
*Figure 5.11: Local R-square values in the neighbourhood model*
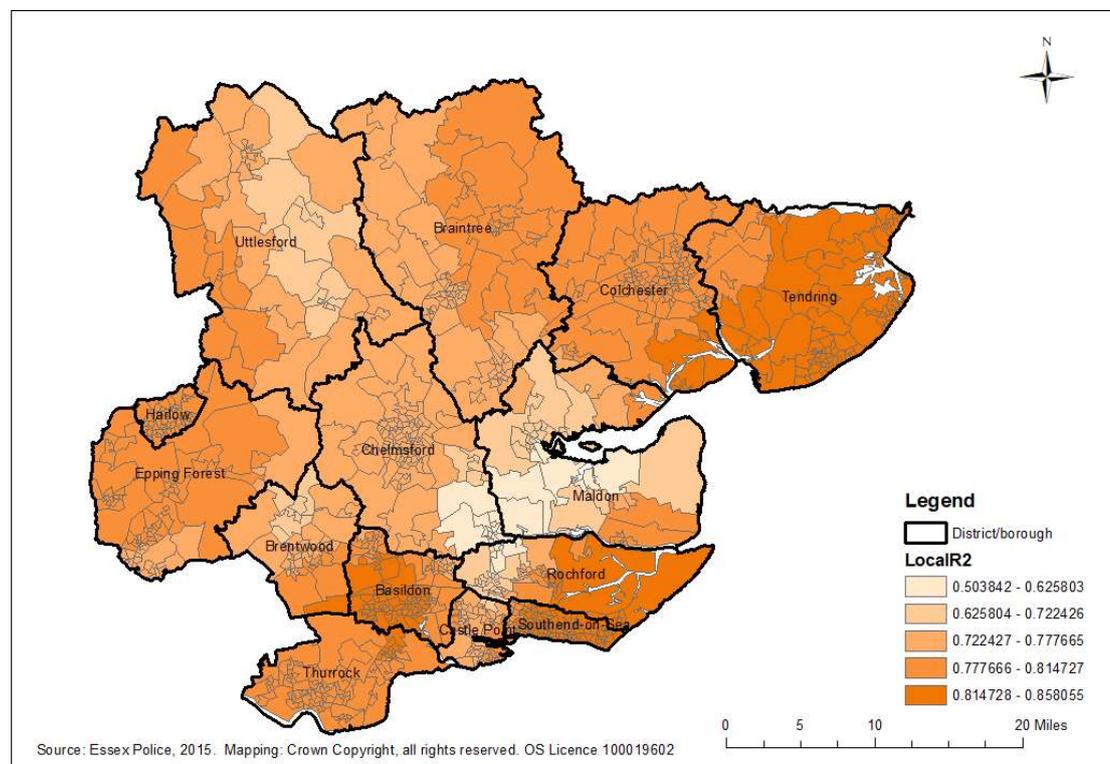


N= 1077 LSOAs

When the R squared values are mapped at each data point, the spatial

distribution of the fit of the model can be explored (figure 5.11). The darker

areas are those where the model performs particularly well, with the highest

R-square value being 0.82. These areas are concentrated in the south, east

and west of the county. The lighter areas in the centre east of Essex are

those areas where the model does not perform as well, with the lowest R-

Square value being 0.5.

Mapping the standard residuals from the GWR models enables the model

performance to be viewed geographically. The pink areas are those where

the model underestimates the amount of domestic abuse in an area, and the green where it over predicts (figure 6.12).

*Figure 6.12: Standard residuals of the neighbourhood model*
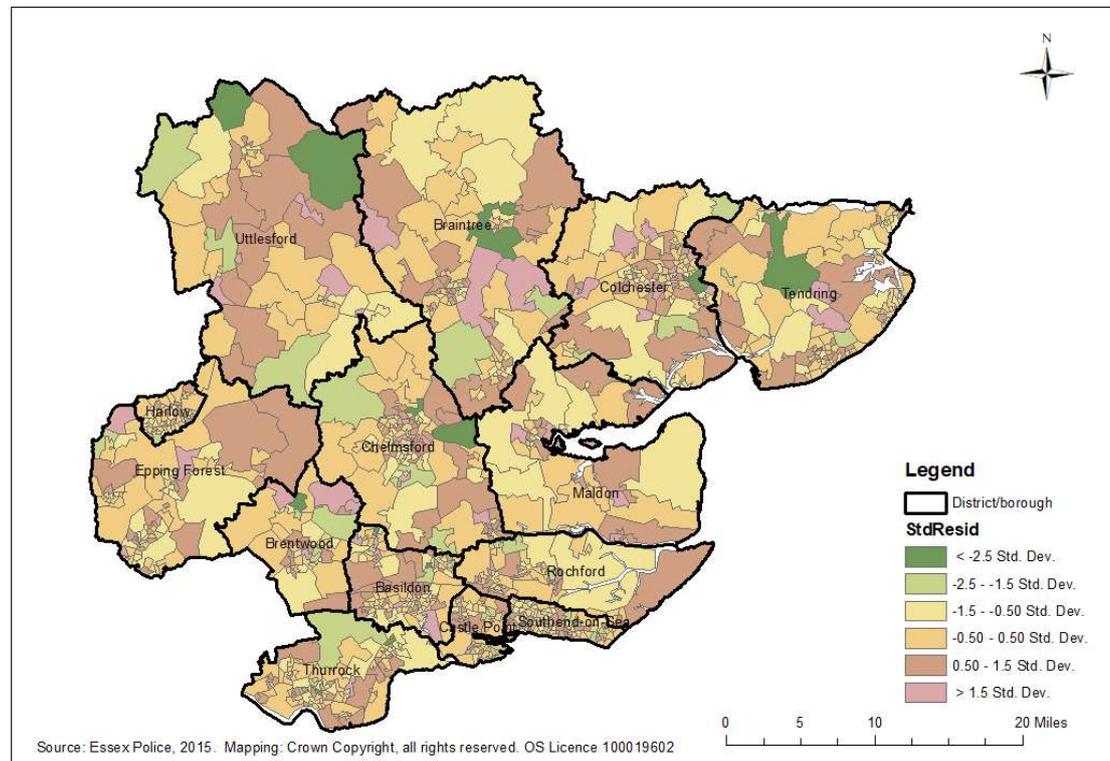


N= 1077 LSOAs

The second model had the best fit when using the same predictors as the first model (table 5.3), although the overall explanatory power of the variables was lower that the first model, with an r square of 0.70 for the GWR model (compared with 0.82 for the first model). This indicates that some other factors need to be considered when focusing on repeat victimisation. Like the first model, all the variables were significant, although interestingly the intercept was no longer significant. Again, the income score was the strongest predictor, followed by the rate of ASB, population density and the

proportion of BAME population. The coefficients were all non-stationary and exhibited very similar distributions to the first model[24], although unlike the first model some of the coefficient values for the proportion of BAME exhibited small negative values, with the proportion of BAME population decreasing the repeat victimisation rate in a small number of areas.

*Table 5.3: Coefficient values for the repeat victimisation model (for OLS and GWR)*

| | OLS | | GWR | |
|---|---|---|---|---|
| Variable | Coefficient | VIF | Minimum | Maximum |
| Anti-Social Behaviour rate (IHS) | 0.34* | 2.31 | 0.039* | 0.521* |
| Proportion BAME (log) | 0.11* | 1.56 | -0.026* | 0.450* |
| Income score (IMD) (log) | 0.65* | 1.90 | 0.407* | 0.899* |
| Population density (log) | 0.14* | 1.29 | 0.008* | 0.259* |
| Intercept | -0.02 | | -0.693* | 0.687* |

Note. N=1077. *p <.05. AIC = 1735 (OLS), 1705 (GWR). R-square = 0.67 (OLS), 0.70 (GWR).

GWR bandwidth = 280 neighbours (using optimal AIC method) ).. Moran's I = 0.0327 (p=0.000) (OLS), -0.0006 (P=0.97) (GWR)

Discussion and implications

The spatial and temporal analysis find clear evidence that police reported domestic abuse clusters both in space and time. Spatial clusters are found in the urban areas, particualrly in the more deprived areas. Temporally there are more incidents in the summer months, at the weekend and in the evenings. There are, however, only a few months when there is clustering in both space and time. The methodology of emerging hotspots proves to be

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[24] See Appendix 5 for the coefficient maps

more useful than studying historial hotspots alone as it is something that police and other agency analyst could operationalise in order to mobilise their resources and services and to evaluate interventions. Whilst crime pattern analysis and routine activities theory could be useful on an individual or operation basis, the benefits to the academic knowledge are more limited as the police data does not provide the detail that is needed, such as the time of day when there is the absence of a capable guardian when abuse might take place.

**Neighbourhood model**

Even though the neighbourhood level predictors do not confirm causality, they do look more to the potential drivers and neighbourhood effects that may result in greater concentrations of abuse in an area. The next section discusses these findings.

The particularly significant finding from this chapter is that domestic abuse can be predicted at the neighbourhood level using easily accessible structural and cultural variables. Income and anti-social behaviour are the strongest predictors of abuse in both the overall domestic abuse rate and the rate of repeat victimisation. The GWR model provides a powerful predictor of the domestic abuse rate, explaining on average 82 per cent of the variability in the dataset, the repeat vicitimisation rate is weaker, but still explains 70 per cent of the variability. The model results echo the findings of the CSEW that reported domestic abuse is more prevalent in deprived areas. These findings support the view that a social policy response to domestic abuse is needed to tackle broader issues that lead to deprivation and a break down in community

cohesion, rather than just using the criminal justice system to react to incidents of domestic abuse.

The ASB rate in an area explains a staggering 70 per cent of the overall domestic abuse rate and is consistent with the modest to strong interdependence that Sampson, (2012) found between perceived disorder and other neighbourhood factors.  This is an important finding, with several policy implications.  Firstly, domestic abuse is one of the most underreported crimes, with only around 21 per cent thought to be reported to the police (Flatley, 2016) and therefore the anti-social behaviour rate in an area could act as a proxy for the amount of domestic abuse.  Secondly anti-social behaviour is also a top priority for Essex Police, so it is possible that a policy intervention that looks at both issues and explores the root causes, rather than treating them separately could be more successful.

The analysis has shown how much value a GWR model can add to understanding the relationship between the dependent and independent variables. Although a prediction and set of coefficients is available for each LSOA, the most value in policy terms is from the sub-regional coefficient clusters.  For instance, ASB has a much higher coefficient value in the east of Essex.  In policy terms the analysis would suggest that this is where you would focus further research and design a relevant response to ASB and domestic abuse.  If resources are limited then a more targeted focus on ASB in the east may have more impact than a more dilute county wide initiative. The initiative does not have to fit rigidly to district or borough boundaries, but could follow the cluster boundaries instead. Using GWR will offer a clear way in which to evaluate the impact of any localised policies.

A limitation to this analysis is that domestic abuse is one of the most underreported crimes and assumptions have been made that the level of underreporting is consistent across neighbourhoods. Targeting resources to these hotspots assumes that the unknown cases of domestic abuse share the same geographical distribution and characteristics. Further analysis is therefore needed as it could be that this analysis is accentuating the issue in deprived areas and under reporting is more concentrated in more affluent areas. One way in which this could be done, would be to replicate the model with data from other agencies where abuse could be reported. This could include health data, charities, such as Victim Support and court data. Other neighbourhood studies have used survey data, but unfortunately the sample size for the LSOA at the neighbourhood level is too small.

Sampson et al., (2002) question whether disorder is an explanatory mechanism or an outcome of the issues of simultaneity bias, this research is unable to answer this question as GWR does not produce a causal model. Previous research has found neighbourhood level concentrated socioeconomic disadvantage to be a precursor to violence and causes of other behaviours that influence violence, including physical and social disorder (Beyer et al., 2015; Browning, 2002; Van Wyk et al., 2003). Whilst exogenous characteristics are known to effect an individual's risk of domestic abuse (Koenig et al., 1999; O'campo et al., 1995), clustering was still found to be present when controlling for household and individual risk factors (Counts et al., 1999), which suggests that endogenous social effects must be at work (McQuestion, 2003). This warrants further research so that a policy response aimed at the root causes can be designed.

The method employed in this research only considers the concentration at the LSOA level; of course, the distribution within the LSOA may not be spatially homogenous.  Making assumptions that everyone shares the same risk could create an ecological fallacy (Robinson, 2009).  The methodology does not factor in the varying nature of abuse and the risk assigned to the different incidents, although the second model that focuses on repeat victimisation recognises those areas where domestic abuse is more than a one- off incident for the victim (in terms of reporting).  In an aspatial application a multilevel model could be used to separate the individual and contextual effects, but this method implies the nature of relationship is discontinuous, and therefore would not identify the non-stationary relationships that GWR does (Fotheringham et al., 2001). A more recent methodology, hierarchical spatial autoregressive modelling, has been used to investigate the spatial dependence of land prices, so future work could explore the application of this methodology to personal and contextual characteristics as predictors of domestic abuse (Dong and Harris, 2015).

Whilst there are some limitations, this analysis has important findings and implications for social policy.  It has been possible to predict the rate of domestic abuse in an area to a high degree of accuracy using data that is readily available online.  A significant finding has been the variability in the coefficient values over space.  In terms of social policy and criminal justice interventions this means that localised policy interventions can be designed, rather than using blanket regional or national approaches, which in a time of austerity will aid the allocation of resources to the most appropriate policies. There are real operational benefits to this methodology and a

recommendation would be to explore its application with other social issues and to test it in other areas. A paper based on this chapter is currently under review (revise and resubmit) with the journal, *Transactions in GIS*.

It had orgininally been hoped that this model would be tested with data from another agency, such as CAFCASS or the NHS. Unfortunately, this was not possible, but instead a Community Asset Mapping exercise was conducted to identify variations in the model fit. The next chapter explains how the exercise was executed and the insight that it gave.

# **Chapter Six: Community Asset Mapping**

Introduction

The previous chapter found that it is possible to predict the police reported domestic abuse rate at the neighbourhood level with a high degree of accuracy using income, the level of anti-social bevahiour, the population density and the proportion of the BAME population.  Whilst exogenous variables, such as income, were good predictors of a social gradient (Gibson and Asthana, 2000) in reported domestic abuse, the causal link to other variables, such as the level of anti-social behaviour in an area, could not be confirmed by the model.

The model also found variation in the predictors across space and approximately 20 per cent of the overall variation was not explained by the model.  What we need to be able to do is work out how to distinguish between neighbourhoods that have higher or lower levels of domestic abuse despite their circumstances, and those that have higher or lower level of abuse because of their circumstances.

This chapter uses the strengths-based approach set out in Chapter Three to conduct a series of community asset mapping exercises in areas identified through the neighbourhood model in Chapter Five.  The exercise generates some important observations around neighbourhood composition, collective efficacy and social capital, the role of churches, community centres and foodbanks and unearths hidden abuse.

<u>Results</u>

**Neighbourhood composition**

The size and structure of the settlement did seem to influence both the availability of assets and the amount of collective efficacy that was evident. To explore this further the visit areas were categorised according to Lee's neighbourhood typology (1968).  Lee stated that neighbourhoods with clear well-defined boundaries have higher levels of social participation.  His research found that regardless of density most people regarded their home area as one that was approximately 100 acres.  This finding was attributed to the distance that people would be prepared to walk.  Three types of neighbourhood were included in Lee's typology, these were the unit, acquaintance and homogenous neighbourhood.  The unit neighbourhood has the largest area, with residents having a number of friends scattered over a wide area meaning they are less dependent on those in the nearest streets. These neighbourhoods are heterogenous in both the makeup of the population and the type of housing.  On the other hand, the social acquaintance neighbourhoods are smaller in physical area, with probably only around six streets and with exception of a few corner shops and pubs are comprised only of houses.  People living in these neighbourhoods form acquaintances with their neighbours, rather than friendships.  Their sources of security and social control come from their families.  The final type of area is the homogenous neighbourhood.  These areas are largely made up of lower middle class and upper working-class families.  The people in these areas are similar in their outlook and in the type of housing and the area is defined by the size of the similar population.  The type of social control exerted by these

neighbours is mutual awareness, which is largely cognitive without overt

interaction taking place (Lee, 1968).

*Table 6.1 LSOAs categorised by neighbourhood type and model fit*

| Model Fit | Unit Neighbourhood | Acquaintance Neighbourhood | Homogenous Neighbourhood |
|---|---|---|---|
| **Over predicted** | Frinton | Southend <br><br> Clacton | |
| **Accurately predicted** | Saffron Walden | | Melbourne, Chelmsford <br><br> Greenstead, Colchester |
| **Under predicted** | Thaxted | Laindon <br> Welshwood, Colchester | |

*Unit neighbourhoods*

*Figure 6.1: Community Assets in Saffron Walden*

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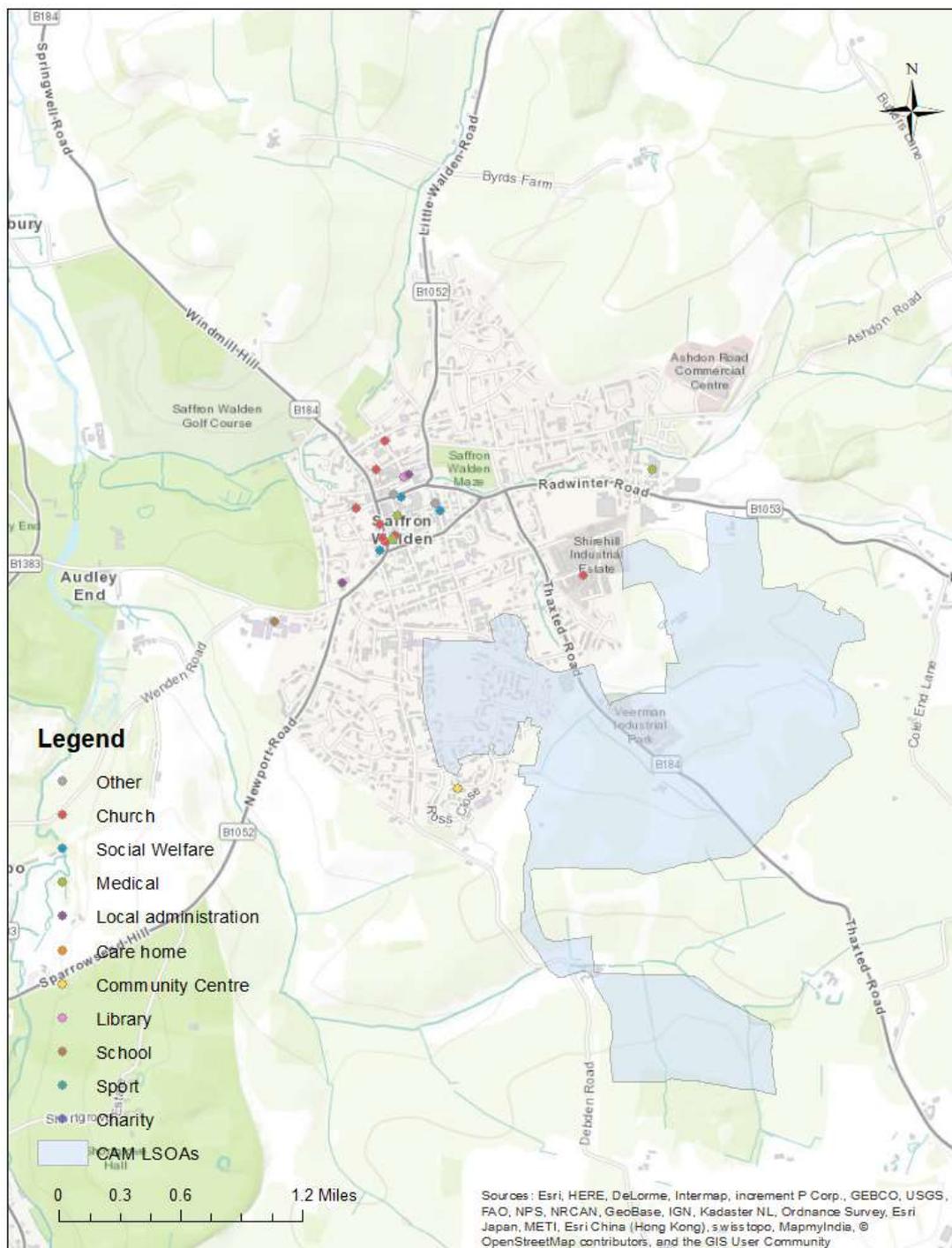
*Figure 6.2: Saffron Walden*

*Saffron Walden, an affluent town in Uttlesford, has a population of 15,000 and the former town planner who showed me around the area had been involved in the Market Town Health Check. She suggested that this was an optimal size for a settlement, with one secondary school and a feeling of community created by multiple interlocking social circles. She believed that generally people would know a lot of other people in the town.*

*There were a wide range of assets within the town centre, but very few in the LSOA that I was focusing on. The interviewee thought that the town size would make it easy for residents to travel into the town centre to access assets and shops, so it was logical for the assets to be located there. There were a wide range of support services with the Citizen's Advice Bureau, churches, voluntary organisations and associations. She said that many of the voluntary services have a waiting list of people willing to help.*

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As figure 6.1 illustrates, one of the best examples of a unit neighbourhood was Saffron Walden with a heterogeneous population and a balanced range of amenities. Most of the assets were found in the town centre and only a few were in the study area LSOA, so the town comes together to share these assets. As shown in table 6.1 the level of reported domestic abuse in the LSOA I visited was accurately predicted by the model.

*Figure 6.3: Community Assets in Thaxted*
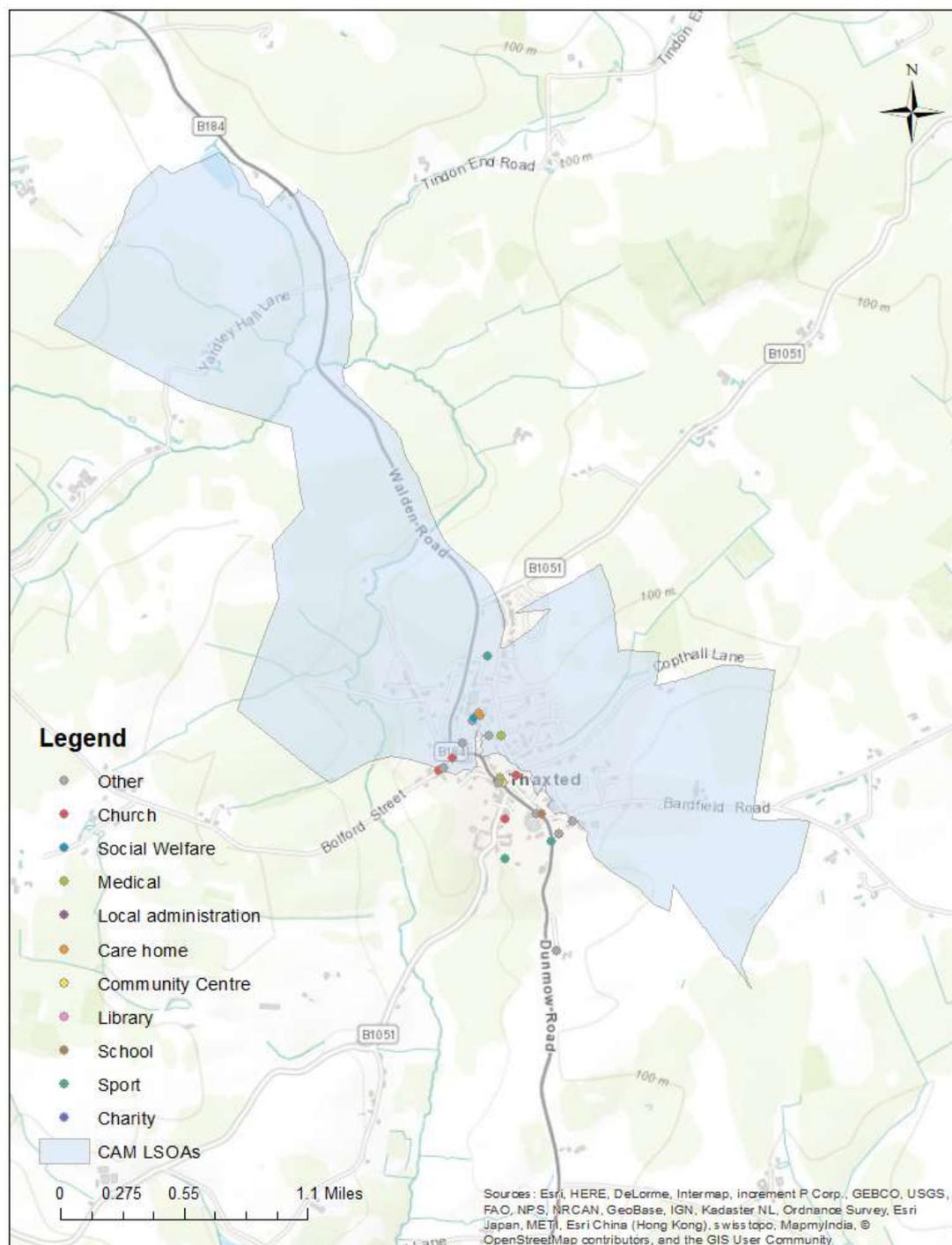


Thaxted, shown in Figure 6.3, also fits the unit neighbourhood typology, but is much smaller than Saffron Walden, with only two LSOAs and a population of under 3,000. The smaller population size and rural nature mean that the

range of amenities available within the town are more limited.  The lack of

suitable services for victims is an issue also raised in research commissioned

by the National Federation of Women's Institutes which found that whilst

women in rural and urban areas are equally as likely to experience abuse,

those in rural areas identified a lack of relevant services for those

experiencing domestic abuse, particularly non-violent coercive control.  They

also expressed concern over being able to confidentially report and GPs were

found to play a

particularly important role (McCarry and Williamson, 2009), which

unfortunately was not a source of data available to analyse in this research.

The amount of domestic abuse reported to the police was higher than

predicted by the model in Thaxted, a finding inconsistent with other research

(Chakraborti and Garland, 2003; Mawby, 2016), who proposed that

underreporting could be higher and an invisible problem in rural areas.  One

explanation could be that underreporting is still high, but whereas areas with

multiple services have more options for victims to choose to report to, rural

victims have nowhere else to report apart from the police and GPs, which

could increase the proportion that are reporting to these agencies.  An

alternative hypothesis could be that collective efficacy is lower in particular

population groups who feel disengaged.  This will be discussed in more depth

in the next section.

Another issue of being a small rural unit neighbourhood is that an ecological

fallacy is created by aggregating people into census areas.  The GWR model

in Chapter Six found that those with lower incomes are more likely to report domestic abuse to the police.  The CAM exercise has generally found that there are a wide range of services in more deprived area.  However, aggregating people into census areas means that those with lower incomes living in generally affluent areas, may not have access to the same services as they would, should they live in a homogenously deprived area.  Thaxted, is generally affluent with an average house price of £415,749 (Rightmove, 2017), which has led to a big divide between those who can and cannot afford to buy a house in the area.  Figure 6.4 illustrates the difference in housing types within the town and the issues created by trying to provide services to a diverse population in a small rural areas.

*Figure 6.4: Thaxted*

*Thaxted is a small historical town in rural Uttlesford. The interviewee who showed me around explained how the town attracts a lot of tourists, so a lot of the assets, such as the information centre and the Guildhall are set up to provide guides and information for tourists. Thaxted is generally regarded as affluent, but the interviewee explained that there are two groups, wealthy home owners living in properties which feature on postcards and those renting or in social housing, the two photographs above illustrate these differences. The heterogeneity of the area means that the range of services that residents require is more diverse. The town caters well for the older affluent residents, with a bowls club, over 60s day centre, disabled centre and working men's breakfasts in the Baptist church, but whilst there are parent and toddler groups and a tennis club, funding issues mean that services such as Citizens Advice are more ad hoc and residents would need to travel to Saffron Walden or Dunmow to access more regularly funded or alternative services.*

*Homogenous neighbourhoods*

*Figure 6.5: Community Assets in Melbourne, Chelmsford*
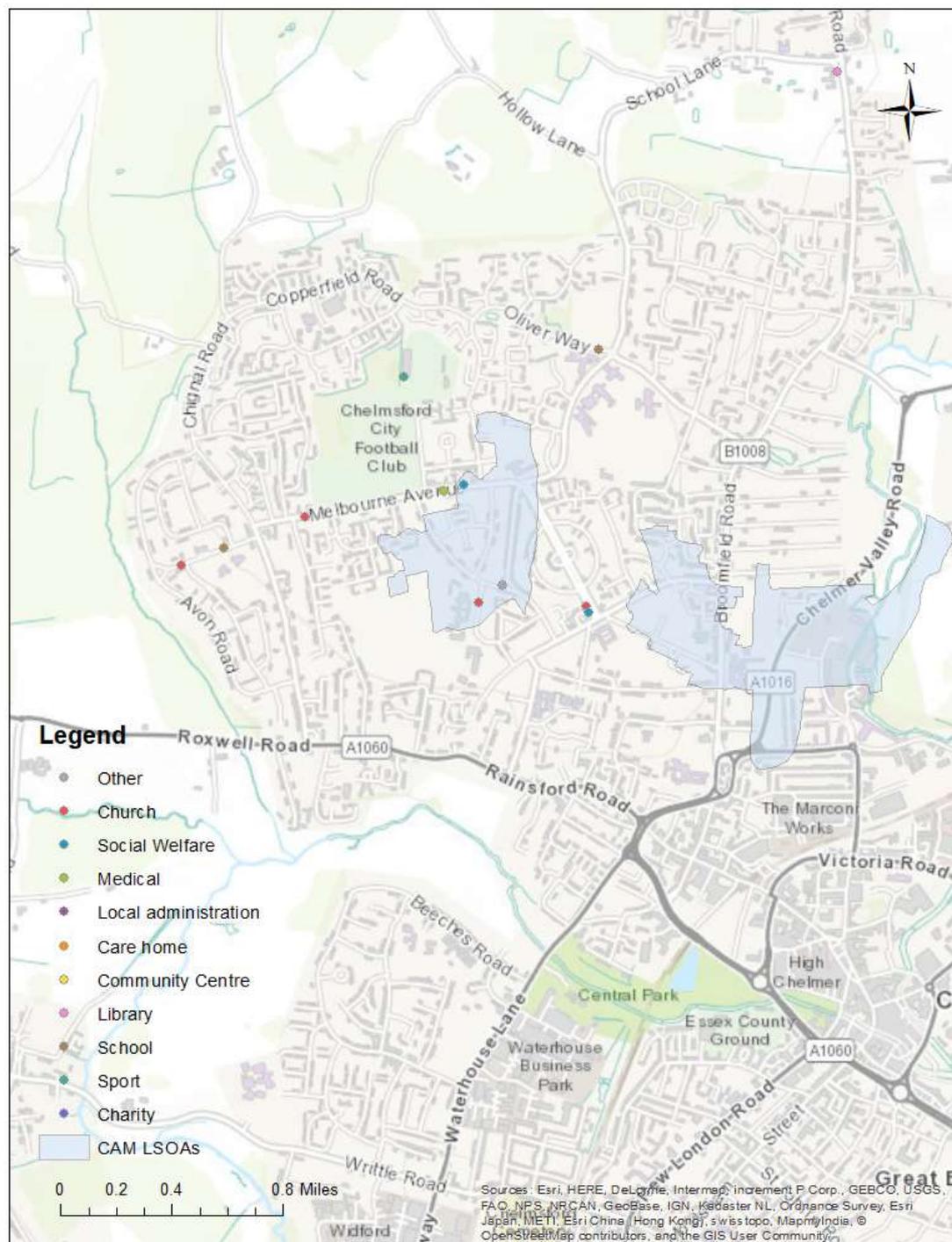


Chelmsford is the only city in Essex and Melbourne (figure 6.5), a

neighbourhood within the city demonstrated social capital and fitted closely

with Gans' (1982) idea of an urban village, a concept still used in planning today that advocates sustainable, well-designed urban areas, with a sense of place and community (Aldous, 1992; Franklin and Tait, 2002; Zarei et al., 2018). The area is long established and the housing manager who showed me around described it as an area where you either stay all your life or you leave (usually after finishing school), therefore demonstrating personal, occupational and residential immobility (for those who stayed), a factor Gans said increased both kinship (through vertical bonds) and friendship (through horizontal bonds). The interviewee said that people did not tend to travel into the area from outside and residents did not travel far out either. The area fits the homogenous neighbourhood typology, with a lot of ex-local authority housing stock, not only are people from similar backgrounds but they also live in similar type of housing (Blowers, 1973; Lee, 1968). Greenstead in Colchester is another area that fits the homogenous model and interestingly like Melbourne the GWR model accurately predicted the level of domestic abuse in the neighbourhood.

*Acquaintance neighbourhoods*

*Figure 6.6: Community Assets in Greenstead, Colchester*
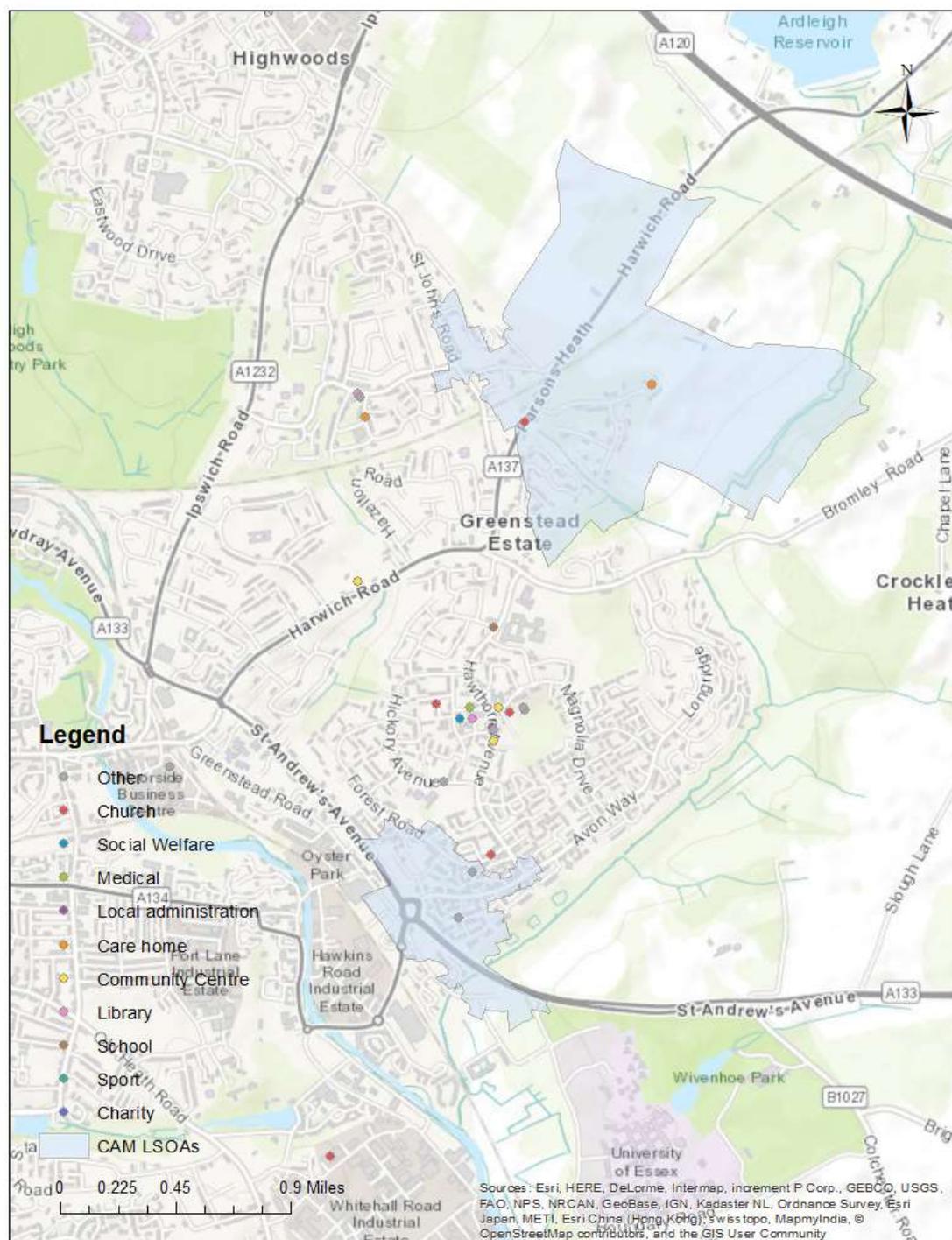


Interestingly, the acquaintance neighbourhoods were found in both affluent

and deprived areas.  An example of this was the LSOA area to the north of

Greenstead (figure 6.6), which is divided into a small affluent estate and a more deprived estate, neither with many of their own assets and the interviewee doubted whether the residents of the affluent estate would visit assets in Greenstead.  The areas did not demonstrate the community spirit that was visible in the unit and homogenous neighbourhoods.  Higher levels of domestic abuse were reported to the police in this area than were predicted by the model, perhaps indicating that residents had fewer places to report, increasing the proportion of police reporting.

*Discussion/summary of neighbourhood typologies*

The causes of domestic abuse are multifaceted and Lee's typology is too simplistic to be used independently, but from the sample of areas that I visited, it does seem that those living in unit and homogenous neighbourhoods demonstrated more collective efficacy, whereas those in the social acquaintance neighbourhoods tended to experience less social capital and at the very least different patterns of reporting.  Whether the actual levels of abuse vary cannot be concluded from this analysis.

**Collective efficacy and social capital**

There were two areas where collective efficacy was visibly lacking.  One was Laindon, a 1960s new town and the other the coastal town of Clacton.  Figure 6.7 shows how the town centre in Laindon was quiet and deserted.  There is a community hub, but it was shut on the day of the visit.  The shopping

precinct was suffering from concrete cancer.  Whilst there were a number of

assets, such as churches, they were closed on the day of the CAM exercise.

*The interviewee, an Essex County Council employee who lived in Laindon,*

*described the local area:*

*'Ford is a big employer in the town and a lot of the housing stock is social or ex social housing.  The town centre has been awaiting redevelopment for over ten years now and many of the shops are closed and empty.   You can see large potholes in the car parks, which no one is going to fix until the town is redeveloped.  On the other hand, the neighbouring town of Basildon has recently undergone a town centre revitalisation and now has a much higher footfall.  I imagine that the residents of Laindon would be more likely to visit Basildon that their own town centre.'*

*Figure 6.7: Laindon town centre*

In Clacton the interviewee, a local resident described how the area suffers

from multiple issues:

*'The town suffers from a lack of facilities to occupy younger residents, with its coastal location and distant proximity to other towns, meaning that young people become disengaged, leading to anti-social behaviour and drug and alcohol issues. The town centre does not have shops that would attract people into the area. I have lived in Clacton for five years, having previously lived in East London. I have tried to engage with the council and CVS to organise events, such as a beach party, but my enthusiasm had not been appreciated and I get the impression that they don't want to do more than they have to. She said that the area lacked the community spirit of her previous neighbourhood and she said a lot of people felt isolated, particularly those who were new to the area.'*

*Figure 6.8: Community Assets in Clacton*

Whilst both areas had reduced collective efficacy, the levels of reported domestic abuse compared to predicted abuse showed different patterns. In Laindon more abuse than predicted was reported to the police, whereas Clacton (figure 6.8) had less abuse reported than predicted. An explanation for higher reporting in Laindon could be that the lack of identifiable and accessible assets led to a smaller number of reporting options, which would mean a higher proportion of abuse is reported to the police. Clacton, however, had a number of different options for reporting, although the interviewee felt that the awareness of the services was not high. The interviewee described how the population suffers from isolation, mistrust and multiple social issues, which may have prevented people from strong place attachment, which has been argued to prevent people from moving (Lyons and Lowery, 1989). Livingston et al., (2010), however found that improved material or environmental circumstances had a bigger influence on residents moving than attachment. It is argued that this residential sorting and selective mobility leads to the creation of areas of concentrated disadvantage, which suffer from multiple social issues (Galster, 2012; Permentier et al., 2011). It may be that the higher level of residential mobility in Clacton and the resultant reduction in collective efficacy has reduced the amount of help that is sought from the range of agencies that are available. This would concur with previous studies (Browning, 2002; Kasarda and Janowitz, 1974; Sampson et al., 1997). Strong social capital, collective action, strong support services, mixed tenure and neighbourhood management have been found to act as protective factors (Lupton and Power, 2002), which would offer an

explanation for why the other deprived areas in this study are not all faced with the same level of issues that Clacton has.

In other areas collective efficacy was evident in certain parts of the population, such as older affluent residents in Thaxted, but whether the impact is felt across the population and the life course of individuals was difficult to ascertain.  There were particular groups that had higher levels of residential mobility and low engagement.  It could be that Putnam's idea of bonding social values, that are built around group homogeneity, are more evident in the affluent population, but less so by in those living in the deprived parts of the town (Putnam, 1993).  However, there was evidence of bridging social values, an example of which is a recently published book, 'Thaxted People', which gives a biography of a cross section of the population though photographs and captions (Griffen, 2017).  The book demonstrates a community spirit across social classes. However, they were all members of the community who had lived in Thaxted for several years.  Perhaps again the residential mobility component of collective efficacy offers a better explanation, with more transient members of the population failing to integrate into the community and feeling the effects of poverty more than those who have been established for years (Sampson and Lauritsen, 1994).  What would be helpful would be to stratify the population by age and other variables, such as their stage in the life course (Völker et al., 2012).

An area that demonstrated the highest levels of collective efficacy and social capital was Saffron Walden. The town has a large number of organisations and agencies and had waiting lists for people wanting to volunteer at

organisations such as the foodbank.  After the film 'I Daniel Blake' was shown at a local screening in the town over £1000 was donated to the Foodbank.

Putnam, (2000) described how the areas that gain the most social capital tend to be the areas that are not the most in need and Saffron Walden is a good example of this.  The area already has economic and human capital and it is really the areas like Clacton, which have neither that would particularly benefit from increased social capital.  A criticism of Putnam is that whilst he describes the symptoms of low social capital, he doesn't provide a plan of treatment (Crothers, 2002).  In policy terms this is an issue that needs to be addressed and research conducted into what conditions cause social capital to change.  It is clear that residential mobility in one factor that needs to be considered.

**Churches/ religious organisations, community centres and foodbanks**

The role of churches in providing support to the community was highlighted in nearly all of the areas, but their social outreach work was particularly evident in the deprived areas.  As the housing manager in Chelmsford stated:

*'The number of residents attending church on a Sunday was declining, so the churches have had to re-evaluate their role in the community.  The emphasis has shifted, and they are all offering something slightly different.  Having a number of churches gives residents a choice and enables them to find something that suits them.'*

In the more affluent areas, the churches seem to have maintained a more traditional role, with fewer activities going on during the week and more on a Sunday.  The range of activities also varied, with Men's prayer breakfasts in the affluent areas of Thaxted and Frinton and counselling sessions in the more deprived area of Melbourne in Chelmsford.  There were, however, some

activities that took place in most areas such as 'Messy church' sessions for children and coffee mornings.

The type of church also made a difference to the sort of activities offered. Community and less traditional churches were engaged in a particularly wide range of outreach work, whereas the Church of England and Catholic Church still seemed to largely maintain a more traditional outlook. This is an observation that Putman also observed in America, with social capital invested inwardly within the evangelical churches, whereas the fundamentalist churches offered far more to the wider community (Putnam, 2000). Internal politics within the church also plays a part, with views on social policy ranging across the churches, with congregations either following a 'consensus' persuasion or a more conservative 'Thatcherite' outlook (Machin, 1998; 211). Social questions surrounding women's liberation have been debated within the church, with some still opposed to the ordination of women and recent debate has also shifted to gay marriage (Eekelaar, 2014). If some in the church still view women as subordinate, and patriarchy, not necessarily a causal factor but still significant in abuse (Tracy, 2007), still exists, then the role of church in combating abuse should be called into question. (Edwards and Edwards, 2017) even question whether violence is facilitated if women are discouraged from seeking help or persuaded to return to abusive homes (Nason-Clark, 2004).

Despite some branches of the church being viewed as more conservative, variation across churches of the same denomination does however exist and was evident in this research, with some interesting outreach work being carried out by the Church of England nuns, who lived and worked in

Greenstead.  They were active in community activities, including running coffee morning with bingo and games for older residents, outreach aimed at reducing isolation.

Many of the churches were linked into the foodbank, either collecting, being a voucher holder or acting as a distributor of food to those in need.  Nationally domestic abuse is seen as the primary reason for referral to foodbanks in 1.41 per cent of cases (Trussell Trust, 2018).  The foodbanks are often situated within community centres or churches that offer other services, such as courses for the recognition of abuse.  The community church in Chelmsford also had a Victim Support counsellor who visited a couple of times a week during the coffee morning.  The idea being that the victim could speak confidentially to a counsellor whilst the perpetrator thought they were at a coffee morning.  The counsellor said that quite a few older women had disclosed abuse to her, this is an age group that does not typically report to the police.  This was the only overt Victim Support service that I came across in churches in the study areas.

*Figure 6.9: Community Assets in Southend*

*Figure 6.10: Storehouse Community Centre, Southend*



Using churches to offer these services is in line with recommendations made by Blood (2004), who recognises the potential channels that churches offer to meet older residents, and this is something that could really help isolated victims in rural areas.  Other churches did not explicitly run sessions for victims of domestic abuse, but three interviewees commented on how disclosures were made when trust had been built up between the victim and someone in the organisation.  National survey data found that 67 per cent of respondents trust the clergy (to tell the truth), a very similar proportion to those who trust the police (68 per cent).  Trust in the clergy has, however, declined by 18 per cent since 1983, when they were the most trusted profession (the most trusted profession are now doctors) (Ipsos Mori, 2015).

Trust was also an issue for churches offering services for hidden victims, such as the Community Centre in Southend.  The centre (see figure 6.10) is positioned in a very deprived area, right in the middle of three tower blocks and there were around 60 families there when I visited.  They were offering breakfast and had a clothes swap event on; meaning residents could swap children's clothes when their children needed the next size.

The pastor who ran the centre talked of a special service that was run for prostitutes:

*'Last week a prostitute came to me to say that she had been threatened with a gun in an alleyway and told that she would be raped or killed because her abusive partner owed money.  I had to speak to the police because of the serious nature of the attack, something that I would not normally do. I did not feel this was the ideal outcome because reporting to the police could have consequences for the victim, either from the man who threatened her or her abusive partner, but not reporting also put the victim in severe danger.'*

Here is an example of a victim, who in Christie's (1986) definition would not be viewed as an ideal victim, with their involvement in criminality and connection to crime, but they felt comfortable talking to the pastor when trust had been built, something they could not do with the police.  Of course, the opposite could happen if the trust and relationship had not developed and it might be that in other churches and organisations the trust and confidence would not have been built. This is clearly an issue when the individual engaging with the victim is fundamental to disclosure.

Although there was no evidence of inappropriate advice being provided in the churches and community centres, there was an agency that said that they did not encourage victims to report to anyone else and they gave advice

themselves.  This could therefore mean that victims are being given inappropriate guidance and support and whilst it is not doubted that they had good intentions, this may not be the best action for the victims, especially if there are safeguarding issues.  This therefore raised the question of training and it was evident that in some places this was minimal.  Volunteers and staff were seen to be good listeners and they were able to build up a rapport with members of the community, treating them as fellow citizens rather than clients (McClay and McAllister, 2014), but very few would have formal counselling skills.  Training needs to be given on what to do if disclosures are made, mainly around appropriate signposting to agencies that can offer the correct support.

Collecting data on where victims are referred to is also important, as there are potential implications for funding.   In Southend, for example, the community centre and many other agencies referred or signposted to the Dove project, which is a refuge.  In many cases this was a clear preference to referring to the police.  An area that actively refers victims to other agencies could see a reduction in funding for domestic abuse services if only the police data is used to allocate resources.  Agencies should not feel that they have to refer to the police and they are often signposting to the most appropriate agency for the victims, but this does highlight that data from other agencies needs to be collected and shared with those making commissioning decisions. Modelling the data using predictor variables highlights potential areas where this might be taking place and then undertaking asset mapping exercises in these neighbourhoods can unearth potential agencies where disclosures and

refers could be made.  Whether or not the agency formally records this information would need to be explored.

The research identified churches and community centres as an important source of support for victims and steps now need to be taken to capture and work with those offering support.  Unfortunately, I did not come across any other assets for different religions that were open when I visited.  A next step would be to explore whether other faiths offer a similar source of trust and support.  This would be particularly interesting in areas where there are higher proportions of people of other faiths, such as metropolitan areas, testing whether Putnam's idea that cultural heterogeneity has a negative effect on social capital (Putnam, 1993).

**Network of referrals**

The CAM exercise identified different methods of referrals between agencies for a range of issues, including domestic abuse, with some favouring separate agencies located in different offices but with formal and informal links between the organisations and other co-locating in a 'one stop shop' approach.

In Melbourne links between individually located agencies were facilitated through the West Chelmsford Community Action Group.  The interviewee, the Housing Manager for the Melbourne Housing Hub explained how the network worked in practice:

*'If clients come in and disclose issues that that particular agency did not have the expertise to deal with then there is a network of other agencies and referrals can be made to a more appropriate organisation.  So, for example if a housing issue was discovered at the Children's Centre then the manager would speak to me at Melbourne Housing Hub.  Melbourne forms part of the wider North West Chelmsford Community Action group, where crime issues*

*and neighbourhood problems are discussed and a more collaborative approach to resolving issues is taken. Membership consists of representatives from the local council, police, churches, housing office and voluntary organisations. This was seen to be a very valuable way to maintain an active network of agencies and is very much a bottom up approach.'*

*Figure 6.11: Community Assets in Laindon*
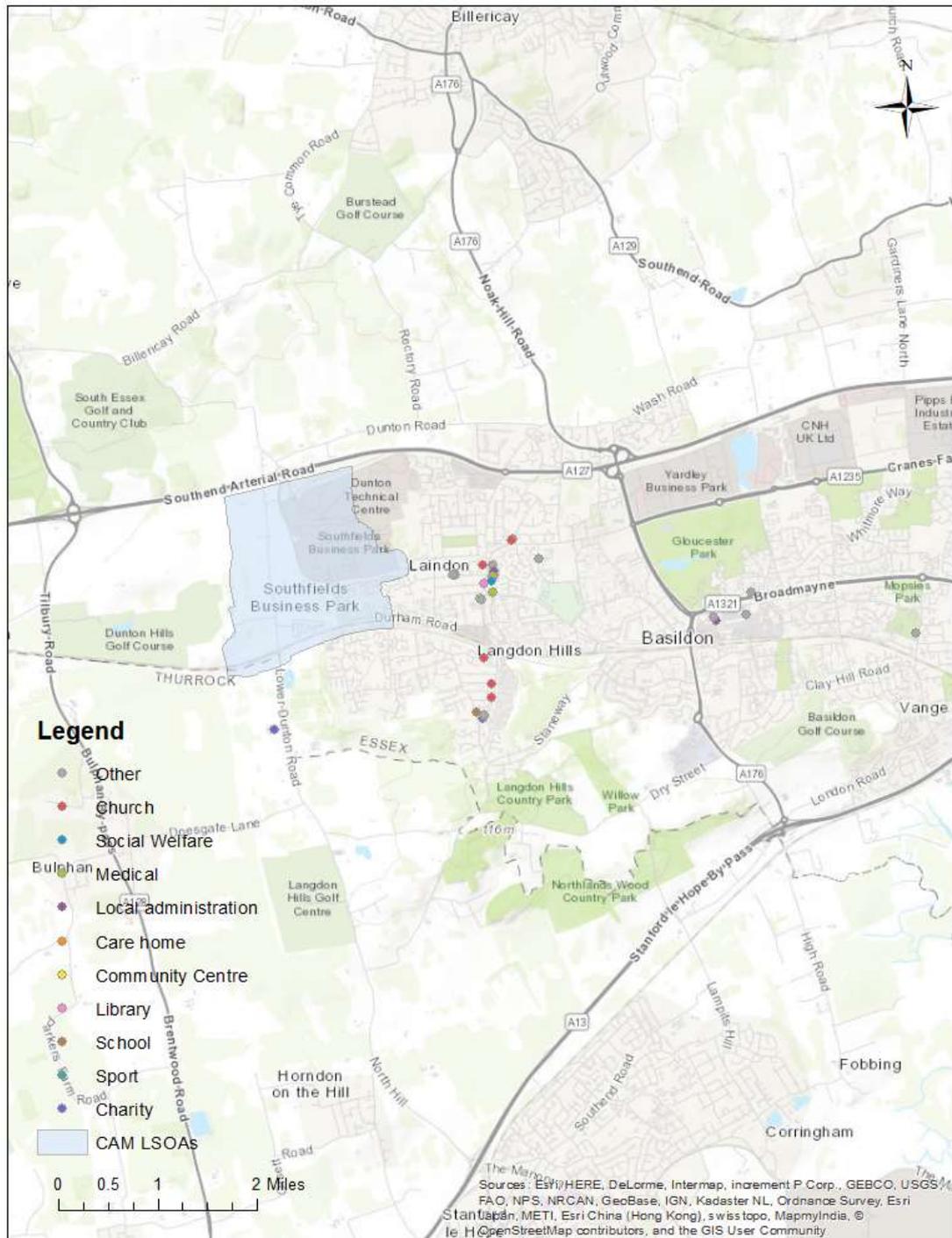
On the other hand, a very different approach was the one stop shop approach that was found in Basildon.  Here the interviewee, who had shown me around Laindon, also showed me the newly redeveloped council offices that are used by clients to enable them to access the Job Centre, Citizens Advice Bureau, library and council services (such as housing) all in one place (see figure 6.12).  The building was large and modern, but quite clinical with rows of chairs and desks separated by privacy screens.  Whether this approach would work for everyone is questionable.  Robinson and Hudson, (2011) evaluated whether separate of integrated, one stop shop services for sexual violence were a better model for victims.  Both were found to have benefits and challenges.  The one stop approach was easier for developing partnerships but being aligned with some statutory partners was seen as a disadvantage to some.  However, the separate location approach, like that seen in Melbourne, made it more difficult for agencies to maintain relationships, but they were viewed as being better for victims to access and maintain confidentiality.  Therefore, the Melbourne approach, which creates the links between agencies, but keeps them separate for victims may be the best approach.  The Basildon hub is aimed at addressing multiple service needs, such as the job centre and Citizen's Advice Bureau.  Perhaps a one stop shop approach that focuses just on domestic abuse, such as those run in Wales (Robinson, 2006) would be a more appropriate multi-agency hub. South Essex has recently set up such hubs, so it will be interesting to evaluate their impact.

*Figure 6.12: Basildon hub*



**Hidden populations**

An area with very low levels of reporting was Frinton, with only 11 incidents of domestic abuse reported in the three-year time period. A very different level of reporting is seen in Clacton, just six miles from Frinton, where in the same time period 536 incidents were reported in area with the same population size. Whilst extremely different areas demographically it appears that the under-reporting is particularly pertinent in Frinton.

The interviewee ran a care company, aimed at keeping those with care requirements in their own home, rather than them having to go into a care home. She described the area and the needs of the residents:

*'The residents in Frinton tend to be asset rich, with house prices much higher than neighbouring Clacton.  The location of Frinton, however, means that there are few opportunities for well-paid employment, which means the population has a high number of better off retired people, who despite having assets may not have the disposable income that younger affluent people might have.*

*I have seen quite a lot of abusive behaviour between my clients, but it is very unlikely that it would be reported, unless it was very serious.  There had been a domestic homicide recently nearby, where a woman was shot by her husband in a care home.*

*Most victims don't want to leave the perpetrator, especially as they are often caring for them as well, they just wanted the perpetrator to stop the abuse and get help.  Often warring couples are having to cope with the fact that one of them has Alzheimer's.  My clients don't want to speak to the police, in the serious cases I encourage victims to contact an advocacy charity instead or I try to speak to adult Social Care.  The service is just too slow though.*

*I have come across several victims who were being abused by their children.  Most of the abuse had been financial, but there was a murder in the area where a daughter strangled her mother.'*

Victims just wanting the abuse to stop, rather than having a criminal justice intervention is a finding that Holder and Daly (2017) also concluded in their research on sequencing justice.  The low level of reporting is consistent with research into older people and domestic abuse, which finds that older victims are not always aware of the services available to them Beaulaurier et al., (2007) or the services provided are inappropriate and may not be adequately set up to deal with physical or psychological needs of older victims (Blood, 2004).  This further highlights the findings of Powell and Wahidin (2008) who identified the paucity of research into older peoples' experiences of crime, victimisation and their vulnerability.

*Figure 6.13: Community Assets in Frinton*



The CAM visit highlighted the need to engage with caregivers and to make sure that they are given training and signposting information.  They do not all work for statutory agencies, so private care providers need to receive regular

training too.  It also confirmed the previously identified issue of the lack of clarity between elder abuse and older victims of domestic abuse.  Most domestic abuse services are targeted at those aged 18-44 and protection services for adults are aimed at the frail elderly and incompetent victims.  The result is a gap in service provision and the people in between are lost in between (Brandl and Cook-Daniels, 2002).

The shame and embarrassment of abuse have been cited as the main reasons for older victims not telling anyone, this includes the reactions that older children might have (Scott et al., 2004).  This case study from Frinton (figure 6.13) really highlights the intergenerational element to domestic abuse, something also seen in research conducted in Canada.  The Canadian study found that whilst spouses were more likely to be physically abusive, adult children were more likely to perpetrate financial abuse (Brandl and Cook-Daniels, 2002).

Discussion and conclusions

Overall using CAM as part of a hybrid approach to understanding variations in police reporting has been extremely insightful and has identified a number of agencies that would never had been considered using a needs-based approach.  Visiting areas and looking to a community's strengths has enabled a fuller understanding of the dynamics that impact where people will seek help, the importance of social capital and collective efficacy, spatial variation, neighbourhood composition and the varying needs of different populations.

The CAM exercise has highlighted that using only police data to resource and commission services will lead to insufficient funding in areas where referral to other agencies is actively encouraged.  This does not mean that victims should be encouraged to report to the police instead, but a multi-agency approach to data collection is needed.  Further modelling is needed to see whether those who report to other agencies exhibit the same predictors as those who report to the police.  If this data is unavailable in Essex, then modelling could take place in another police force area so that reporting patterns and risk factors can be investigated further.  For example, there is a survey currently being conducted in Cumbria on domestic abuse and the church (Restored, 2018).  Using the results of this research could help to increase the understanding of reporting patterns.  Another example is in Northumbria, where a multi-agency domestic abuse database is recording domestic abuse in all housing related organisations.  Modelling this data and comparing it to police reported incidents would add further to the knowledge on reporting.

CAM is a method of action research that has real impact whilst it is being conducted.  Through asking questions at the Colchester Foodbank links have now been set up so that the Greenstead Community Centre can act as a voucher holder and bus passes can also be issued to help those without cars to get there and bring their food home.  It is a method that brings people together, finding shared vision and goals, such as the interviewee in Clacton who is now applying to volunteer with the Citizen's Advice Bureau.

As a methodology CAM has helped to offer a unique insight into domestic abuse that would not have been gained through quantitative analysis alone. By looking to strengths within a community, rather than just needs, it has unearthed agencies such as the churches, foodbanks and community centres that had not previously been considered in this research.  They could play a role in supporting victims, particularly in the deprived areas.  The trust that is built up between victims and these agencies is particularly significant and it has highlighted geographic areas and agencies where training and support needs to be given by those with statutory responsibilities.

The CAM exercise has also helped to explain why the model over and under predicts in certain areas and confirms that the model is a more accurate way to identify the levels of abuse in neighbourhoods, rather than relying on police data.

Visiting ten different areas identified a lot of variation in types of neighbourhoods, levels of cohesion and multiple issues that may potentially contribute towards the level of abuse.  It has highlighted that the neighbourhood level is a good size to concentrate on to tackle the many different facets that influence abuse.  It reinforces the findings of the quantitative neighbourhood model that the variables that influence domestic abuse vary over space.  Taking a countywide approach makes an assumption that the factors that contribute to abuse are distributed evenly, when in fact neighbourhoods have many endogenous variables that influence the level of abuse and the amount that is reported to the police.

The methodology helped to unearth some of the particularly hidden groups, such as older victims and prostitutes, who were disclosing to other agencies, but not to the police.  There are still some groups, however, such as the middle class who were not identified explicitly by the CAM.  This may be because the middle class are not reporting to anyone, or if anyone at all only close friends or family.  Further analysis is needed to try and gain more of an insight into middle class victimisation.

There was only a limited amount of time to visit each neighbourhood, so not all of the assets were open, and a different impression may have been created had the visit taken place on another day.  There was only one interviewee in each area, and they may have had their own bias.  Everyone had a different role in the community, with differing levels of exposure to the assets in the area.  In some areas more information was collected by looking at leaflets and promotional material, making it difficult to assess how influential the asset might be to different members of the community, whereas in other areas there was direct contact with those providing services and support.  A CAM exercise in a true ABCD definition would involve a group of community members and would be conducted by people who knew the area well.  As a researcher the methodology has been adapted, but nonetheless offers a new and unique understanding of domestic abuse.

Using LSOAs to define neighbourhoods is not ideal, as this is rarely the way in which residents would visualise their community, but it does offer a starting

point from which to explore the wider area. Focusing on those who live in the area and the assets that they use appears a good compromise.

One of the difficulties with the community asset mapping process is knowing how to value the assets that are seemingly intangible. It is straight forward to measure the cost of a service, but for a less formal asset to be evaluated having the ability to capture the benefits in a quantifiable way may appeal. HACT, an organisation that promote ideas and innovation in housing, have a social value bank to measure the social impact of activities. An extension of this work could be to put a value on the work that is going on in the community, this would help statutory authorities to commission their resources more effectively and also to offer financial support or training to those who are providing services to victims. Whilst churches and other agencies are offering support, a change in personnel or funding could dramatically affect the support offered.

The research identified churches as an important source of support. Unfortunately, I did not come across any other assets for different religions that were open when I visited. A next step would be to explore whether other faiths offer a similar source of trust and support. This would be particularly interesting in areas where there are higher proportions of people of other faiths, such as metropolitan areas.

The biggest challenge now is for policy makers. Identifying areas where social capital is lacking is more straight forward than attempting to generate it.

There is also the issue of accountability: who is responsible for taking this forward? Is it the local community, local organisations or statutory agencies? Mathie and Cunningham (2003) question whether communities need to learn to survive rather than challenging the economic system.  This leads to the challenging point of how can communities protect themselves from the external factors, such as the 'Westminster effects', which research has found to disproportionately affect poorer communities (Beatty and Fothergill, 2016; Crossley, 2017; 54) and have been argued to have the strongest effect, both symbolically and materially (Crossley, 2017)[25].

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[25] This chapter is now being prepared for submission to a special edition of the *Journal of Gender based Violence*.

# **Chapter Seven – Discussion chapter**

The previous three empirical chapters have provided an analysis of domestic abuse at the individual, family and relationship and neighbourhood level. Each chapter has used different methods and theories to explore these levels. This chapter reflects on the different approaches adopted and brings together what the collective analysis offers in terms of findings, implications for theory, the applicability of the overaching framework, potential causal pathways and the implications of gender.

## The findings and their implications for theory

At the individual level the research confirms that an intersectional approach to tackling domestic abuse is needed. Like other research, gender is found to be particularly significant, with victims far more likely to be female and for the experiences of women to be more serious in terms of repeat victimisation. However, the risk of repeat victimisation varies according to the age of the victim, with different patterns for male and female victims. The risk for men increases with age, but the opposite is seen for women, with the risk decreasing with age. The risk is also increased if the victim is white, but due to the problem of police recording of ethnicity, this is an area that certainly warrants further investigation.

A significant contribution to existing intersections is that the relationship between the victim and the perpetrator produces different risk profiles for repeat victimisation, with partners and ex-partners showing the greatest degree of gender asymmetry, compared to other famial relationships (which are included in the definition of domestic abuse). For partners and ex-

partners physical violence increases the odds of repeat victimisation and to a lesser extent coecive behaviour for ex-partners.  A similar pattern of repeat victimsiation is found for victims whose abuse is being perpetrated by an adult child, but the odds of repeat victimisation are even higher when there is coecive behaviour.  The other familial relationships did not exhibit any statistically significant increased odds of repeat victimisation based on physical or coercive behaviour, which emphasises the importance of understanding risk through different intersections.

The rate of domestic abuse can be accurately predicted at the neighbourhood level using four variables, income, ASB, population density and the percentage of BAME population.  Social disorganisation theory has mainly focused on crimes that occurred in public places, so these findings support the previous work of Browning et al (2002) indicating that the theory can also be extended to domestic abuse, which largely takes place in the private sphere.  This research therefore suggests that the mechanisms for crime are similar in both the public and private sphere, with the structural charactistics of concentrated disadvantage and social disorder strong predictors in both spaces.  The unique finding from this research is that the predictors are non-stationary, with the strength of the variables varying geographically.  This has important implications for both policy responses and for bringing about a theory of change.

Carrying out a CAM exercise in a sample of areas found a number of potential neighbourhood mechanisms that led to a varation in the level of reported abuse.  The diagram in figure 7.1 identifies the interventions, mechanisms and outcomes and their connections.  In terms of interventions,

two factors were found to be significant, the quality of and engagement in community assets and the neighbourhood composition.  In areas where there was a high level of engagement with community assets, the social environment appeared to create higher levels of collective effiicacy, which not only provided alterative sources of reporting, but also built resilience within the community and the creation of a capable guardian.  The composition of the neighbourhood also appeared to act as a driver for collective efficacy.  Unit neighbourhoods or homgenous areas were found to be more conducive to building collective efficacy than those in acquaintance neighbourhoods.  The protective factors that collective efficacy and social capital offer were particularly evident in some areas and it was in these neighbourhoods that the level of reported abuse was consistent with the predicted level of abuse generated by the neighbourhood model.  In areas that were lacking in collective efficacy reporting was either higher or lower, which suggested that in some communities more people reported to the police because they had no where else to report or in some areas people didn't report to anyone as they were so disengaged with their neighbourhood and did not trust the police.

*Figure 7.1. Interventions, mechanisms and outcomes at the neighbourhood level*
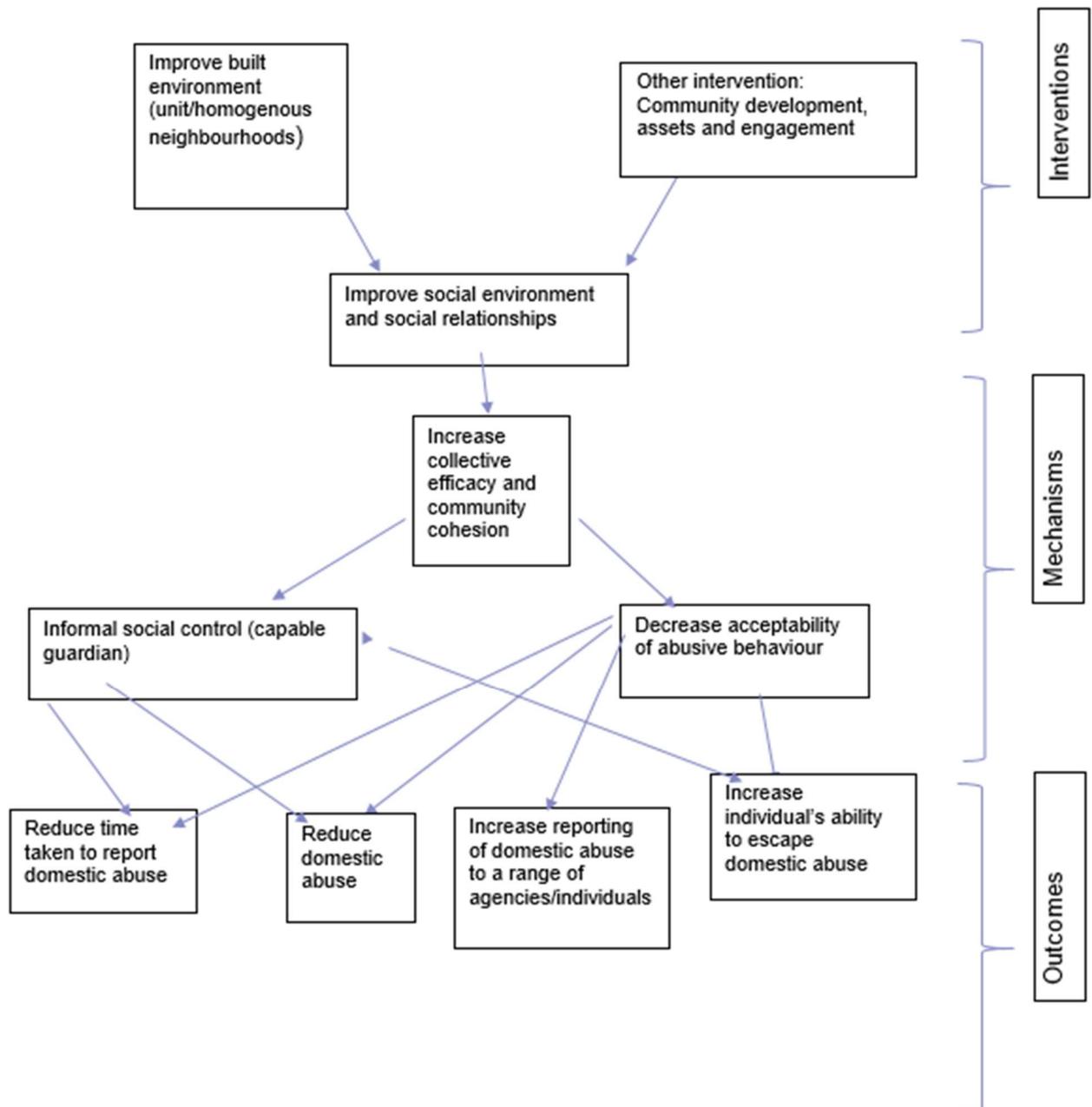
The relationship between the findings of each of the three empirical analysis chapters

Whilst the first two empirical chapters are drawn from the same data, they have used different methodologies, granularity and theory to explore individual, relationship and neighbourhood risk factors and predictors.  Overall the chapters find that victims are more likely to report domestic abuse to the police in Essex if they are female, under 45, white, have experienced physical violence, the perpetratror is a partner or ex partner, live in an area that has high levels of ASB, low income and has a higher population density.

The CAM chapter has helped to qualify some of the findings from the previous chapters and has also made links between the individual and neighbourhood level findings.  For instance at the relationship level analysis it was found that when the victim was the parent and the perpetrator an adult child, there were higher odds of repeat victimisation if the incident was recorded as high risk, a pattern not observed in other familial relationships.  It is suspected that this was because these victims were less likely to report their child to the police and so leave reporting of such abuse until it has really escalated and they are in danger.  The CAM exercise identified that Frinton, a town with a large older population, had far fewer incidents than predicted with the neighbourhood model.  The interviews in the CAM exercise confirmed that the abuse is taking place, but that the older victims were very unlikely to report their abuse to the police.

The CAM exercise also confirmed the superiority of using the neighbourhood model, rather than the police data alone.  Using this mixed method approach proved

particularly useful in explaining some of the findings from the quantitative analysis and for exploring how collective efficacy could account for variation in why two equally deprived areas may experience different levels of reported abuse.

There are also links between the individual and neighbouhood chapters through the use of the OAC data.  Having the classification enabled some area level data to be considered in the intersectional model.  It was found that the Contrained City Dwellers and Hard Pressed Living supergroups were those most likely to experince domestic abuse, a finding echoed in the neighbourhood chapters, with those experincing deprivation and disorder having the highest rates of reported abuse.  Previous research has suggested that the lack of economic resources reduces the reslience of the victim, making it more difficult to escape the abuse (Walby and Towers, 2017).

<u>The applicability theoretical framework</u>

The Beyer el al (2015) framework set out the four layers over which domestic abuse operates.  The first being the individual level, the second the family and relationship level, the third the neighbourhood level and forth, the policy systems and society level.  This research set to investigate the first three levels in order to challenge the final level.  Overall the framework was a helpful way to approach the complex issue and to explore different theories over the various levels and to apply a range of methods.

It soon became apparent that using an intersectional approach resulted in the first two levels, the individual and family and relationship, being researched together, with the findings very much interlinked.  For future research the first two levels could be

combined with relationship between the victim and perpetrator one of the intersections explored.

The neighbourhood level was investigated seperatately, testing social disorganisation theory using both quantitative and qualitative methods. The quantitative findings support previous research into other crime types, which found that concentrated disadvantage and social disorder increase the rate of domestic abuse in an area (Sampson et al, 2007)

The direction of causality is difficult to see from the quantiative data alone, but the CAM exercise helped to visualise a probable causal pathway. To explain this I have adapted the routine activities theory model (Cohen and Felson, 1979) to add the neighbourhood level (see figure 7.2). For domestic abuse to take place there needs to be three things, a suitable target (the victim), a motivated offender (the perpetrator) and the lack of a capable guardian. Previously there has been doubt as to whether this theory is applicable to domestic abuse as most of the incidents occur in the home (Browning, 2002), so it is difficult to factor in the capable guardian, which in public crime could be a person or CCTV. However, the CAM exercise found that the level of disclosure and speed at which abuse is reported can be greater in areas where there is collective efficacy. This therefore means that the community is in effect acting as the capable guardian and linking back to figure 7.1, could mean that the perpetrators behaviour is challenged and the victim is able to escape sooner than those without this protective element and the resilience it provides.

*Figure 7.2: Potential theoretical pathway to domestic abuse.*

Relationship type

Motivated offender

Actions not questioned or deterred

DOMESTIC

Suitable target

Absence of capable guardian

Suitable neighbourhood

Target does not engage in or receive support from the community
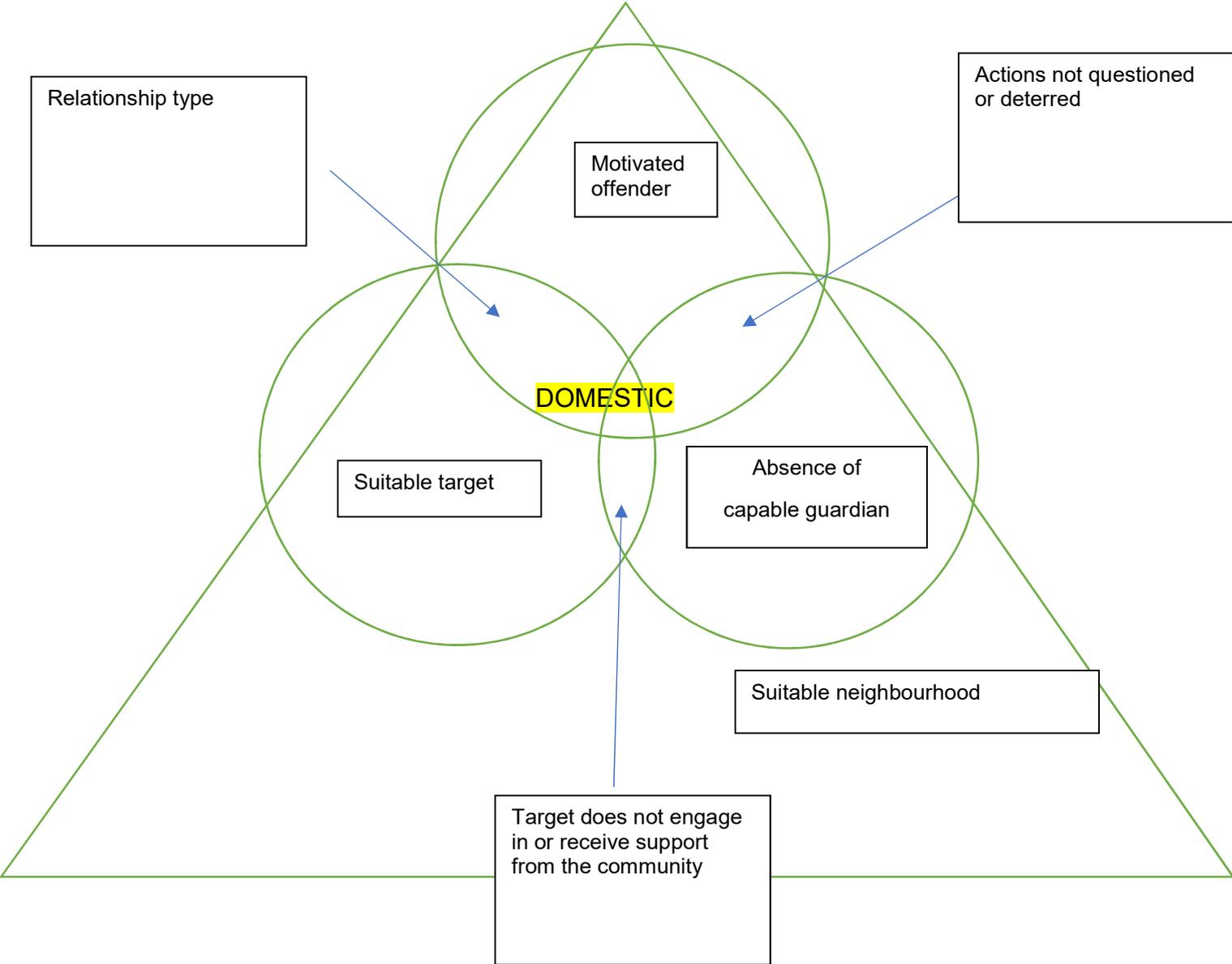
What is different in this model is that the original version of routine activities theory does not account for macro level social factors, such as unemployment or poverty. This research has found the importance that neighbourhood level factors play in predicting domestic abuse. I have therefore added a triangle, called the ideal neighbourhood in which the target, offender and lack of a capable guardian are nested. Whilst domestic abuse can happen to anyone regardless of where they live, this model helps identify a causal pathway for the most at risk victims. The model also brings in new intersections between each of the circles. So for example the cross over between the target and the offender would be the relationship type and the risk of abuse and the type of abuse will vary according to the relationship between the victim and the perpetrator. Another intersection is that between the target and the lack of a capable guardian. Where this occurs there may be a climate of tolerance that allows the perpetrator to carry on with his violent behaviour without the woman being able to disclose (Gracia, 2004).

So for example the risk of victimisation would be higher for a female, under the age of 35, in a relationship with or having just ended a relationship with a man of a similar age or older. They live in a low income, densily populated area and the woman does not have the economic resilience to flee the abuse. Whether the woman can escape the relationship could be influenced by whether she feels able to disclose her abuse and access support and services and whether the community can facilitate this by acting as a capable guardian.

The neighbourhood model has also found that the predictors are not stationary over space. So like a recipe with a number of ingredients, the exact quantities of different risk factors in each area is not the same over the whole area, but we do know that nearby areas are more similar than those further away. The model will

also change over time, especially if interventions are introduced to try and reduce the risk of domestic abuse. So if a theory of change is to be developed it needs to be noted that constant monitoring of the risk factors at each level will be needed.

Another way of theorising a pathway would be to see whether living in a deprived area that lacks in collective efficacy could lead to individuals becoming victims and offenders. This way round is less likely to be a casual pathway to victimisation but rather an excerbating factor in a relationship that already has the risk factors for becoming abusive.

A consideration of the implications of gender

The analysis at the individual and family and relationship level used an intersectional approach to understand the risk factors that lead to repeat victimisation. In line with previous research (ONS, 2018, Walby and Allen, 2004; Walby and Towers, 2017) the findings reinforce the importance of gender, finding women to be disproportionately more likely to experience abuse and for the harm experienced to be greater.

The neighbourhood level analysis, which was conducted prior to the intersectional analysis, used variables from social disorganisation theory to explore the predictors of the domestic abuse rate at the neighbourhood level. One thing that is not considered in social disorganisation theory is gender.

On reflection, if the intersectional analysis had been carried out before the neighbourhood analysis, then the knowledge gained from that analysis could have been used to inform the use of gendered data at the neighbourhood level. It is probable that if gender is so significant for individuals and family and

relationships that it would be important at the neighbourhood level. In fact, the attributes of the neighbourhood could be a further intersection to explore in a model that covers all three levels. Gendered data could include the percentage of female unemployment and the proportion of women in the population.

This chapter has brought together the key findings from the separate empirical chapters to reflect on their collective contribution to the theoretical understanding of domestic abuse. Combining the findings from the qualitative and quantitative research at the individual, relationship and neighbourhood level has enabled a new potential casual pathway to be developed. Future research should however consider gender across all levels. The final conclusions and implications for policy will be considered in the next concluding chapter.

# **Chapter Eight: Conclusion**

## Introduction

Domestic abuse is one the most under reported crime, with only around 20 percent of victims thought to report their abuse to the police (Flatley, 2016).  With the absence of multi-agency data, commissioners at Essex County Council have had to largely rely on police data to make decisions about where to target their resources and services.  Late intervention not only has an economic cost to the county council, but also a tragic human cost.  The aims of this research were to identify the predictors of abuse at the individual, family and interpersonal level; to explore the geographical distribution of incidents and the neighbourhood level predictors of abuse; and to see whether the profile of those who report to the police is the same as those who do not.  The study aimed to answer three research questions:

1) Where should Essex County Council focus their resources and services to have the most impact in reducing domestic abuse?

2) Can Essex County Council rely on Essex Police recorded crime data to predict the service requirements of those who do not report their abuse to the police?

3) Are individual or neighbourhood variables a better predictor of domestic abuse?

## Chapter structure

This concluding chapter will synthesise the main findings from this research by addressing each of the research questions in turn.  There is then a discussion about the impacts of the research for theory followed by recommendations on

how the research can be applied to policy.  Finally, the chapter draws to a close with suggestions for future research.

**Where should Essex County Council focus their resources and services to have the most impact in reducing domestic abuse?**

The research explored the risk factors of abuse at the individual, family and relationship and neighbourhood level.  Evidence of where resources and services should be focused was found across all levels.

**Individual**

In line with existing research those reporting to the police are at greater risk of another incident if they are female.  However, taking an intersectional approach to the analysis also found that the age of the victim interacted with gender, with the probability of a repeat incident increasing with age for men and decreasing for women, with men having a higher chance of a repeat incident than women after 80 years old.  Therefore, Essex County Council would benefit from an intersectional approach to their service design and resource provision, recognising that a far more targeted approach focusing on the risk factors across different sections of society, is more beneficial than adopting a one size fits all model.

**Family and interpersonal relationships**

Another important characteristic to factor into an intersectional approach is the relationship between the victim and the perpetrator.  Individually the risk factors for a repeat incident, a proxy used in the absence of data on those who are not victims of domestic abuse, were found to vary quite considerably by the relationship type.  The gender symmetry between victim and perpetrators is far

more marked in victims who are partners, ex-partners or parents, whereas siblings and children show more of a symmetrical distribution. Incidents between partners, ex-partners and parent and children (where the parent was the victims) also had increased odds of a repeat incident when physical violence and coercive behaviour was present. The most significant finding has been that the relationship between victims and perpetrators reflect different risks and patterns of abuse over the lifecourse. Recognising these different relationships means that in policy terms different service and solutions could be offered.

**Neighbourhood**

This research has found that the police reported domestic abuse can be predicted to a high degree of accuracy at the LSOA level using just four variables; rate of ASB; income score from the IMD; population density; and the proportion of the BAME population. This therefore not only gives Essex County Council the information on where to base their services, but also on factors that are present in the areas where abuse is particularly high. Like the findings from the CSEW, which find that reported domestic abuse is more prevalent in deprived areas. These findings support the view that a social policy response to domestic abuse is needed to tackle broader issues that lead to deprivation and a break down in community cohesion, rather than just using the criminal justice system to react to incidents of domestic abuse.

Whilst caution is needed in the interpretation of these findings, as it is not a causal model, it does give policy makers additional information on which to trial new methods of reducing abuse.

What the GWR methodology has also given policy makers is a unique insight into how the four predictors vary in strength over space. For example ASB is a much stronger predictor in the Colchester and Tendring areas, which suggests that a targeted intervention in these areas focusing on potential links between ASB and domestic abuse would be a better use of resources than a blanket reponse for the whole area.

The research also found that the hotspots of domestic abuse are largely static over time, but there has been some space time clustering, particularly in the Clacton area. This therefore would be a geographical area that Essex County Council might wish to focus on. Whilst the data used in this research is now quite old, using GIS to evalulate the emerging hotspots on a regular basis would add a lot of value in both the targetting of resources and the evaluation of their effectiveness.

Whilst the GWR model is not causal, the CAM exercise that followed in ten areas where the model over, under or accurately predicted the rate of abuse did shed light on some of the variations in reporting and suggested that Essex County Council cannot just rely on police data to commission their services. A more detailed discussion of this now follows in answer to the next research question.

**Can Essex County Council rely on Essex Police recorded crime data to predict the service requirements of those who do not report their abuse to the police?**

The research identified that using GWR and CAM as part of a hybrid approach, focusing on both the strengths and needs at a neighbourhood level was extremely insightful and made it clear that only focusing on police data for

commissioning services would mean that some groups and communities would not get the resources that they need.  The CAM exercises highlighted the importance of social capital and collective efficacy, spatial variation, neighbourhood composition and the varying needs of different populations.  It also showed that using the GWR model to predict the rates of domestic abuse was a more reliable model than just using police data, as areas where the model under or over reported clear reasons for variations in reporting.  An example of this is that in neighbourhoods where referrals to other agencies, such as refuges, by churches, community centre and foodbanks, are actively encouraged, there would be a deficit in funding if only police data is used to make decisions on resource allocation.

The CAM exercise found that homogenous neighbourhoods were more likely to produce accurate model predictions, whereas those living in acquaintance neighbourhoods, where residents were less likely to interact with their community had higher levels of police reported in some areas as they were less likely to use other services or community outlets to report their abuse.  Some areas however, such as Clacton, were so disengaged that they were underreporting to all agencies.  The study only looked at ten areas, so there would be merit in exploring these findings further in other areas.

One of the groups that was identified by all the methodologies were older people.  Having this mixed method approach has enabled previously hidden groups to be discovered.  The next research question explores the merits of this approach in more depth.

**Are individual or neighbourhood variables a better predictor of domestic abuse?**

This research aimed to test three methodologies at different geographical levels to examine their effectiveness in predicting domestic abuse. Firstly, statistical analysis was used to explore the risk factors at the individual level. Secondly, spatial statistics were applied to investigate neighbourhood level predictors at the LSOA level and their variation over space. Finally, Community Asset Mapping exercises were carried out in ten areas where the neighbourhood model either over, under or accurately predicted the level of abuse in the area to look for possible explanations for the variation in the predicted values.

Referring to the original conceptual model that frames this analysis the research was able to investigate the characteristics of the victim, perpetrator and the incident that made an individual victim more likely to experience injury, abuse that was getting worse and repeat victimisation. Having this knowledge has the potential to allow policy makers and practitioner to target interventions amongst the most at-risk victims and intervene earlier, which will not only reduce the harm experienced by victims, but also saves resources which would otherwise need to be deployed if the abuse had not been identified. There are, however, still gaps in our understanding of individual level factors, the police data does not have attitude data or individual's health or social history. This sort of information would need to come from victim surveys or interviews.

The statistical analysis also made an important contribution to the knowledge on how risk factors vary according to the relationship between the victim and perpetrator. Patriarchal culture was captured through the measure of coercive

behaviour that was created by collapsing the 27 DASH questions into two (physical violence and coercive behaviour).  Alcohol and drug use was also captured in the analysis and was found to increase the risk of injury.  Poverty and employment data were not directly available at the family and interpersonal level, but were factored into the OAC data at the individual level (although reflecting the Output Area of the incident) and at the neighbourhood level through the independent variables.  One variable that was not captured was the role of women, which the ecological model suggests is important.

At the neighbourhood level the CAM exercise was able to capture the neighbourhood environment, access to services (assets), quality of housing, drug use, social isolation and the general culture of the area in the ten areas that were visited.  In additional to the attributes set out in the ecological framework, the GWR model was able to capture the predictors of domestic abuse at the LSOA level and their variation over space.  CAM offered a method in which explore the heterogeneity within the areas.

In answer to the research question the individual and neighbourhood methodologies on their own have been very useful and contributions to knowledge have been found at the individual levels.  However, using a multi-faceted approach using a range of methodologies to explore the different tiers of domestic abuse has gained insight that would not have been found by considering only the individual or neighbourhood level.  For example, the individual analysis found that victims who are parents of the perpetrator have an increase in risk of repeat victimisation if the incident is high risk.  The CAM exercise in Frinton found that underreporting is particularly high in the older population and that often the abuse is financial perpetrated by their children.  It

was clear that this group was very unlikely to go the police unless the risk to them was very high, which suggests that those who do report to the police are doing so as a last resort and therefore the response to their call needs to reflect this. As the CAM visit eluded, there have already been a number of domestic homicides in this area where the victim has been an older person. The finding also suggests that a response from other agencies, such as care providers and social care is needed.

**Impact on theory**

The research has confirmed that taking an intersectional approach to understanding the individual and family and interpersonal risk factors and predictors of domestic abuse is particularly valuable. This does not detract from the important contributions that feminists have made in framing domestic abuse as a gendered issue. In fact, by breaking the incidents down by relationship type, the asymmetrical nature of the abuse becomes even more apparent between partners, ex-partners and parents. Whereas the pattern is far more symmetrical for siblings and children, suggesting that these groups should be studied separately, not all grouped together. Age and class are also very important intersections. More work is needed with ethnicity, as unfortunately the recording of this and the low numbers for BAME residents in Essex has made this difficult to test.

The study has also revealed the value of taking a quantitative approach to understanding domestic abuse. The research is not claiming that a quantitative approach is more valuable, it instead finds that a hybrid approach, such as that demonstrated by the GWR model and the CAM exercise adds particular value. A

more nuanced argument could be developed by combining the intersectional analysis with qualitative methods such as interviews or text analysis of the free text fields.

The thesis has taken a novel approach by using geographical methods to explore the distribution and predictors of domestic abuse. This was experimental as these methods have never been applied before (or at least reported in the literature) to domestic abuse. A significant and unique contribution that this thesis has offered to theory is the finding that the predictors of domestic abuse are not stationary over space. This has important implications for policy and theory and could also potentially be applied to other crimes or social issues. The model could also be used in other locations, both in and outside of the UK and there is considerable merit in testing this further.

By combining the findings from the three empirical chapters a possible causal pathway has been developed that adds a neighbourhood level to Routine Activities Theory. The pathway highlights that for domestic abuse to take place there needs to be a suitable target, a motivated offender and the lack of a capable guardian. The research has found that the community can act as a capable guardian, enabling victims to build resilience to access support and to potentially escape their abuse. The community can also act to reduce the acceptability of abusive behaviour for perpetrators. Whilst victims are most at risk of abuse in neighbourhoods that have concentrated disadvantage and social disorder, in two equally deprived areas those neighbourhoods with collective efficacy appear to be more resilient than those lacking in community spirit.

**Policy recommendations**

The biggest challenge now is to turn the findings in this research into tangible policies and practices.  Findings from this research are already feeding into a live risk model that is being developed by Essex County Council and partner agencies to identify escalating risk of domestic abuse.  Below is a list of recommendations that policy makers and practitioners can take from this research:

1) The Police would benefit from recognising the different risk factors for a repeat incident according to relationship between the victim and the perpetrator.  Relationship profiles could be added to the live risk model for escalating abuse that is currently being developed by Essex County Council and partner agencies.  The risks could also be flagged up to officers when they first attend the incident, perhaps through a mobile device.

2) Integrate the neighbourhood predictors and their variation over space into the live risk model.

3) Use emerging hotspot analysis to monitor the changing hotspots over time and to evaluate the impact of interventions.

4) Since this research has been completed further datasets from other agencies have come available.  Essex County Council could therefore commission further research to test neighbourhood model with other

datasets that have become available more recently including housing data from Colchester Borough Homes etc.  This will see if the predictors found in the police data are the same with other data, or whether the model needs refining to incorporate this data.

5) Targeted projects could be piloted and evaluated in Colchester borough and Tendring district area, where the relationship between the ASB rate and rate of domestic abuse is strongest.

6) One of the main limitations of this analysis has been data missingness. Only half of victims had completed a DASH and the data was skewed by inconsistencies with reporting, with it appearing that questions that are meant to be completed by the victim potentially being filled in by a police officer instead.  This issue could be overcome if Essex Police add an additional field that specifies who has completed the question.  In the future the amount of missing DASH forms should reduce, with the new policy to ask all standard risk victims as well.  The police also need to address the way in which they record ethnicity, the current system is out of date.

7) Use data such as the HACT value database to put a value on the work that is going on in the community, this would help statutory authorities to commission their resources more effectively and also to offer financial support or training to those who are providing services to victims.

8) Provide training and details of where to signpost victims to churches, community centres and other agencies that have been found to be offering informal support to victims.

9) Work with Social Care and care agencies to provide tailored support to older victims who are found to be far less likely to report to the police. Training needs to be provided on where they should seek help and how to recognise the signs of abuse, which should include financial abuse from children.

10) The CAM exercise demonstrated its use as action research. More exercises like this could be conducted by the community in areas that are flagged up by the model as under or over predicting the amount of abuse. This could help identify the services that already exist, both formally and informally, the level of collective efficacy and the strengths and needs of the community. It could also inform commissioners of the most appropriate services for the area.

11) Clacton was flagged up as an area that had less abuse reported than that was predicted, was lacking collective efficacy and was an area where there was space and time clustering. This area warrants close monitoring, partnership and community engagement.

<u>Future research</u>

Taking an intersectional approach to this analysis has really added value in seeing the interaction between gender and other variables, particularly age and class.  There are, however, limitations to the analysis, particularly the issues around recording ethnicity.  There are also variables that were not available in this analysis, such as sexuality and disability data.  To really understand the nuances between the intersections the analysis could be complimented with some more in-depth interviews or text analysis of the free text fields recorded in the DASH.

The importance of gender was particularly clear at the individual and family and relationship level.  Future research should also consider using gendered data at the neighbourhood level and to view the neighbourhood as a further intersection.

Further modelling is needed to see whether those who report to other agencies exhibit the same predictors as those who report to the police.  If this data is unavailable in Essex, then modelling could take place in another police force area so that reporting patterns and risk factors can be investigated further.  Agencies that could be contacted include health, housing providers, courts, CAFCASS, Victim Support, refuges and other charities.

The research found that the amount of collective efficacy in an area seems to influence the level of abuse that is reported to the police.  Being able to quantify this, using survey data would enable this variable to be added into the model.  Exploration of suitable surveys or new methods of collecting this information could be explored in further research.  This would help to confirm the probable casual pathway that was developed in chapter seven.

There are some hidden groups who have been difficult to identify in this research, such as the middle class.  This may be because the middle class are not reporting to anyone, or if anyone at all only close friends or family.  Reporting of domestic abuse did increase during a domestic abuse storyline in the BBC Radio 4 series, The Archers, which has many middle class listeners.  Analysis of police data before, during and after the storyline using classification data, such as OAC or Mosaic, could identify middle class victims and the areas in which they live.

The research identified churches as an important source of support.  Unfortunately, no other faith organisations were visited during the CAM exercise.  A next step would be to explore whether other faiths offer a similar source of trust and support.  This would be particularly interesting in areas where there are higher proportions of people of other religions, such as metropolitan areas.

In an aspatial application a multilevel model could be used to separate the individual and contextual effects, but this method implies the nature of relationship is discontinuous, and therefore would not identify the non-stationary relationships that GWR does (Fotheringham, 2002). A more recent methodology, hierarchical spatial autoregressive modelling, has been used to investigate the spatial dependence of land prices, so future work could explore the application of this methodology to personal and contextual characteristics as predictors of domestic abuse (Dong and Harris, 2015).

Plans are already afoot for this research to be expanded nationally.  Essex is fairly representative of the general population, but whether the models would fit in a more metropolitan or very rural area need to be tested.  Essex is not as

ethnically diverse as other areas, so it would be good to test the models in areas that are different.  An application is currently being written to apply for an ESRC New Investigator grant, with support from the Home Office, College of Policing, several police forces, housing providers and local authorities.  The model is also currently being tested with data from Colchester Borough Homes (CBH), with funding from CBH and the Office for Student's funded Catalyst project.

Conclusion

Those who report their abuse to the police do appear to be different in profile from those who do not and therefore commissioning services based on police data will fail certain groups in the population or geographical areas.  Taking an interdisciplinary, multi-faceted approach to predicting domestic abuse, however, gives a more accurate prediction of the risk factors and where the services and resouces should be focused in order to have the greatest impact in intervening earlier, to reduce the harm and to give victims access to justice and support.  The thesis contributes to theory, makes recommendations to policy makers and leaves suggestions on future research that could expand the uses and reach of the model.

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Appendix 1: Domestic Abuse, Stalking and Harassment and Honour Based

Violence (DASH) risk assessment full questions

| Variable Name | DASH Risk Questions |
|---|---|
| Financial | Are there any financial issues? |
| Pregnant | Are you currently pregnant or have you recently had a baby? |
| Depressed | Are you depressed or having suicidal thoughts? |
| Frightened | Are you very frightened? |
| Isolated | Do you feel isolated from family/friends? |
| Police trouble | Do you know if (.....) has ever been in trouble with the police or has a criminal history? |
| Hurt others | Do you know if (.....) has hurt anyone else? |
| Harassment | Does (.....) constantly text, call, contact, follow, stalk or harass you? |
| Sexual | Does (.....) do or say things of a sexual nature that makes you feel bad or that physically hurt you or someone else? |
| Control | Does (.....) try to control everything you do and/or are they excessively jealous? |
| Strangle | Has (.....) ever attempted to strangle / choke / suffocate / drown you? |
| Hurt children | Has (.....) ever hurt the children / dependants? |
| Hurt animals | Has (.....) ever mistreated an animal or the family pet? |
| Perpetrator attempted suicide | Has (.....) ever threatened or attempted suicide |
| Threatened to hurt children | Has (.....) ever threatened to hurt or kill the children / dependants? |
| Threat to kill | Has (.....) ever threatened to kill you or someone else and you believed them? |
| Weapon | Has (.....) ever used weapons or objects to hurt you? |
| Drugs alcohol mental health | Has (.....) had problems in the past year with drugs (prescription or other), alcohol or mental health leading to problems leading a normal life? |
| Injury | Has the current incident resulted in injury? |
| Separated | Have you separated or tried to separate from (.....) within the last 12 months? |
| Worse | Is the abuse getting worse? |
| Abuse more often | Is the abuse happening more often? |

| | |
|---|---|
| Any other person afraid of | Is there any other person that has threatened you or that you are afraid of? |
| Child contact | Is there conflict over child contact? |

Appendix 2: Output Area Classification Description

http://geogale.github.io/2011OAC/

1 – Rural residents The population of this supergroup live in rural areas that are far less densely populated compared with elsewhere in the country. They will tend to live in large detached properties which they own and work in the agriculture, forestry and fishing industries. The level of unemployment in these areas is below the national average. Each household is likely to have multiple motor vehicles, and these will be the preferred method of transport to their places of work. The population tends to be older, married and well educated. An above average proportion of the population in these areas provide unpaid care and an above average number of people live in communal establishments (most likely to be retirement homes). There is less ethnic integration in these areas and households tend to speak English or Welsh as their main language.

2 – Cosmopolitans The majority of the population in this supergroup live in densely populated urban areas. They are more likely to live in flats and communal establishments, and private renting is more prevalent than nationally. The group has a high ethnic integration, with an above average number of residents from EU accession countries coinciding with a below average proportion of persons stating their country of birth as the UK or Ireland. A result of this is that households are less likely to speak English or Welsh as their main language. The population of the group is characterised by young adults, with a higher proportion of single adults and households without children than nationally. There are also higher proportions of full-time students. Workers are more likely to be employed in the accommodation, information and

communication, and financial related industries, and using public transport, or walking or cycling to get to work.

3 – Ethnicity central The population of this group is predominately located in the denser central areas of London, with other inner urban areas across the UK having smaller concentrations. All non-white ethnic groups have a higher representation than the UK average especially people of mixed ethnicity or who are Black, with an above average number of residents born in other EU countries. Residents are more likely to be young adults with slightly higher rates of divorce or separation than the national average, with a lower proportion of households having no children or non-dependent children. Residents are more likely to live in flats and more likely to rent. A higher proportion of people use public transport to get to work, with lower car ownership, and higher unemployment. Those in employment are more likely to work in the accommodation, information and communication, financial, and administrative related industries.

4 – Multicultural metropolitans The population of this supergroup is concentrated in larger urban conurbations in the transitional areas between urban centres and suburbia. They are likely to live in terraced housing that is rented – both private and social. The group has a high ethnic mix, but a below average number of UK and Irish born residents. A result of this is that households are less likely to speak English or Welsh as their main language. Residents are likely to be below retirement age. There is likely to be an above average number of families with children who attend school or college, or who are currently too young to do so. The rates of marriage and divorce are broadly comparable with the national average. The level of qualifications is just under the national average with the

rates of unemployment being above the national average. Residents who are employed are more likely to work in the transport and administrative related industries. Public transport is the most likely method for individuals to get to and from work, since households are less likely to have multiple motor vehicles available to them.

5 – Urbanites The population of this group are most likely to be located in urban areas in southern England and in less dense concentrations in large urban areas elsewhere in the UK. They are more likely to live in either flats or terraces, and to privately rent their home. The supergroup has an average ethnic mix, with an above average number of residents from other EU countries. A result of this is households are less likely to speak English or Welsh as their main language. Those in employment are more likely to be working in the information and communication, financial, public administration and education related sectors. Compared with the UK, unemployment is lower.

6 – Suburbanites The population of this supergroup is most likely to be located on the outskirts of urban areas. They are more likely to own their own home and to live in semi-detached or detached properties. The population tends to be a mixture of those above retirement age and middle-aged parents with school age children. The number of residents who are married or in civil-partnerships is above the national average. Individuals are likely to have higher-level qualifications than the national average, with the levels of unemployment in these areas being below the national average. All non-White ethnic groups have a lower representation when compared with the UK and the proportion of people born in the UK or Ireland is slightly higher. People are more likely to work in the

information and communication, financial, public administration, and education sectors, and use private transport to get to work.

7 – Constrained city dwellers This supergroup has a lower proportion of people aged 5 to 14 and a higher level aged 65 and over than nationally. It is more densely populated than the UK average. People are more likely to be single or divorced. There is a lower representation of all the non-White ethnic groups and of people who were born in other EU countries. There is a lower proportion of households with no children. Households are more likely to live in flats and to live in social rented accommodation, and there is a higher prevalence of overcrowding. There is a higher proportion of people whose day-today activities are limited, and lower qualification levels than nationally. There is a higher level of unemployment in the supergroup. There are no particular industries in which workers are most likely to be employed, but some industries such as information and communication, and the education sector are underrepresented.

8 – Hard-pressed living The population of this group is most likely to be found in urban surroundings, predominately in northern England and southern Wales. There is less non-White ethnic group representation than elsewhere in the UK, and a higher than average proportion of residents born in the UK and Ireland. Rates of divorce and separation are above the national average. Households are more likely to have non-dependent children and are more likely to live in semi-detached or terraced properties, and to socially rent. There is a smaller proportion of people with higher level qualifications, with rates of unemployment above the national average. Those in employment are more likely to be employed in the mining, manufacturing, energy, wholesale and retail, and transport related industries.

Appendix 3: Knox test results by month

| Month | Chi-Square | P of Chi-Square | 95% Simulation | Significant space time interaction |
|---|---|---|---|---|
| November 2011 | 21.73 | 0.00010 | 51.96 | No |
| December 2011 | 0.23 | n.s. | 54.93 | No |
| January 2012 | 174.25 | 0.00010 | 52.95 | Yes |
| February 2012 | 0.83 | n.s. | 48.47 | No |
| March 2012 | 8.69 | 0.0001 | 54.33 | No |
| April 2012 | 2.41 | n.s. | 46.56 | No |
| May 2012 | 20.03 | 0.0001 | 50.41 | No |
| June 2012 | 21.06 | 0.0001 | 55.31 | No |
| July 2012 | 43.32 | 0.0001 | 59.06 | No |
| August 2012 | 11.74 | 0.001 | 55.39 | No |
| September 2012 | 108.02 | 0.0001 | 50.98 | Yes |
| October 2012 | 1.68 | n.s. | 56.60 | No |
| November 2012 | 0.32 | n.s. | 46.01 | No |
| December 2012 | 55.79 | n.s. | 51.61 | Yes |
| January 2013 | 0.11 | n.s. | 51.48 | No |
| February 2013 | 8.47 | 0.01 | 40.61 | No |
| March 2013 | 0.013 | n.s. | 51.02 | No |
| April 2013 | 4.54 | 0.05 | 47.17 | No |
| May 2013 | 152.34 | 0.0001 | 50.83 | Yes |
| June 2013 | 4.23 | 0.05 | 55.58 | No |
| July 2013 | 1.28 | n.s. | 66.00 | No |
| August 2013 | 0.18 | n.s. | 55.41 | No |

| September 2013 | 3.43 | n.s. | 47.31 | No |
|---|---|---|---|---|
| October 2013 | 0.035 | n.s. | 55.23 | No |
| November 2013 | 21.53 | 0.0001 | 45.20 | No |
| December 2013 | 2.14 | n.s. | 43.42 | No |
| January 2014 | 8.47 | 0.01 | 49.89 | No |
| February 2014 | 0.45 | 0.016 | 69.8 | No |
| March 2014 | 25.31 | 0.0001 | 45.93 | No |
| April 2014 | 37.67 | 0.0001 | 52.53 | No |
| May 2014 | 29.71 | 0.0001 | 53.88 | No |
| June 2014 | 7.91 | 0.01 | 59.08 | No |
| July 2014 | 37.36 | 0.0001 | 53.33 | No |
| August 2014 | 29.27 | 0.0001 | 49.56 | No |
| September 2014 | 34.13 | 0.0001 | 45.91 | No |
| October 2014 | 0.22 | n.s. | 50.83 | No |
| November 2014 | 0.58 | n.s. | 55.91 | No |
| December 2014 | 6.04 | 0.05 | 54.30 | No |

Appendix 4: Mantel test results by month

| Month | Mantel Index | Simulated index 2.5% | Simulated index 97.5% | Significant space time interaction |
|---|---|---|---|---|
| November 2011 | 0.00704 | -0.00860 | 0.00913 | No |
| December 2011 | -0.00119 | -0.00897 | 0.00860 | No |
| January 2012 | 0.01412 | -0.00960 | 0.00905 | Yes |
| February 2012 | 0.00754 | -0.00824 | 0.00892 | No |
| March 2012 | 0.00487 | -0.00869 | 0.00899 | No |
| April 2012 | 0.00067 | -0.00892 | 0.00862 | No |
| May 2012 | -0.00553 | -0.00830 | 0.00866 | No |
| June 2012 | 0.00582 | -0.00817 | 0.00870 | No |
| July 2012 | 0.00817 | -0.00826 | 0.00819 | No |
| August 2012 | 0.00102 | -0.00798 | 0.00839 | No |
| September 2012 | -0.00841 | -0.00873 | 0.00858 | No |
| October 2012 | -0.00248 | -0.00895 | 0.00945 | No |
| November 2012 | 0.00333 | -0.00870 | 0.00923 | No |
| December 2012 | 0.00686 | -0.00846 | 0.00792 | No |
| January 2013 | 0.00017 | -0.00845 | 0.00939 | No |
| February 2013 | -0.00053 | -0.00924 | 0.00993 | No |
| March 2013 | -0.00086 | -0.00859 | 0.00941 | No |
| April 2013 | 0.00111 | -0.00849 | 0.00829 | No |
| May 2013 | 0.00562 | -0.00827 | 0.00857 | No |
| June 2013 | -0.00348 | -0.00809 | 0.00824 | No |
| July 2013 | -0.00088 | -0.00770 | 0.00765 | No |
| August 2013 | -0.00539 | -0.00798 | 0.00816 | No |

| September 2013 | -0.00404 | -0.00858 | 0.00815 | No |
|---|---|---|---|---|
| October 2013 | 0.00183 | -0.00870 | 0.00886 | No |
| November 2013 | 0.00638 | -0.00962 | 0.00885 | No |
| December 2013 | 0.00502 | -0.00928 | 0.00901 | No |
| January 2014 | -0.00163 | -0.00824 | 0.00919 | No |
| February 2014 | -0.00164 | -0.00937 | 0.00968 | No |
| March 2014 | -0.00723 | -0.00911 | 0.00891 | No |
| April 2014 | -0.00081 | -0.00827 | 0.00859 | No |
| May 2014 | 0.00437 | -0.00878 | 0.00912 | No |
| June 2014 | -0.00071 | -0.00799 | 0.00775 | No |
| July 2014 | 0.00618 | -0.00774 | 0.00817 | No |
| August 2014 | 0.00510 | -0.00846 | 0.00827 | No |
| September 2014 | 0.00579 | -0.00889 | 0.00926 | No |
| October 2014 | 0.00211 | -0.00911 | 0.00862 | No |
| November 2014 | 0.00295 | -0.00858 | 0.00887 | No |
| December 2014 | 0.00334 | -0.00848 | 0.00822 | No |

## Appendix 5: Repeat victimisation coefficient maps
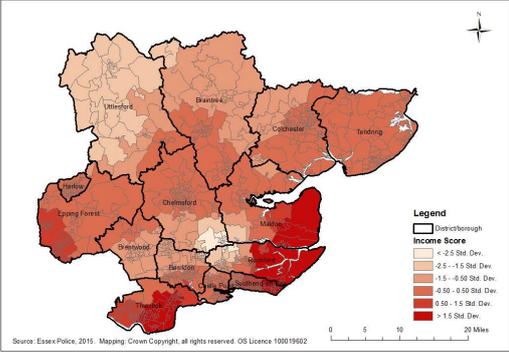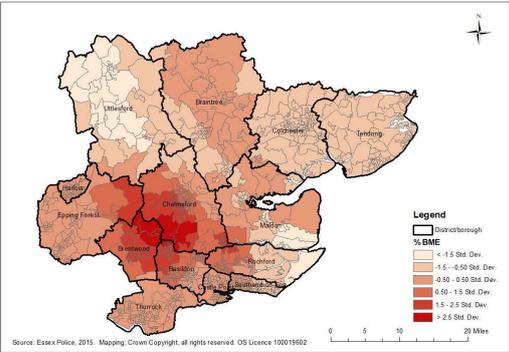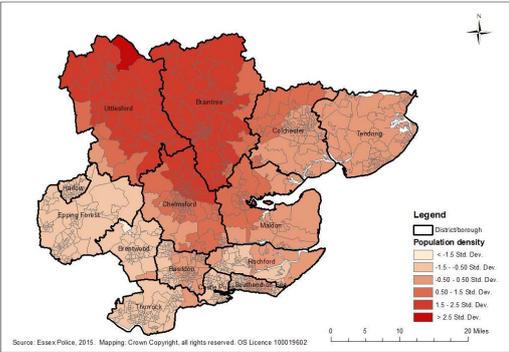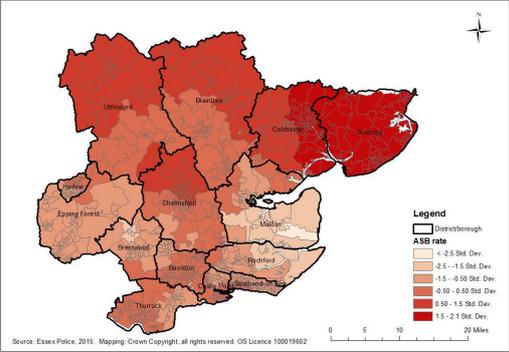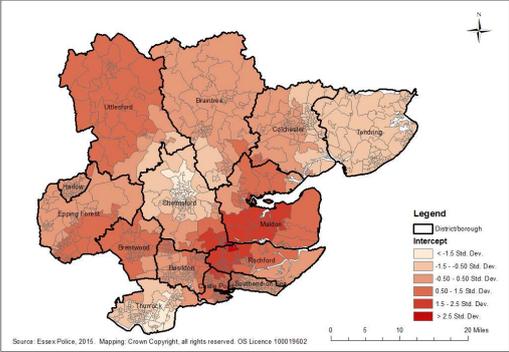
## Appendix 6: Survey123 questions

**Name of asset** *
What is the name of the asset

Please input 1 - 50 characters

**Type of Asset** *

☐ Organisation

☐ Group/Informal

☐ Individual

☐ Other

**Number of members**

**Opening times**

**Asset details**

**Asset photo**

Click here to upload file. (<10MB, support: jpg.jpeg.png.gif)

**Asset photo 2**

Click here to upload file. (<10MB, support: jpg.jpeg.png.gif)

**Asset webite**

**GeoPoint**

⦿ Set Location