First time offenders as once and future victims:

Using police records to explore the victim-offender overlap in the Turning Point Project

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This thesis is submitted for the degree of Doctor of Philosophy

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Signed:

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Abstract

Introduction

The victim-offender overlap is an important phenomenon in criminology (Jennings et al, 2012). The research supporting the existence of the overlap is undisputable and it is arguably one of the most significant facts in criminology (Bottoms and Costello, 2010). Current research has neglected critical areas and answers are needed about how victimisation and offending co-occur and how to identify those victim-offenders who are most harmed (Bottoms and Costello, 2010). Furthermore, there is limited knowledge about what effect interventions such as out of court disposals (OOCD) have on the overlap, or if there is potential to build a triage tool or algorithm to identify the most harmed in future.

Research questions

These will focus on four areas victimisation – including types, frequency and harm, the victim-offender overlap, the impact on police reported victimisation by an OOCD, and finally if from criminal and victimisation history prior to the intervention date can outcomes post be predicted.

1). What does victimisation look like in low-level offenders when explored through police records in terms of prevalence, frequency, types, and harm?
2). What are the patterns and relationships between victimisation and offending in this sample?
3). What is the impact of an out of court disposal that aimed to be as effective at reducing offending as sending individuals to court on victimisation?
4). Can victimisation be predicted, and can who is most at-risk of becoming victim-offenders be predicted?

Methods

This PhD thesis used the police records of offending and victimisation from the sample of low-level offenders taking part in the Turning Point Project. Which was a randomised control trial (RCT) comparing sending low level offenders through court processing against an OOCD. Victimisation and offending data were collected from police data systems (CRIMES, Police National Computer, and ICIS), matched manually using name and date of birth. Before being analysed in R, basic descriptive statistics, correlations, and odds ratios were used for the first two parts of the analysis. Results from the RCT were analysed using chi square, effect sizes and survival analysis. The final section of the thesis used cox's regression and binomial logistic regression to examine the impact of pre randomisation variables.

Results

The victim-offender overlap was found to be extensive with 63% of the sample reporting a form of victimisation. Victimisation experiences and involvement in offending varied throughout the sample. Violence was most the most prevalent form of both victimisation and offending, caused the most victimisation harm, and had the largest overlap between victimisation and offending. The analysis of harm indicated these low-level offenders reported victimisations that equalled a total 82,180.5 harm points on the Cambridge Crime Harm Index. Using a harm score allowed five different groupings for victimisation to be created, based on the total harm and total number of victimisations suffered. Combining victimisation and offending in this sample showed some complex patterns, and while the two were clearly related this was not a simple positive correlation.

The results of the RCT showed no effect of the intervention on male low-level offenders for either prevalence, frequency, survival, or harm for victimisation. However, a significant backfire effect on all measures was seen for female low-level offenders. Further research concludes this effect is most likely attributable to the significantly higher victimisation occurring prior to randomisation. Finally, the results of the regression analysis indicated key variables associated with increased risk, although the models used here produced high rates of false negatives. Victimisation is more likely to occur if the individual is still involved

in offending and key predictive variables differ between victim only, offender only, non-involved and victim-offenders. With victim-offenders tending to be younger, be involved in offending or victimisation prior.

Discussion

Consistent with prior research low-level offenders show a substantial overlap, indicating that low-level can be experiencing problematic and concerning levels of victimisation. While the precise mechanism cannot be discerned from this study, it is proposed that understanding both the individual propensity and the environmental exposure is important. This provides some suggestions for beneficial interventions and how to target victim-offenders effectively. While the results here did not produce a clear case for the benefits of OOCD, the results indicated for male low-level offenders the OOCD was "*as good as*" preventing victimisation as court processing. This mirrored the findings for offending for the OOCD, suggesting that inventions that have null effects on offending are likely to have the same on victimisation. The picture for female low-level offenders is more complex, and while it is likely related to the initially higher levels further investigation would be advisable. Finally, while the models used here produced high rates of false negatives and were limited in their explanatory power, they did highlight key variables and groups to focus on. Indicating this may be an approach to explore further in future.

Policy implications

This research suggests six key considerations for policy:

1). Given the amount of victimisation present in low level offenders any policy aimed at low level offenders needs to be written with the explicit understanding that there will be high levels of victimisation present.

2). Prevention of violence is a key policy that should be taken from this thesis. Violence was the most prevalent form of both victimisation and offending and caused the most harm from victimisation.

3). Issues are not distributed equally throughout, and resources should be targeted to those suffering or causing the most harm. Using number alongside harm may provide a context that allows better targeting of resources.

4). Any intervention research into preventing offending needs to include a measure of victimisation alongside that of offending, and vice versa. Without these important effects may be being missed, and policy decisions are not being made based on the best evidence.

5). Due to the link between victimisation and offending in those where cooccurring issues are identified, interventions should aim to approach both simultaneously.

6). Victimisation, offending and becoming a victim-offending appear to be outcomes that could to some degree be predicted through algorithms or machine learning. Therefore, policy should consider utilising this approach to improve the accuracy of decisions.

Conclusion

The study reiterates the importance of the victim-offender overlap and indicates even among low-level offenders the overlap can be extensive and problematic. The results here present important findings on several aspects including the first known analysis of victimisation from a RCT aimed at prevention of offending. The potential to prevent future harm from the policy implications outlined in this study are potentially vast, and the approaching victimisation and offending simultaneously could produce wide ranging benefits. The victim-offender overlap should be the centre of future policy and research.

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While writing a PhD is a rather lonely pursuit mostly completed on your own, all these people helped to keep me going and remind of why I perhaps rather innocently began.

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Chapter 1

Introduction

Select any group of individuals, make them any ethnicity, from any place, and of any age (provided they are all old enough to engage in criminal behaviour) then try to separate them into three groups. To the left side place the offenders, and to the right place the victims; this should leave those who have not been either offender or victim standing in the middle. The reality is that many of those who have been victims will also have been offenders and vice versa (Lauritsen and Laub, 2007). The distinctions between offenders and victims are not as neat as many criminologists, police, policy makers and the public believe (Drake and Henley, 2014; Greer, 2017; Heber, 2013).

This is known as the victim-offender overlap and it is one of the more uncomfortable truths in criminology (Lauritsen and Laub, 2007; Bottoms and Costello, 2010). That this overlap exists is incontestable (Lauritsen and Laub, 2007; Jennings et al, 2012; Bottoms and Costello, 2010); however, why it occurs is far more open to debate (Berg and Felson, 2016), and even more controversial is how to approach this in practice (Heber, 2013). Currently the research base on the victim-offender overlap is quite limited in several critical areas (Berg and Felson, 2016), including flawed theories, simplistic methods, and lack of a variety of samples preventing full exploration of the mechanisms behind the victim-offender overlap (Berg and Felson, 2016). Authors Lauritsen and Laub (2007) conclude the research has reached somewhat of an impasse, more is known about the factors that do not produce the victim-offender overlap than about those that may be responsible. In the years since this opinion was expressed this sentiment continues to be echoed e.g Bottoms and Costello (2010) and Berg and Felson (2016).

Numerous papers, books and procedures talk of treating offending or alleviating the impact of victimisation – just as they are written on the distinct causes of offending and victimisation. Few explicitly address the causes of the overlap. Bottoms and Costello (2010) suggest that this could due be in part to data collection – for example on police systems records of victimisation and records

of offending tend to be kept separately, meaning prior to any analysis records must be matched manually. This is a difficult time-consuming process, although it is possible to carry out as Neyroud (2015) and Bottoms and Costello (2010) demonstrated. Offenders that have been victimised also have to contend with the perspective that due to their activities their victimisation is somehow deserved or earned. Making it a lesser priority than solving crimes occurring to "*innocent*" victims (Drake and Henley, 2014).

How the criminal justice system (CJS) approaches victim-offenders should be a critical consideration for several valid reasons. Firstly, some argue that certain policing strategies such as zero tolerance can create an environment where the legitimacy of the police decreases, which can lead to individuals relying on informal justice to solve disputes (Rosenfeld, Jacobs & Wright, 2003). Previous bad experiences with the CJS can also discourage the disclosure of victimisation, or individuals could feel that due to their involvement in risky or deviant activities that they may be blamed (Mancini and Pickett, 2015).

Often when individuals are arrested there is a failure to acknowledge that offending and victimisation co-occur and are linked in intricate ways (Jay, 2014; Gilfus, 1993). This can lead to misidentification of individuals as offenders when they have predominantly suffered victimisation or been coerced into illegal activities. This is particularly applicable to instances where trafficked individuals are coerced into illegal activities such as prostitution or involvement in selling or producing drugs (Gilfus, 1993; Williams, 2010; Finn Muftic and Marsh, 2015; Robinson, McClean and Densley, 2019; Mir, 2013).

The British CJS is constructed on the idea that victims need to be supported and helped to overcome their trauma, while offenders need to be dissuaded from continuing offending and punished (Drake and Henley, 2014). In the UKs adversarial justice system there needs to be a guilty party – the offender – and an innocent one – the victim (Bottoms and Costello, 2010). Given the significant overlap it is arguably a serious failing of the current CJS, and consequently could be less efficient, less effective and at times even harmful to victims. A clear example of this was demonstrated by the revelations around Child sexual

exploitation in Rotherham (Jay, 2014). While creating a state where offenders can be seen a less valid victims because they do not fit the cookie cutter innocent victim.

Victimisation of offenders' fits within the view of a "*just*" world – that bad things happen to bad people and they must have done something in order to deserve victimisation (Dalbert, 2009). In the *#metoo* age jokes about child molesters or other serious offenders being raped in prison are still laughed about (Rousell, 2018). On more minor offending even "*God laughs*" when a thief steals from a thief (Old Jamaican proverb). It is easy to justify the victimisation of offenders as something that they have brought upon themselves (Drake and Henley, 2014). The legal system should strive to rehabilitate and where possible reintegrate offenders into society and therefore prevent future offending and victimisation (Lauritsen and Laub, 2007).

Study of the victim-offender overlap is also critical to Evidence Based Policing. Which is defined by Sherman (1998) as: *"Evidence-based policing" is the use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units, and officers. It suggests that just doing research is not enough and that proactive efforts are required to push accumulated research evidence into practice through national and community guidelines. These guidelines can then focus in-house evaluations on what works best across agencies, units, victims, and officers*." The current literature on "*what works*" in policing has critical gaps since arguably misses addressing the victim-offender overlap. If Sherman's (1998) policy of moving towards Evidence Based Policing is to be followed, then better evidence about the victim-offender overlap is needed. This would allow the design of better policy, as Lauritsen and Laub (2007) and Bottoms and Costello (2010) highlight current policy assumes that offenders are offenders only and victims are victims only then opportunities may be being missed.

Victim-offenders should not only be identified in simple of terms of how much victimisation has been suffered, a measure of how much harm the crime suffered or committed should be considered (Sherman, Neyroud and Neyroud,

2016). Here harm can be defined as "*physical or mental damage*" Merriam Webster (2021) or "*to damage them or make them less effective or successful than they were*" Collins (2021). Counting by number alone attempted murder, rape, criminal damage, common assault will all count for one crime or victimisation – yet clearly there is a serious harm differential between types – "*not all crimes are created equal*" (Sherman, Neyroud and Neyroud, 2016).

In a time of ever decreasing resources and budgets while faced with investigating increasingly complex cases (College of Policing, 2015) deciding where and how to apply resources is critical. (Sherman, Neyroud and Neyroud, 2016. Considering harm allows researchers and the police to identify a "*power few*" or in the case of offenders a "*felonious few*" – which are the small number of individuals which account for a disproportionate amount of the harm in each population (Sherman, 2007). There can then be a triage approach where more resources are applied to those experiencing the most harm (Dudfield et al, 2017), with the aim of firstly alleviating the damage from the previous harm and since repeat victimisation can be a likely outcome in some circumstances (Pease, 1998). Targeting by harm will also allow individuals who are suffering small numbers of very harmful crimes to be identified – when if they were identified by number alone would have been missed (Sherman, Neyroud and Neyroud, 2016). From Hiltz, Bland, and Barnes (2020) victim-offenders can be a critical group where harm concentrates, with the victim-offenders in their study having the highest average harm score, and accounting for 13% of total harm despite only making up 6% of the total sample number. This was also confirmed by Sandall, Angel, and White (2018) who found victim-offenders had 75.4% higher harm scores on average and 68% higher average crime counts.

Evidence based policing also means considering what the best approach is to treating victim-offenders within the CJS. The outcome of randomised control trials in criminology generally only considers one outcome – which is the effect of an intervention on reducing offending (Lauritsen and Laub, 2007). Yet with victimisation and offending so intricately linked there should be consideration of whether interventions can be adapted to target both victimisation and offending concurrently (Lauritsen and Laub, 2007; Mckillop, Brown, Johnson,

Smallbone and Oligvie, 2017) or as some authors argue (e.g. Shreck, 1999) the causes of victimisation and offending are one and the same if these can be alleviated then there should be effects on victimisation as well. Furthermore, if the victim-offender overlap is ignored interventions may be based on the wrong factors (Lauritsen and Laub, 2007).

This could mean the intervention are ineffective because they are targeting the wrong factors or worse could have a backfire effect (Lauritsen and Laub, 2007). Potentially making any reductions in reoffending worthless if a simultaneous increase in victimisation is occurring. An intervention that prevents 100 crimes being committed yet increasing the number of victimisations suffered by the treatment group to 300, means the net number of crimes occurring in the treatment group would still be higher than the control group by 200. So, while the intervention successfully reduced offending the overall crime in fact increased, overall meaning the intervention outcome was unfavourable, and arguably harmful.

There is the possibility for an overall net loss, yet interventions could effectively target factors that are associated with both victimisation and offending – meaning that any net reductions in crime could be even greater when victimisation added (Lauritsen and Laub, 2007; Mckillop et al, 2016). An intervention that prevented 100 fewer offences and reduced victimisation by 100 would give a net reduction 200 crimes. With any intervention or randomised control trial a measurement of victimisation needs to occur. First to test if there are any backfire effects on victimisation and second to see if the opposite is true – those interventions that reduce offending could potentially also reduce victimisation (Mckillop et al, 2016).

Identifying who among the offender or victim population are likely to go on to become victim-offenders could be a critical avenue for future research. Many of these offender-victims seem to have more negative mental health measures that those who are involved in either offending or victimisation alone (Cuevas et al, 2007), making them a critical group to target for reducing harm, preventing further victimisation, and offending. Current decision making in custody is

regarding risk doesn't consider prediction of victim-offenders or victimisation, instead focussing on future risk of re-offending. Secondly decision making relies primarily on "*clinical models*" of forecasting risk, rather than statistical prediction methods (Oswald, Grace, Unwin and Barnes, 2018). Research across a wide range of fields shows that statistical forecasting in combination with professional judgement is typically more accurate than clinical judgement alone (Oswald, Grace, Unwin and Barnes, 2018).

With the increasing interest in "*big data*" and "*machine learning*" in policing and the success of predictive algorithms such as the evidence-based intelligence tool (EBIT) (McFadzien, Pughsley, Featherstone and Phillips, 2020) and the Harm Assessment Risk Tool (HART) (Oswald, Grace, Unwin and Barnes, 2018). This may be the ideal time to begin considering this approach for victim-offenders and for risk of future victimisation. If victim-offenders – known to be a critical group where harm concentrates (Hiltz, Bland and Barnes, 2020) - can be more accurately forecasted, then more appropriate and consistent decisions could be made.

In a climate where there is less money and workforce the focus should be on committing resources to programs that are evidentially proven to be successful, and to the individuals most at need of them (Sherman, 1998). Linking together these four aspects – the victim-offender overlap, harm scoring, testing the success of interventions through measurement of victimisation alongside offending and prediction who is at most risk of future harm – could provide so much insight for criminologists and those involved in the CJS. The causes and mechanisms of the victim-offender overlap in can be investigated. These can be used to inform policy and to plan future interventions. Use of a harm index to investigate who is most harmed can identify those most harmed. While investigation of offending and victimisation looks at the possible effects of interventions on both offending and victimisation. Identifying if interventions have beneficial, null or backfire on victimisation or the victim-offender overlap. While the final strand looks at whether at the point of delivering the intervention who is most at risk of becoming a victim-offender. Putting these aspects together could create better interventions based on a more robust knowledge

base about the victim-offender overlap. This thesis will use the data from the Turning Point Project to investigate and inform knowledge on these areas.

Chapter 2

The Turning Point Project and the key aims of this research

The Turning Point Project (TPP) is a randomised control trial (RCT) based in Birmingham (UK) comparing an out of court disposal on low-level offenders with the usual court process - to examine the four areas outlined in the introduction. This part of the thesis will outline the aims and initial findings of the TPP project, how low-level offenders were identified, the initial victimisation study and summarise the research approach, hypothesis, and justifications for this thesis.

The four key questions will be as follows:

1). What does victimisation look like in low-level offenders when explored through police records in terms of prevalence, frequency, types, and harm?

2). What are the patterns and relationships between victimisation and offending in this sample?

3). What is the impact of an out of court disposal that aimed to be as effective at reducing offending as sending individuals to court on victimisation?

4). Can victimisation be predicted, and can who most at-risk of becoming victim-offenders be predicted?

The Turning Point Project

The Turning Point Project (TPP) is a randomised control trial designed to test the effectiveness of an out of court disposal (OOCD) – consisting of 4-month tailored plan designed to aid offenders in desisting from future offending – against the usual court process for a sample of low-level offenders. The TPP aimed to implement a more structured out of court disposal based on a "*sword of Damocles*" idea – called "*offender desistance policing*" (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). The offenders were offered a four-month plan with the promise of no official sanction if they complied. Failure to comply or declining the OOCD would result in the offender being sent through the court process. This aimed to emphasise the celerity and certainty of justice – this was achieved by having offenders attend the first meeting within days of subject offences - rather than severity (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). While the conditions given were aimed to tackle the

criminogenic causes of their offending. Conditions given to offenders focussed on either restorative/reparative, rehabilitation or movement constraint (table 1).

Table 1: Breakdown of Turning Point conditions in Phase 4 (Neyroud and Slothower, 2013)

Primary type of condition	*Specific type*
Restorative/Reparation (65%)	Compensation (40%)
	Community payback (36%)
	Letter of apology (20%)
Rehabilitation (58%)	Drugs/alcohol counselling (36%)
	Employment (16%)
	Mental health (11%)
	Housing (5%)
	Anger management (2%)
	Debt (2%)
	Drug search (2%)
Movement constraint (33%)	Exclusion zone (27%)
	Not to contact victim (15%)

To be entered into the project offenders were run through a series of 14 questions to determine their eligibility against of set of criteria (see appendix A for full list of questions) based primarily on previous offending history and details of the current offence. To be eligible, the offending history had to be limited to one previous conviction at least five years prior for adults and two years for juveniles. The offence randomised for had to be one where the custody sergeant considers to be unlikely to result in a custodial sentence. To prevent net widening offenders were only entered once the police considered there was adequate evidence to charge the offender (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015).

Eligible offenders entered a randomiser to determine if they were to be assigned to treatment or control groups (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). If the offender was assigned to the treatment group, then they were given the option of the OOCD. To take part in the OOCD no admission of guilt was necessary, researchers considered that requiring an admission could bias the sample. Some offences are more likely to be admitted to and admittance can vary based on trust of the police (Neyroud and Slothower, 2013). The offence would still appear on their Police National Computer (PNC) Record but would be listed as a caution rather than a court conviction. Some offenders despite being assigned to the OOCD they opted to proceed through court with one notably saying he would prefer to go to court since nothing ever happened to him at court.

The project ran from 2013-2016 including data collection and the two year follow up for results. Run primarily by the police with one permanent embedded researcher and a research assistant the TPP replicated a "*business as usual*" approach (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). The random assignment of subjects was carried out by custody sergeants. The plans created by either the offender management teams or the local youth offender team (YOTs) depending on the age of the subject. By running TPP as business as usual the team aimed to overcome one of the primary criticisms of randomised control trials. That of when an intervention is moved from the "*sterile*" environment of the trial and into "*real life*" that the results are not replicable (Sampson, 2010). TPP relied on utilising the police's inbuilt resources rather than bringing extra staff or moving the responsibility to other organisations allowing the police to maintain control.

Turning point two-year results

In 2016 the initial two years of reoffending data were collected for analysis to determine the effects of the experiment. This section will give a brief overview of the yet unpublished results, which have currently been subjected to limited analysis. This produced four key early findings; firstly, while using an OOCD did not produce significant decreases in offending prevalence or frequency there were four notable positive outcomes. Victims whose offenders were sent

to the TPP were significantly more satisfied (45% increase) than victims whose offenders were sent to court (Slothower, 2014). It should be noted that this is also influenced by how the OOCD is explained to the victim. Effective communication of the aims of TPP and the likely outcomes from court processing is essential to keep victims satisfied. Contrary to some opinions victims can be happy with OOCD and can be preferable option to victims.

Secondly returning to the idea of certainty of justice offenders were more likely to face consequences with the OOCD disposal (94%) compared to court (70%). This is an essential consideration when thinking about deterrence because previous studies have shown that increasing the certainty of punishment is more effective than increasing the severity (Nagin, 2018). Additionally, this means that less offenders were sent to court – potentially leaving more court time for more frequent offenders or serious offences.

Thirdly when measuring harm using the Cambridge Crime Harm index the sample of offenders who were sent through TPP committed 36% less harm than those sent to court. The total decrease between the two sides is equivalent to almost 10,000 days in prison on the CCHI – equivalent to the harm caused by 1.7 homicides, or 5.3 rapes. A significant finding even if the OOCD did not produce significant effects on prevalence or frequency of offending.

Finally – and perhaps most significant to policy makers looking at strategies to reduce cost in a time of austerity and severe budget cuts to both policing and court services – sending offenders to an OOCD has significant cost savings. Conservative estimates of processing offenders through court indicated an average cost of £1,762, with cases with multiple court dates were costing significantly more. Processing offenders through the OOCD cost an average of £977.43, a saving of nearly half for every case dealt with via an OOCD.

Despite these promising results there are some considerations for future. Breach cases could have been followed up faster leading to a greater retention of cases. Breaches between the assignment to TPP and the approximately three day wait for a meeting with an offender manager was a common point for

a breach to occur. Another method to prevent this loss would be to have the treatment plans agreed immediately following assignment, again this would bring emphasis to celerity of justice. The interventions given by the offender manager teams overall could have been better targeted to the needs of the offenders and could have been delivered with more clarity. Expanding the scope of the intervention to focus more clearly on the criminogenic causes of re-offending and re-victimisation using a more therapeutic approach could produce greater benefits (Cullen et al, 2018) – since TPP focussed more on certainty and celerity.

It can be concluded that the processing offenders through an OOCD produced no significant decreases in offending frequency or prevalence with no backfire effects. Despite the lack of a *"positive"* win in terms of the usual measurements of successfulness – prevalence and frequency - of an intervention; the project produced a significant cost saving even with a conservative estimate of court costs, brought more offenders "*to justice*" and had a significant reduction in harm over court processing.

The work on TPP victims also shows that using an OOCD can be a preferable option to victims provided it is completely explained to victims of the crimes. While as with any experiment there are aspects of the TPP that could be improved in future, the initial results are extremely encouraging. With replications of TPP being conducted by Durham (Checkpoint) and the Metropolitan Police some of these can be improved upon. The potential expansion of this approach beyond the specific types of offenders selected for TPP is also promising – with of course the usual caveat that the approach would need to be adequately tested to ensure there are no backfire effects for specific types or groups of offenders.

The initial victimisation study

The prevalence, incidence, type, and harm of police reported victimisation of offenders in the Turning Point Project

The study in 2015 used police data from TPP to examine the prevalence, frequency, and types of victimisations. There was additionally a small amount

of work identifying through correlation patterns in victimisation and offending. This study produced some key but limited findings. Critically 56% were listed as victims, and the incidence of violent victimisation reported to the police was three times that which the general population self-reports (Neyroud, 2015). The first victimisation occurred generally in adolescent or when the individual was a young adult, with a mean first victimisation age of 21, with 75% of first-time victimisations occurring under 24. In 58% (n=146) of cases where the individual was recorded as a victim, the victimisation occurred prior to first arrest, while 41% (n=102) arrest proceeded first victimisation (Neyroud, 2015). Victimisations varied in number with 24% (n=105) recording a singular victimisation event and the maximum reported for one being 21. A clear power few could be identified, those recording six or more victimisations accounted for only 8% of the sample but 43% of the total victimisation.

As well as criminal type victimisation events the data system used also produced results related to no crimes incidents. These were events e.g a child going missing or a domestic violence incident that did not result in injury (Neyroud, 2015). While some may consider that criminal victimisation alone should be the focus of study, these non-crime incidents showed significant correlation to criminal victimisation and could be valuable for identifying the most vulnerable victim-offenders. These also identified suspected child sexual exploitation, mental health issues, and other relevant events (Neyroud, 2015).

Utilising motus operandi (MO) details identified that 62% of violent assaults were perpetrated by someone known to the victim (i.e a family member, friend, or partner). Indicating that whom the individuals knew and associated with influenced their risk of victimisation. Leading to the author proposing as Bottoms and Costello (2010) that relationships and social networks may influence the victim-offender overlap, through exposure to peers, family or other known associates that are likely to victimise them (Neyroud, 2015).

This research built a picture of a population suffering high levels of victimisation, and even though they were defined as "*low level*" offenders victimisation experienced could be defined as problematic and occurring at higher rates for

some types than the general population. However, this research was limited to a basic description analysis and correlations. Due to the TPP study design and the high levels of victimisation identified by the initial study this data provides as excellent resource to investigate aspects of the victim-offender overlap in more depth.

Why use the TPP data to look at the victim-offender overlap

TPP provides a unique opportunity to explore several different areas beyond just the effectiveness of the OOCD on offending. Due to both the extensive data collection and randomisation of the sample other areas of criminology can be explored. While TPP was primarily concerned with reducing offending, exploration of victimisation using police records is also possible. Previous studies have focussed on study of the victim-offender overlap primarily utilising self-reports or surveys (e.g Smith and Ecob, 2007) other authors (e.g Bottoms and Costello, 2010) have used police records to examine the overlap. Though police records will always be subject to the missing data from unreported or unrecorded crime, it is important to investigate if the victimisation data held by police could provide crucial insights to the victim-offender overlap. Potentially as previously discussed this data could be utilised by the police to decided resource allocation and predict risk of future, it is valuable to analyse the accuracy and relevance of what data can be readily accessed, since it may be difficult if not impossible when victim-offenders are arrested to persuade them to make disclosures regarding their victimisation and vulnerabilities.

Firstly, the data can be used to provide a basic overview of the victim offender overlap. This will build on the previous study (Neyroud, 2015), which used data up to March 2015. The first part of this research will add an additional two years of data up to October 2017 and repeat the methods used in 2015. This will aim to provide details about prevalence and frequency of victimisation in this sample. An additional two years of data allows a longer follow up of the victim-offender overlap as well as giving the potential to answer further questions, such as the impact of the OOCD on victimisation. Intervention research generally requires two years of data post to make firm conclusions, which was not available for the initial study.

As well as looking at prevalence and frequency this research will also add a measure of harm to the data. Victimisation cannot be considered merely in terms of frequency and prevalence – clearly all crimes are not created equally, and it is necessary to be able to distinguish theft, rape, and murder (Sherman, Neyroud and Neyroud, 2016). From this the identification of a "*power few*" – those most harmed by victimisation – can be made. Potentially providing details to create a triage tool for use by police. The focus here will be on harm from victimisation since the offending harm caused will be reported in the overview of the TPP results.

Using a UK based sample adds to the knowledge base because many of the previous studies use samples based in the US. Potentially the predominant culture values and relationship with the police may be considerably different between large urban areas in the US and the UK. That is not to say that Birmingham does not have some cultures at odds with the police or each other. Since previous authors (Berg et al, 2012) have suggested that culture could play a role in the causation of the victim- offender overlap it is suggested that examining it in a large urban area of the UK, with offenders who are less involved in criminogenic activities could be essential to understanding the potential mechanisms that determine the overlap.

Arguably examining the overlap in low-harm first time offenders could provide the greatest overall benefit, because these comprise the largest group (Sherman, 2007) and every offender must have a first offence. How to build the CJS gateway to have the greatest possible effect of deterring future crime and preventing future harm – and that includes harm to offenders - is a critical question. Potentially understanding if there is a victimisation history prior to this event could allow more effective treatment and provide a justification for treating in a less punitive and more supportive method (Neyroud, 2015). The overlap can be extensive even among low-harm offenders their lives are often as complex and contain many of the same issues as those in custody (Mazerolle and Legosz, 2007; Neyroud, 2015).

The TPP can be used to explore the hypothesis that interventions designed to reduce reoffending could also impact subsequent victimisation. From research victimisation and offending are linked both through shared risk factors and or causally (Lauritsen and Laub, 2007; Berg and Mulford, 2020). Interventions like TPP that aim to target offending should be investigated to explore any impacts on victimisation. The question of whether through successfully "*treating*" offending the CJS can also affect changes in victimisation among offenders is an intriguing idea, and one that requires investigation. Particularly because theoretically the converse could be true, treatment of offending could result in increased amount of victimisation which could make the overall impact when both victimisation and offending are considered a net negative impact. As McCord 2003 noted, "*Unless social programs are evaluated for potential harm as well as benefit, safety as well as efficacy, the choice of which social programs to use will remain a dangerous guess*" (p. 16).

The final aim of this thesis will be to explore whether prediction of future victimisation and victim-offenders using police data is possible. Making triage decisions based on previous harm is one approach but being able to predict future outcomes could be more valuable for deciding appropriate disposals, and resource allocation. This may require the creation of a forecasting tool or algorithm to predict these outcomes. A tool such as this could assist police decision-making about eligibility for an OOCD as well identifying potentially highest harm groups for targeting.

Research aims and hypothesis.

Victimisation and the victim-offender overlap

Victimisation and the victim-offender overlap in low level offenders will be explored using police records to examine how extensive, the amount of victimisation and what different types are occurring. Different types will be examined to see how they co-occur in this group of offenders, and if non-criminal victimisation is co-occurring with criminal victimisations. Data on the location and circumstances of the victimisations will be used to consider what

types of mechanisms could be involved in the victim-offender overlap in this sample.

Using the CCHI this thesis will investigate distribution of harm from victimisation within this sample. This research will aim to identify a "*power few*" within the sample, compare differences between genders for harm scores, and examine concentration of harm against concentrations of victimisations by number. Finally, this thesis will categorise individuals based on numbers of victimisations and harm from victimisation into five categories. From this information on harm distribution through samples will be found and potentially could be used to give suggestions for potential strategies to approach victimisation can be indicated.

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Part 1: Exploring victimisation in the TPP sample:

Does an overlap exist between victimisation and offending, and what types of victimisations are most prevalent and most harmful?

From previous research an overlap will exist between victimisation and offending (Jennings et al, 2012), although arguably it may be smaller among low-level offenders who could be perceived as being less involved in criminality and therefore less vulnerable to victimisation. The converse may be true with some low-level offenders as involved in victimisation as higher-level (Mazerolle and Legosz, 2007; Neyroud, 2015).

H:1.1 An overlap exists between victimisation and offending.

Previous research (e.g Dudfield et al, 2017) suggests that harm is unevenly distributed with a small proportion of the sample – the so called "*power few*" accounting for a disproportionate amount of the harm. If the TPP sample follows this rule, then a small proportion of individuals will account for a significant and disproportionate amount of harm.

H:1.2 Harm will be unevenly distributed with a small proportion of individuals recording a disproportionate amount of harm.

Does harm concentrate more than number of victimisations?

From prior studies (e.g Dudfield et al, 2017; Weinborn et al, 2017) harm concentrates within a smaller number of units than number, potentially this will be true among low-level offenders as well.

H:1.3 Harm concentrated on a smaller number of units than number.

How do types of victimisations relate to each other? And do non-criminal victimisations relate to criminal victimisations?

Potentially some types of victimisations may be particularly likely to co-occur – for example violence and domestic violence non-crimes, since they may be related to factors that increase vulnerability to different types of victimisations. Non – criminal types of victimisations may be acting as *"markers"* for features that relate to vulnerability to criminal victimisations, or events that the police speculate could latter become criminal (Neyroud, 2015).

H:1.4 Different types of victimisations are related

H:1.5 Non-criminal victimisations are co-occurring and relate to criminal victimisations.

What is the influence of gender on victimisation within this sample?

Previous research has highlighted critical differences between male and female offending and involvement in the victim-offender overlap. Potentially this could be true among low-level offenders.

H:1.6 Gender influences victimisation with one gender tending to report more victimisation

Prior research proposes that there are differences between male and female victimisation and offending. Potentially females may be reporting more victimisation or may be more vulnerable to some kinds of victimisation and therefore have a tendency towards having higher harm scores.

H:1.7 There are clear differences between males and females harm distributions and what types of victimisations harm is coming from.

Can individuals be placed into different categories depending on how many victimisations and how harmful the victimisations they are suffering are?

Weinborn et al (2017) proposed using number and harm to create 5 different categories for places, it may be possible to use this approach for victimisation as well however it has yet to be tried. Potentially victimisation may follow similar patterns to how crime distributes by place. Based on Weinborn et al (2017) analysis of place suggested categories is as follows; high harm high frequency victims, high harm low frequency, low harm high frequency, low harm low frequency and those not suffering victimisation.

H:1.8 Individuals can be classified into one of five different distinct categories.

What are the circumstances and location of the victimisations suffered and do these vary by type of victimisation or gender?

Arguably some types of victimisations are more likely to occur in some circumstances, domestic violence could be more likely to occur within the home setting while others – such as theft – may be more likely to occur away from the home. These factors may also show some variability by gender with males and females being more vulnerable in different circumstances or locations.

H:1.9 There is variability due to gender and type of victimisation, which certain types of victimisation being more likely to relate different circumstances and be more prevalence for one gender than the other.

Part 2: Investigating the victim-offender overlap

Offending data will be matched to victimisation records to identify any links between victimisation and offending in this sample. A specific closer look will be taken at the overlap between violent victimisation and offending due to the previously high reported levels of violence in this sample (Neyroud, 2015). As well as adding to the limited data base on the victim-offender overlap, potentially this information could inform CJS approaches and strategy to improve outcomes for low level victim-offenders

What is the prevalence and types of offending that the police are charging the TPP sample with?

The main analysis for the offending behaviour of the TPP sample will be analysed in separate research, however a brief overview will be included here, to provide context for the further analysis of the victim-offender overlap.

H:2.1 Offending behaviours will vary across the sample, and there may gender differences for which crime types are committed.

How do victimisation and offending relate to each in this sample?

Due the previous research on the victim-offender overlap, some forms of victimisation and offending will show significant overlap and is it likely that this will vary by the type of victimisation.

H:2.2 Victim and offending will be related, but the relationship will vary depending on the types of victimisations considered.

What influences the overlap between violent victimisation and offending in the TPP sample?

How to understand violence and the causes of violent is a critical question for researchers and practitioners alike (Berg and Felson, 2016). Potentially violent victims and violent victim-offenders may show significant differences in where their victimisations are occurring.

H: 2.3 Violent victims and violent victim-offenders may be significantly different and the factors causing their victimisations may vary.

Part 3: The effect of an OOCD on victimisation

This thesis will make use of the fact that the study method was a randomised control trial to investigate the impact of OOCD upon victimisation. Whether assignment to an OOCD increased, decreased, or had no effect on victimisation two years post random assignment will be examined. This will aim to firstly provide a unique perspective on whether victimisation is impacted by formal processing – something which few other studies into offending consider, and to consider a possible factor that could affect treatment success through an OOCD.

What differences are evident for subsequent police reported victimisation when low-level offenders are assigned to an out of court disposal compared to treatment as usual (court processing)?

Theoretically if offending was reduced then potentially victimisation could also be reduced (Mckillop et al, 2016), however potentially there could be backfire effects in victimisation regardless of the effect on offending. No previous known studies using a RCT have considered this aspect, therefore it is not known which outcome is most likely. Effects on offending by the TPP OOCD were equivalent to that from sending offenders to court, speculatively the same could be found to be true for victimisation.

H3.1 The TPP OOCD will have no effect on reported victimisation prevalence

What effect do OOCDs have on reported victimisation frequency?

As the results for offending there will be no impact on victimisation between the OOCD and court processing.

H3.2 The TPP OOCD will have no effect on reported victimisation frequency

What effect do OOCDs have on reported victimisation harm?

The offending results for TPP OOCD produced a reduction in offending harm so it may be possible that this pattern may be seen for victimisation harm. With results showing a significant reduction in harm from victimisation in the OOCD side.

H3.3 The TPP OOCD will have no effect on reported victimisation harm

Part 4: Prediction of victimisation and victim-offenders

Who is most at risk of victimisation post randomisation, and is becoming a victim-offender a predictable outcome?

Knowing who is a victim-offender within historic data is one aspect, however if it is possible to predict who will become victimised, offended, or become a victim-offender in future this could be a more critical concern. The first part of this research provides an overall look at the types of victimisations and the harm from victimisation. This final part of the research aims to look at if from what is known prior to randomisation outcomes for offending and victimisation can be predicted post. This would potentially suggest if creation of triage tool or

algorithm could be beneficial for guiding decisions around where to expend resources and prioritise based not just on prior history but also future risk.

What other variables that have so far not been considered in the earlier analysis are associated with reduced victimisation survival?

Previous research demonstrates the strong links between offending and victimisation (e.g Mckillop et al, 2016); therefore, it is predicted that those suffering victimisations will be more likely to be reoffending in the two years post randomisation. Other variables such as age, types of offending and victimisation may also influence future risk of victimisation.

Using Cox's regression and binomial models what variables are the most significant in predicting poorer outcomes for victimisation post randomisation, and what percentage of variability in victimisation can the variables available in this study explain?

H4.1 some variables such as continued re-offending post randomisation may relate to increased risk of continued victimisation.

Is it possible to identify from variables associated with the period prior to randomisation which group – victim only, offender only, victim offender or non-involved low-level offenders are likely to belong to? And do these variables differ between the four groups?

From previous research (e.g Van Gelder et al, 2014; Cuevas et al, 2007) there may be key differences between victim only, offender only, victim-offender and the non-involved. It may be possible the significant variables prior to randomisation are difference between the four groups.

H4.3 Predictor variables are different between victim only, offender only, victim-offender and the non involved.

Chapter 3

Victim-offender overlap

Introduction

This chapter will discuss the current key research and theories of the victim-offender overlap, as well as how it is currently approached in policy, and the issues posed by the neglect in policy and practice. An overview of the current limitations of the research base will also be presented, along with key criminological theories and mechanisms forwarded to the overlap in current literatures. Based on the analysis a possible more comprehensive theory based on situational action theory (SAT) is offered.

Overview and limitations

One of the best predictors of an individual's risk of victimisation is the extent to which that individual is involved in offending (Lauritsen and Laub, 2007) with evidence for the existence of the overlap across different crime types from violent (Dobrin, 2001; Briody, Daday, Crandall, Sklar and Frost, 2006; Daday, Briody and Crandall, 2008), acquisitive (Bottoms & Costello, 2010), fraud (Holfreter, Reisig, Piquero & Piquero, 2010), cybercrime (Kerstens and Jansen, 2016), road rage (Ashbridge, Smart & Mann, 2003; Roberts and Indermaur, 2008) and to non-criminal but deviant activities such as bullying (Haufle and Wolter, 2014; Gunter and Newby, 2014). The overlap also presents when using different data sources including police data (Bottoms and Costello, 2010; Neyroud, 2015; Pizzarro, Zgoba and Jennings, 2011), hospital records (Riviara, Shepherd, Farrington, Richmon and Cannon, 1995 ; Daday, Briody and Crandall, 2008), self-reports (Smith and Ecob, 2007), in prison (Toman, 2019) to interviews (Jacobs and Wright, 2006).

This overlap can be extensive although variation by sample type, methods, types of victimisations and offending, and location can be seen (Jennings et al, 2012). For example, Neyroud (2015) found using police records that 56% of a sample of low-level offenders in Birmingham (UK) reported victimisation to the police, while studies using interviews (e.g Gilfus, 1993; Jacobs and Wright, 2006) found victimisation appears to be an almost universal experience. Bottoms and Costello (2010) found in a 9-month period 69% of their sample of

offenders had reported a household offence such as burglary or theft in a dwelling to the police. Reingle and Maldonaldo-Maldina (2012) found in a sample of Native Americans (n=338) from the ADD health study 27.5% reported both victimisation and offending. Broidy et al. (2006) found 50% of homicide victims in New Mexico had been arrested for an offence. While Cuevas et al. (2007) classified 23% of their sample of youths from the Developmental Victimisation survey as delinquent-victims. For the three waves of the Boricua Youth Study Maldonado-Molina et al (2010) found 27.4% at wave 1, 18.2% at wave 2 and 15.3% for wave 3 were victim-offenders. At all three waves victim-offender group size was considerably larger than those defined as only offending (9.1% wave 1, 6.6% wave 2, and 4.3% wave 3). This was consistent with others studies e.g Beckley et al (2018) found in E-risk study individuals (n=2232) were 1.5 times as likely to be victim-offenders (29%) compared to offenders-only (20%).

The research is conclusive about the existence of the overlap with a review of the literature by (Jennings et al, 2012) finding that 31 out 37 studies found in support of the overlap, with the remaining six finding mixed or limited support. Yet despite the overwhelming evidence supporting the existence of the overlap, in policy the overlap is almost entirely neglected. Offenders and victims are portrayed as belonging to two different groups, with offenders preying upon the vulnerable victims (Heber, 2013; Drake & Henley, 2014).

However uncomfortably this may sit against the conventional perspective of victims and offenders as discrete groups, it cannot be ignored that in any sample of victims there will be a significant number involved in offending (Bottoms & Costello, 2010; Berg and Mulford, 2020). Requiring "*model*" victims or creating policy based on the "*ideal*" victim can arguably disadvantage "*real*" victims. A justice system built for ideal victims will inevitably fail when faced with the real challenges of offending and victimisation.

Some suggest that looking at some aspects of the victim-offender overlap could reflect the idea of "*victim blaming*" (Bottoms and Costello, 2010). The victim is blamed for attracting the attention of the offender and failing to protect

themselves from victimisation (Eigenburg and Garland, 2008). A classic example is where a rape victim's clothing is "*blamed*" for drawing the attention of the rapist. In the case of a victim-offender they could be "*blamed*" for their victimisation due to their previous actions such as inciting the offender, associations with "*dodgy*" friends, or going to a place known to be related to high crime (Drake and Henley, 2014). Furthermore, if all offenders are treated as victims this could be perceived as relieving them of responsibility for their offences (Bottoms and Costello, 2010). Yet individuals can be victimised through circumstances out of their control e.g. victims of childhood sexual exploitation and childhood abuse often go on to become offenders (Miley et al, 2020; Widom, 1995). Again, this leads back to the view of "*model*" victims and that in order to be a "*true*" victim they must be entirely blameless for what has occurred. There is more acceptance in policy for the role of adverse childhood experiences (ACEs) in relation to crime (UK Parliament, 2018) and awareness of the victim-bully pathway within schools (Haufle and Wolter, 2014; Gunter and Newby, 2014). The victim-offender overlap is not limited to these types and policy must expand beyond consideration of more sympathetic victim-offenders.

It must be accepted however that victims can be instrumental in the actions that lead to them becoming a victim of crime (Wolfgang, 1958). During assaults and homicides, the eventual victim was often noted to be the initial aggressor (Berg, Slocum and Loeber, 2013; Berg, 2012; Wolfgang, 1958). Understanding how the interactions between victim and offender lead to the result is vital to prevent future crime (Berg, Slocum and Loeber, 2013; Berg and Mulford, 2020). This approach arguably is distinct from victim blaming where fault is placed onto the victim alone for the actions of the offender and more focused to a practical and realistic approach of how individuals become victims of crime.

How the criminal justice system approaches victim-offenders should be a critical consideration from multiple aspects. Some argue that certain policing strategies such as zero tolerance policing can create an environment where the community views the police primarily as harassers who unfairly target them (Berg, Slocum and Loeber, 2013; Berg, Stewart, Schreck and Simon, 2013),

Causing alienation between the police and the community. Rather than relying on police intervention to resolve disputes individuals or groups may move to resolving them potentially through more direct and often violent means (Rosenfeld, Jacobs and Wright, 2003; Jacobs and Wright, 2006). This can also lead to escalation where a cycle of actions can lead to serious violence within the communities.

Previous adverse experiences with the criminal justice system (CJS) can also discourage the disclosure of victimisation. Individuals could feel that due to their involvement in risky or deviant activities that they likely to be blamed (Mancini & Pickett, 2015). Often when individuals are arrested there is a failure to acknowledge that offending and victimisation co-occur and are linked in intricate ways. Which can lead to misidentification of individuals as offenders when they have predominantly suffered victimisation or been coerced into illegal activities. This is particularly applicable in instances where trafficked individuals are pressured into illegal activities such as prostitution (Gilfus, 1992; Williams, 2010; Finn, Muftic and Marsh, 2015; Robinson, McClean and Densley, 2019).

Victim blaming, a lack of understanding and alienation were all were implicated in the inability of services to intervene timely in the case of child sexual exploitation (CSE) in Rotherham and Oxford. These cases involved the exploitation of vulnerable young people over several years, victims were subjected to repeated serious sexual abuse, threatened, and in some cases trafficked. Conservative estimates from the Jay report (2014) suggested that 1,400 children had been abused between 1993 and 2013 in Rotherham alone. One review of the Oxford cases noted victims of CSE were labelled "*troublemakers*" who were "*difficult, badly behaved and they were putting themselves in harms way*" (Oxfordshire Safeguarding Children Board, OSCB, 2015, pp105) and "*precocious and difficult behaviour was seen as something that they decided to adopt with harm coming because of their decisions to place themselves in situations of great risk* " (OSCB, 2015, pp111). These were not the only failings noted in the report; another issue was the reluctance of involved authorities to be branded racist as the perpetrators were

predominantly British Pakistani males (Jay, 2014). Still, it is apparent that the attitude towards and lack of understanding of the victims of CSE contributed to the failure to recognise that they were victims of exploitation. In these cases of CSE these were young vulnerable girls being sexually exploited by older men, yet due in part to services not making the connections the exploitation and serious harm were permitted to continue (Jay, 2014; OSCB, 2015).

Knowing about these individual's previous history of offending or victimisation can possibly explain why they are vulnerable to being victimised and committing offences (Berg and Felson, 2016). It may show how these experiences unfolded and influenced offending and victimisation (Jennings, Piquero and Reingle, 2012). Offending and victimisation are very different concepts, and it is hard to reconcile how the two could be linked. To discount the relationship between victimisation and offending limits the understanding of both. Even if offending alone is considered victimisation still needs be studied to be able to discount non causal factors from causal (Lauritsen and Laub, 2007).

The victim-offender overlap doesn't just face neglect in policy; comparative to studies focused on either offending or victimisation there are few studies of the victim-offender overlap (Bottoms and Costello, 2010; Jennings et al, 2012). Research in this area is critical to understand several aspects of both offending and victimisation, with some leading criminologists going as far to argue that "*neither victimisation nor offending can be understood without full consideration of the other*" (Lauritsen and Laub, 2007, pp56).

With the current focus on "*what works*" and "*evidence-based policy*" the victim-offender overlap should arguably be at the centre of future research in crime prevention (Lauritsen and Laub, 2007; Berg and Felson, 2016). Policy and practise that effectively addresses the issues facing victim-offenders could have far reaching benefits (Berg and Felson, 2016, Neyroud, 2015), and may be especially relevant given that victim-offenders appear to have more negative mental health issues than victims or offenders (Cuevas, Finkelhor, Turner and

Ormrod, 2007). Victim-offenders could be a critical group to target to prevent both future harm by and to (Bottoms and Costello, 2010).

While there has been an increase in the amount of research into this topic, there remain some critical limitations to the research base. Predominantly, the current studies are conducted on juvenile populations, often using school-based samples which relying on self-report alone to assess the overlap and variables. Considerable repetition in the data sources used for these studies poses a significant limitation, for example numerous studies use data from the ADD Health study (e.g Daigle, Beaver and Hartman, 2008; Schreck and Fisher, 2004). These are not different studies on unique discrete data but instead the same population reanalysed with focus on different variables or theoretical approaches. The response rate with ADD Health sees significant losses over the years – beginning with 20,745 participants but aiming to collect data for only 12,000 during wave V - and many questions have significant missing data. It is quite possible given the often-chaotic lifestyles of those seriously involved in either or both victimisation and offending that they may be the hardest to remain in contact with and be significantly more likely to be missed in the follow up waves (Bottoms and Costello, 2010; Kenny et al, 2016).

Other limitations include a focus in the studies based on interviews or in-depth analysis of police data, on more severe types of crime and offenders and a focus on violent crime (Bottoms and Costello, 2010). Although, the focus on violent crime is understandable due to the significant harm that violence causes to society and the overlap for violent crime is suggested to be larger (Jennings, Piquero and Reingle, 2012). It is important to understand how other types of offending and victimisation fit together or alongside violence.

A further limitation is that the greater proportion of studies use samples from the United States. The results of these studies may not be transferable across cultures limiting their applications to the wider victim-offender overlap. This may be especially significant given that one of the key mechanisms proposed by many researchers are based on sub-cultural theories (Berg and Felson, 2016), and due to the current geographic limitations of the data full analysis of this

aspect is incomplete. Posick and Gould (2015) found that while the overlap between victimisation and offending was consistent feature across countries, some cultural variables (e.g power distance and individualism) were found to have a small amount of influence. Their findings were for countries, and it may be necessary to consider differences within cities, and even down to small neighbourhoods, or microplaces.

Why does this overlap occur?

At first glance it is tricky to see how victimisation and offending could be related. Offending can be perceived as an action – something that one does (Wikstrom, 2014), however victimisation is something that is experienced and done to someone. How can vulnerability victimisation and commission of offending be so closely linked? The two are so different in concept and meaning, yet that an overlap exists between the two is indisputable (Berg and Mulford, 2020). While there is a research base proving the existence of the overlap, far less attention has been paid to the mechanisms responsible (Lauritsen and Laub, 2007; Bottoms and Costello, 2010; Berg and Mulford, 2020).

Within the literature there is little consensus whether there is a causal relationship or if the overlap is spurious and linked by variables related to both phenomena. The relationship between may be spurious because victims and offenders tend to live in areas that are socially disadvantaged, where the overall rate of crime in such areas is higher and individuals may be experiencing more exposure to associated risk factors (Lauritsen and Laub, 2007). Several studies through controlling multiple factors suggest that the overlap is not spurious (e.g Averdijk, Van Gelder, Eisner and Ribeaud, 2016; Stewart, Schreck & Simons, 2006) and there is some form of causal relationship between victimisation and offending. Direction of the causal relationship also remains debatable with some using victimisation to predict latter offending (e.g Averdijk et al; 2016), while others relating offending to victimisation (e.g Farrell and Maltby, 2003). Causal ordering may also be impossible to discern in all circumstances since individuals can ricochet rapidly between offending and victimisation (Farrall and Maltby, 2003).

Potentially the causes and mechanisms of the overlap may vary depending on the direction of events (Berg and Felson, 2016). There are further questions about whether offending and victimisation are related positively – i.e as victimisation increases so does offending, and vice versa, or if involvement in one can end the involvement in the other (Daigle, Beaver and Hartman, 2008). From the literature any of the above are possible outcomes of the overlap, so while the existence of the overlap is clearly proved many aspects are subject to debate (Berg and Mulford, 2020).

To further complicate some people are resilient against the effects of victimisation and do not become involved in offending (Falshaw, Browne and Hollin, 1996) and some offenders appear to escape victimisation. Even within those belonging to the overlap group some are involved as predominantly offenders and some are principally involved as victims (Maldonaldo-Molina, Jennings, Tobler, Piquero and Canino, 2010). For example, Cuevas et al (2007) found 12% of their sample of 1,000 youth between the ages of 10 and 17 were primarily delinquent reporting very little victimisation, and 19% were primarily victims reported to have very minor involvement in delinquency.

Those involved in both victimisation and offending there is variation in the types of offending and victimisation. Cuevas et al. (2007) found three main types, bully victims, property delinquent victims and a delinquent sexual/maltreatment group. Reid and Sullivan (2012) also identified three types labelling them; general, bullied combative and abused/substance types. As well as different types of offenders, Madonaldo et al, (2010) proposes that individuals exhibit different trajectories finding four relating to delinquency and three for victimisation.

The mechanisms proposed to explain the overlap are generally based on either "*risk or population heterogeneity*" or "*state dependant*" processes or in some cases aspects of both. The former (*risk or population heterogeneity)* argues that individuals differ according to some generally stable characteristics that correlate to or influence both offending and victimisation, while the latter (*state*

dependence) proposes that exposure to victimisation/offending influences the individual's future risk of victimisation/offending (Bottoms and Costello, 2010).

There is evidence for both state dependant (Averdijk et al, 2016) and risk heterogeneity processes influencing the overlap (Schreck, 1999; Van Gelder et al., 2014). As with offending alone (Nagin and Paternoster, 2000) the most complete explanation of the victim-offending overlap requires both state dependant and risk heterogeneity (Ousey, Wilcox and Fisher, 2010), meaning that overall neither population heterogeneity or state dependant processes alone can explain all aspects of the overlap.

Risky lifestyles perspective

One of the early proposed mechanisms for the victim-offender overlap is known as either the *deviant or risky lifestyles perspective*. Suggesting that victimisation and offending are related because risky lifestyles expose individuals to other offenders as well as provide opportunities for victimisation (Sampson and Lauritsen, 1990; Lauritsen, Sampson and Laub, 1991; Lauritsen, Laub and Sampson, 1992). Participation in activities such as drinking extensively, attending bars, nightclubs, parties, walking or driving after dark were found to correlate with increases in both offending and victimisation (Sampson and Lauritsen, 1990). As well as facilitating offending delinquent peers may also facilitate victimisation because they are not the most capable guardians– and may be involved in victimising their peers (Schreck et al, 2004; Turanovic and Young, 2016). Time spent involved in risky activities with such peers may also provide opportunities for motivated individuals that are conducive to offending and delinquency (Schreck et al, 2004).

Why offenders may be motivated to victimise other offenders is critical to understand and why offenders can be vulnerable victims is also important. Three explanatory mechanisms proposed by Felson et al., (2000) to explain why offenders may become victimised by people they know. Firstly "*inside information*" – offenders may have inside knowledge about where a person is likely to be and what goods they may be carrying. Secondly "*proximity and impulsiveness*" – offenders may target anyone in proximity and people they

may be convenient targets. "*Dispute related*" – offenders are interested in targeting the person with whom they have a grievance, or who has provoked their anger in some way. Although Felson et al (2000) proposes these with reference to acquisitive forms of offending, they remain relevant to other some other types e.g dispute related has relevance for violent offending.

Early studies that analysed the British Crime Survey indicated that involvement in deviant activities was associated with risk for victimisation, and this relationship remained significant even after controlling for socio-demographic factors and proxies for neighbourhood crime rates. Lauritsen, Laub and Sampson (1992) found the most dangerous activity for adolescents to engage in was delinquent behaviours. Victims and victim-offenders differ in their tendencies to engage in risky activities (Klevens, Duque and Ramirez, 2002). While Mustaine and Tewksbury (2000) found that victimisation was best predicted by high exposure to potential offenders and to a lesser extent alcohol use, offending was related to demographic characteristics and participation in other illegal activities.

This evidence of the relationship between risky lifestyles and the victim-offender overlap suggested that this does have some relevance to explaining the overlap. Yet the theory may explain some aspects better than the others. For example, Cops and Pleysier (2014) found that risky lifestyles was better for explaining offending than victimisation – their binomial regressions could account for a maximum of 0.20 of the variance in offending and only 0.158 for victimisation; leaving a significant amount of variance unaccounted for by their risky lifestyles variables. Victimisation was not the result of having a risky lifestyle but having a riskier lifestyle was related to a higher prevalence of offending which in turn led to higher levels of victimisation (Cops and Pleysier, 2014). Characteristics associated with offending behaviour may make offenders attractive victims – irrespective of how risky their lifestyles are.

Critically this theory fails to address if there is a causal sequence between victimisation and offending, instead viewing as the convergence between a vulnerable victim and a motivated offender. While risky lifestyles can provide a

framework for explaining the convergence of victim and offenders, there is a need for further consideration of why individuals select into situations or respond with behaviours. Additionally, risky lifestyles does not effectively address the fact not all of the offender population falls victim to crime, and not all victims are involved in offending (Cuevas et al, 2007; Beckley et al, 2018), and some victims are not targeted for reasons related to their delinquent behaviour. As a theory deviant lifestyles or risky lifestyles requires further development.

Individual differences

A second proposed approach to explain the victim-offender overlap is the individual differences perspective (Berg and Felson, 2016). This perspective proposes that rather than victimisation and offending being causally related to each other; instead, each is a symptom of a common trait that sorts individuals into environments conducive offending and victimisation (Schreck, 1999). One of the traits proposed is low self-control; while originally used to explain offending, low-self-control associates with other risky behaviours (Schreck, 1999). Specific to victimisation Schreck (1999) argues that people with low self-control are less likely to perceive that their behaviour can have negative consequences, more likely to engage in untrustworthy behaviour, lack empathy, less likely to take measures to avoid being victimised, and may be more likely to antagonise others or deal with conflict with physical aggression.

In a sample of college students studying criminal justice programs in the United States Schreck (1999) found that even after the effect of criminal behaviour was controlled, the measure of self-control still had significant effects on victimisation. Holfreter, Reisig, Piquero and Piquero (2010) also found that the overlap between fraud offending, and victimisation is partially explained by self-control. Using data from the second International Study of Delinquent Development (ISRD-2) Posick (2013) found that low self-control was one of the most powerful and consistent predictors of offending and victimisation across countries. While these studies are all cross sectional in a longitudinal study Jennings, Higgins, Tewksbury, Gover and Piquero (2010) found that low self-control was the most salient risk factor for distinguishing victim-offender

trajectories, signifying that low self-control can affect long term patterns in victimisation and offending.

Low self-control may be a good differentiator between those involved in victimisation and offending and those uninvolved Van Gelder et al. (2014). Yet individual involvement in both victimisation and offending is not always equal, some offenders are heavily involved in offending with little to no victimisation and some victims are only peripherally involved in offending (Berg and Felson, 2016). Low self-control alone arguably cannot adequately explain the differential vulnerability of individuals offend or be victimised. Just identifying low self-control as the critical variable doesn't address how this develops, for example early victimisation or childhood experiences, as well genetic variability, head injuries, environmental exposure to violence and a multitude of other potential developmental experiences could be the root causes of low self-control.

Van Gelder et al (2014) expanded their variables beyond self-control and found that additional socio-psychological variables such as depression or social anxiety, were found to predict the tendency to differentiate into victim, offender, or victim-offender roles over and about routine activities and subculture of violence perspectives, suggesting that certain psychological characteristics increase risk of being targeted for victimisation as well as offending. By expanding the variables measured beyond self-control meant role differentiation can be better understood. Some of these variables are better predictors of offending than victimisation – for example Posick (2015) found that low self-control, violent attitudes, and delinquent peer association were much stronger predictors of offending, while negative life events and family bonding more strongly associated with victimisation; and Schreck et al (2008) reported frequent intoxication, lower school commitment and attachment to parents better predicted offending than victimisation. Indicating that to further extend our understanding the victim-offender overlap it is necessary to move beyond low self-control.

The individual difference perspective does make an important contribution to explanation of the victim-offender overlap and the existing studies suggest that low self-control does have a substantive effect on both victimisation and offending. The addition of psychosocial variables including measures of anxiety and depression as used by Van Gelder et al. (2014) is also a relevant approach. However so far, the variables measured have only partially explained the overlap (Berg and Felson, 2016). There are likely yet unmeasured or unexamined differences that are relevant. Measurement of personal propensity and vulnerability alone is unlikely to fully clarify the overlap. These events are occurring within different environments and to explain theories need to put the individual into the environments they occur in, rather than merely measuring correlates and risk factors.

Perhaps a future potential avenue for exploration in the individual differences area is the role of genetics, individuals inherit different gene variants, and these can vary precisely what proteins they produce, and how much. This influences cell functionality particularly in the brain. A study by Barnes and Beaver (2012) using sibling pairs from the ADD health study suggested between 51% and 98% of the covariance in victimisation and offending in a population could be explained by genetics. There are several genes that have already been studied and linked to offending and victimisation.

Perhaps the most well-known of these is genes that which produces is Monoamine oxidase A (MAOA) (Caspi et al., 2002) which is responsible for metabolising neurotransmitters. They found some gene variants moderated the negative effects of maltreatment – increased deviant behaviour - with the higher activity variant conferring more resilience to maltreatment. Complex behaviours – like offending – are not generally directly affected by genes, but usually interact with the environment, other genes or individual differences (Beaver et al, 2010). Therefore, the genetic differences are an indirect cause of the outcome (deviant behaviour here) with the effect of the low activity MAOA variant effected by a plethora of external (e.g exposure to maltreatment) and internal (e.g other genes) factors. Clearly this could be a promising area for future research, yet it must be noted that this is an approach that emphasises

not only individual differences in genetics but also in the role of environment in shaping and modifying behaviours (Reif et al., 2007).

Subcultural theories and disadvantaged neighbourhoods

Another popular perspective used to explain the victim-offender overlap are subcultural theories. These postulate that violence is concentrated among groups that hold norms that are supportive and may even encourage the use of force to resolve conflicts (Berg and Felson, 2016; Mcneeley and Wilcox, 2015). In these subcultures access to formal justice can be curtailed because of their illicit activities, meaning the deterrent, compensatory and retributive benefits of formal justice are available (Topalli, Wright and Fornago, 2002). For example, the theft of illegal drugs cannot be reported to police since it would most likely result in the arrest of the reportee. To get justice informal avenues including violent retribution may be one method of gaining redress. The response to victimisation can also be important for reputation maintenance, loss recovery and vengeance (Topalli, Wright and Fornago, 2002; Jacobs & Wright, 2006). Being labelled as a victim in these settings can have a negative connotation contrary to how they wish to be perceived, and retaliation may be a method of deterring potential victimisation (McNeeley and Wilcox, 2015).

From their interview studies with offenders in St Louis, Missouri, Jacobs and Wright (2006) suggested that belonging to a subculture supportive of violence accounted for the high amounts of victimisation recounted. Berg, Stewart, Schreck and Simons (2012) also found evidence that that the effects of victimisation on offending were particularly strong in areas where "*street culture*" dominated. However, others for example Van Gelder et al. (2014) when comparing different variables found that self-control was a better predictor of involvement in overlap suggesting that while the predominant cultural values influence overall levels of criminality within an area, individual differences could be more important to identify who is involved and whether they are victim-offenders, offender only or victim only.

There is some evidence that the overlap does vary by culture. Posick and Gould (2015) using data from the ISRD found that victimisation remained a significant

predictor of offending across all contexts and some cultural indicators – individualism and power distance were shown to slightly moderate the relationship, however there was no effect from their measure of masculinity. The cultural variables measured had some influence on behaviour, but the influence wasn't as strong as initially expected. It may be that a comparison across countries as a whole miss some of the nuances of culture related to specific areas of a country, city or even a town.

A further consideration is the impact that disadvantage has on the overlap some findings suggest the overlap is more pronounced among people living in disadvantaged neighbourhoods (Berg and Loeber 2011, Berg, Stewart, Schreck, Simons, 2012, Schuck and Widom 2005). While others have found the relationship between victimisation and offending is attenuated and this may be due to a crowding out effect by multiple other risk factors to which individuals living in disadvantaged neighbourhoods are exposed (Wright and Fagan, 2013; Posick and Zimmerman, 2015). Exposure to violence can become a "*normative*" experience in some cultures so that individuals cease to be affected by violent events (Wright and Fagan, 2013). This could potentially be a factor in the weakening the association between victimisation and offending.

The values that individuals internalise has an influence on their behaviour – individual morality influences what actions in certain environments are seen as acceptable (Wikstrom et al, 2012). Being in environments where individuals are exposed to others that believe victimisation is acceptable, will increase the likelihood of becoming a target. Currently precisely how culture and context mediate the victim-offender overlap is still debatable; however, both appear to have some influence on the relevant factors and the strength of the relationship, and it is possible that different mechanisms are more relevant in different types of neighbourhoods.

Life course approaches

Perhaps the most neglected perspective in victim-offender overlap research is the life course approach (Lauritsen and Laub, 2007; Jennings et al, 2012). This neglect is likely in part because most studies are conducted on juvenile

populations and do not follow through into mature adulthood, or only follow to young adulthood (e.g ADDhealth). Current data sets used to study the victim offender overlap are not optimised to focus on the life course approach (Lauritsen and Laub, 2007). A notable failing in many of these studies attempting the life course approach is the significant loss of participants throughout the repeated waves of the studies. Often those that are hardest to track down are the most involved in deviant behaviour missing a critical subset for the study of the victim-offender overlap (Bottoms and Costello, 2010). A further failure in the methods of these studies is the long follow up periods make them reliant on the recall of the subject may lead to incorrect data or key events missed.

Yet this is a critical approach to consider because throughout the life course there can be continuity, escalation and generally at some point desistance in offending (Laub, Sampson and Sweeten, 2006). Research examining desistance from offending show that specific life events such as marriage, steady employment and military service are associated with reductions in offending (Laub, Sampson and Sweeten, 2006), and Daigle, Beaver and Hamilton (2008) suggests that these events can influence victimisation as well. Whether these events have a direct causal effect on victimisation or offending is another question since they may be associated with other co-occurring processes such as neurological maturation.

As well as life events, a wealth of research indicates a close relationship between age and delinquent involvement, the likelihood of offending increases steeply during adolescence, reaches a plateau around the age of 18 to 21, and declines as individuals age into their adult years (Laub, Sampson and Sweeten 2006; Farrington, 1986). It is plausible as with offending, victimisation changes with maturation from adolescence into adulthood (Schreck et al, 2017). At different time points victimisation may have more acute effects because different ages individuals have variability levels of vulnerability, exposure, and resilience (Schreck et al, 2017).

Victimisation such as maltreatment, violent, emotional, or sexual abuse occurring during childhood can have both acute and chronic effects increasing the probability of both re-victimisation and offending (Falshaw, Browne and Hollin, 1996; Widom, 1995; Beckley et al, 2017). As individuals mature into adulthood, they may become more resilient to victimisation and less sensitive to forms of victimisation that would have previously resulted in reaction or retaliation (Jacobs and Wright, 1999). Some adult offenders cite victimisation experience as a reason for their desistance, victimisation could be a seminal turning point ending involvement in offending (Farrell, 2016).

At a basic level a descriptive account of how the victim-offender overlap changes as individuals mature would be useful to understand if the overlap mimics the age crime curve (Jennings et al, 2012). It is possible that offending and victimisation may decrease and increase in unison or increases in one could precede changes in the other. The lone study using data that followed individuals into early adulthood found that while the association between victimisation and offending remained positive the influence of victimisation on offending diminished (Schreck et al, 2017). The sparse studies using this perspective do suggest that this approach could provide important insights into how victimisation and offending fit together alongside other life events.

Other theories

Deviant lifestyles, individual differences and subcultural theories are the most forwarded theories used to explain the overlap between victimisation and offending, and the life course perspective could future avenues for furthering understanding. Several other explanations are suggested including strain theory and learning theories. The first, strain theory proposes that victimisation can elicit feelings of distress or anger and take an emotional and psychological toll on individuals. To alleviate this strain coping strategies are adopted (Agnew, 2002 & 2013). Of the suggested possible strategies offending is one response to victimisation, Agnew (2002) proposes that variations in social control, peer influence and social support influence coping strategies. Turonovic and Pratt (2013) found that variations in self-control could mediate the likelihood of

individual's developing issues with substance abuse in response to victimisation.

The second set of theories – learning theories – advances a state dependant mechanism that experiencing one event affects an individual's appraisal of subsequent. One explanation for the victim-offender overlap using this approach comes from Averdijk et al. (2016), who propose that through being victimised individuals become more attuned to the benefits of conflictive situations. Prior victimisation was theorised to increase the likelihood that individuals anticipate positive feelings about violent offending and decrease feelings of anticipated shame. Another proposition is that through experience individuals learn to reduce the risk of victimisation; for example Sullivan, Ousey and Wilcox (2015) found some negative correlations between victimisation and offending– which they suggested could be due to individuals learning to avoid victimisation. These approaches suggest that experiences with victimisation or offending can have several impacts, individuals may adopt strategies that reduce risk of victimisation or through being victimised may learn to anticipate benefits from offending. What both theories have in common is they are based on a causal process moving from one to the other, and while they provide some framework for the victim-offender overlap are limited in provision of full explanation.

Where could we go next

Thus far the current theoretical perspectives and research suggest several different mechanisms that could be responsible for the causing the overlap. Current mechanisms proposed have notable limitations in their ability to thoroughly explain all aspects of the victim-offender overlap. Theories which explain offending or victimisation have been shoehorned into providing an explanation of the victim-offender overlap (Lauritsen and Laub, 2007). Many of these theories are flawed at explaining victimisation or offending alone to begin with (Lauritsen and Laub, 2007).

Many of the existing theories struggle to explain why someone is sometimes a victim and at other times an offender and fall when they are used to explain the

distinctions. They may be capable of explaining the convergence of offender and victim but not whom eventually becomes the victim and whom the offender (Berg and Felson, 2016). Overall better and more thorough theories that are testable are needed (Berg and Mulford, 2020). This would assist the design of more effectual studies to analyse the overlap. Eliciting better data which can then be used to further refine the theory.

Potentially the best theories for providing explanations of the overlap may be based on ones such as Situational Action Theory (SAT), which integrates an "*action theory*" with different levels of explanation – from the individual to the wider social environs and places the person into the environment – unlike many other theories of criminology (Wikstrom, 2014). SAT promotes an analytical criminological theory focussed on the mechanisms involved rather than producing lists of statistically significant correlates or risk factors (Wikstrom, 2014).

SAT contends three basic points: 1) that "*all crimes are moral actions, and they break a rule of conduct (stated in law) about what is the right or wrong thing to do (or not do)"* (Wikstrom, 2014), 2) "*people are the source of their actions, but the causes of their actions are situational*" (Wikstrom, 2014); crime is the result of an interaction between particular types of people and settings, therefore resulting in certain actions; 3) that *"social and developmental factors and processes are best studied and explained as causes of the causes"* (Wikstrom, 2014). In SAT developmental and social processes are theorised to affect an individual's crime propensity, and impact the exposure to criminogenic settings, creating interactions that may result in an act of crime (Wikstrom, 2014). The developmental aspects of SAT could link into the life course theory aspects discussed earlier. SAT defines crime as the "*breaking of rules*" fundamentally identifying crime as the contravention of law (Wikstrom, 2014).

SAT is presented as a theory to explain commission of crime which does mean it requires some adaptation to explain victimisation as well as offending. Offending is a result of action and choices (Wikstrom et al, 2017), while being a victim could be perceived as a passive event rather than an action. Victims

can be directly involved in the processes that make them a victim – they may antagonise or even throw the first punch (Berg, 2012; Wolfgang, 1958). Furthermore, as SAT proposes for offending there must be selection processes explaining why a person is present in a setting where they are vulnerable to victimisation. There are still actions and choices involved in becoming a victim.

From the research literature risk of victimisation relates to both individual vulnerabilities to becoming a victim and the environmental exposure (Van Gelder et al, 2014; Posick and Zimmerman, 2015; Posick and Gould, 2015); with there being an interaction between the individual and the environment. According to SAT offending is the outcome of both exposure to a criminogenic setting and the individual's propensity to offend (Wikstrom et al, 2017) – the same is true of victimisation- except it is exposure to a victimogenic environment combined with a vulnerability to victimisation. Here a victimogenic environment would be defined as one that provides opportunities for victimisation and can cause or promote victimisation. These may be very different for everyone, e.g for some home is a safe place providing little opportunity for victimisation, yet for a victim of domestic violence it may be the primary location for assaults to occur. Using the framework of SAT which integrates both individual difference and environment, while being able to account for continuity and change in behaviours, would arguably provide the best explanation for the overlap.

The inclusion of a moral aspect or filter in SAT is thought-provoking to the context of the victim-offender overlap. Some other theories posit moral or value explanations to some aspects of the victim-offender overlap, for example subcultural theory or code of the street (e.g Jacobs and Wright, 2006) where the victim-offender overlap continues in a culture of self-reliance and retaliation (Topalli, Wright and Fornango, 2002). Morality relates to the victim-offender overlap in other ways victimising offenders may be seen as a morally acceptable e.g harassment of paedophiles (Williams and Thompson, 2004) may be perceived as a legitimate punishment for their crimes; stealing from thieves may be a just recompense for the original theft. SAT would posit that if it is morally acceptable to victimise criminals this could be one of the

explanations of the victim-offender overlap (Palmer and Begum, 2006). Another aspect to consider would be once someone has been a victim of a criminal act it may become easier for them to commit the act on someone else (Agnew, 2002). Their morality may shift, and they may use their experience to rationalise commission of the offence (Averdijk et al, 2016) – although the opposite could be true and the belief that the offence is morally wrong could be reinforced.

Perhaps the simplest way to explain the overlap is that everyone has a propensity to offending (Wikstrom et al, 2017) and a vulnerability to victimisation (Green, 2012). The development of both the offending propensity and vulnerability to victimisation is the outcome of interaction between the person and their environment. Arguably neither propensity to offend or victimisation vulnerability are stable over time but can be changed by events the individual experiences (Lauritsen, Laub and Sweeten, 2006; Daigle, Beaver and Hamilton, 2008), processes of maturation (Schreck et al, 2017), and changes in environmental exposure.

The degree of propensity to offend and the amount of vulnerability to victimisation influences which group the individual belongs to when exposed to criminogenic or victimogenic environments. Propensity to offend but no vulnerability to victimisation – offender only, vulnerability to victimisation but no propensity to offend – victim only, both propensity to offender and vulnerability to victimisation – victim-offender, and neither propensity to offend or vulnerability to victimisation – non-involved group (see table 2). While here these are presented as discrete categories it may be necessary to consider this theory on a sliding scale – i.e some propensity to offend and significant vulnerability to victimisation would lead to an individual tending towards the victimisation side and vice-versa for offending. Exposure to the environments that are conducive to these events occurring is also crucial – if there is no exposure to such environments regardless of how offending prone or victimisation vulnerable the individual is the events cannot occur.

Table 2: Proposed use of SAT to explain different categorisation of individuals

		Victimisation vulnerability	
		No	Yes
Propensity to offend	No	Non- involved	Victim-only
	Yes	Offender-only	Victim-offender

While SAT in its current format as an action theory may not be perfect for providing an explanation for both victimisation and offending, the fundamental principles underlying SAT – that of integrating individual and wider social environs – are critical to creating better theories for the overlap. So many of the existing theories fall on this point and either look at the individual or the environment in isolation (Berg and Mulford, 2020). Focus on one aspect or the other without integrating will inevitably fail to provide an effective explanation for complex phenomenon like the victim-offender overlap.

The role of gender in the victim-offender overlap

An additional consideration is the role that gender plays in the victim-offender overlap, criminological studies find there is a consistent gender gap, with females less likely to involved in offending or to commit violent offences (Heidensohn and Gelsthorpe, 2007; Heimer and Kruttschnitt, 2006; Heidenson and Silvestri, 2012). Existing literature has found that gender shapes perceptions of risk within social contexts (Cobbina, Miller and Brunsun, 2008). Females may also be under less pressure to respond with violence to provocative situations (Flexon, Meldrum and Piquero, 2015). Ruback, Clark and Warner (2014) suggested that victimisation in females was related to a change in a whole cluster of behaviours and argued that victimisation has a greater impact to a female victim. They may also be more willing to disclose victimisation, to contact the police and employ different coping strategies to males (Hart and Rennison, 2003; Turonovic and Pratt, 2013; Moore and

Shepherd, 2007). The ways in which females respond to and view risk of victimisation appear to differ from that of males.

The way society views women and men may also shape aspects of the victim-offender overlap – or at least how readily women who offend are able to be perceived as victims. For example, "*battered women's syndrome*" which is readily used as a criminal defence for women who claim to have been abused by the partner, they have murdered can be an accepted defence – even in instances where the woman's life was not immediately at risk (Dutton, 1992; Dutton, 1996; Dalton and Schneider, 2001). The converse – a battered man killing his abusive partner – is perceived with far less ready sympathy. There is a societal perception that violence from and among males is expected and normal, but a female need to be "*driven*" to commit serious violence (Dutton, 1992).

With reference specifically to studies of the victim offender overlap; females appear to predominantly belong to different types of victim-offenders, and follow different trajectories (Cuevas et al. 2007; Jennings et al. 2010; Ousey et al. 2011). Flexon, Meldrum and Piquero (2015) found only among males did low self-control account for a substantive portion of the overlap, other explanations than low self-control may be more relevant to the overlap in females. Clearly gender can have some complex effects on offending and victimisation, and a number of researchers have suggested that gender specific analysis are necessary, both to avoid type II errors (Gunter and Newby, 2014; Flexon, Meldrum and Piquero, 2015) and to identify the different mechanisms that may be applicable to male and female victim-offenders.

Victim-offender overlap summary

The victim-offender overlap is a consistent and critically important empirical fact in criminology, yet neglected in policy and under researched by criminologists. The current research base does provide important information and allows some questions about the victim-offender overlap to be answered to some extent. Nonetheless it is a topic that requires further research and consideration to fully unravel especially given complexity. The literature base is plagued by gaps,

limited research methods and over utilisation of specific data sources. Currently most studies are limited to correlating variables against one another, which cannot unravel the intricate phenomenon, and research needs to move beyond correlation and to causation.

The victim-offender overlap can be a difficult topic to approach since it sits against the conventional view of offenders and victims as two distinct groups (Berg and Mulford, 2020). Yet experience shows from incidences of CSE (West Midlands Police, 2012; OCSB, 2015; Jay, 2014) and also the emerging issues around young people being "*persuaded*" to run drugs for older gang members (Robinson, McLean and Densley, 2019) that this is not a topic that can or should be unheeded.

Comparative to research on either offending or victimisation the victim-offender overlap knowledge is fragmented with a lack of cohesive and provable theory. Currently leading researchers in the field suggest that research into mechanisms has reached somewhat of an impasse (Berg and Felson, 2016). Lauritsen and Laub in 2007 advised that more is known about the factors that do not cause the victim-offender overlap than do, and while research has progressed somewhat since this point, the mechanism of the overlap remain open to debate (Berg and Mulford, 2020). It is likely that both state dependant and risk heterogeneity processes are involved, with aspects of deviant lifestyles, individual differences, subculture, emotions and learning all appearing to play some role in the overlap. Though under researched, the life course perspective may present an important framework for future research (Daigle, Beaver and Hartman, 2008), especially since there appears to be both continuity and change in the victim-offender overlap through the lifetime and knowing how the overlap develops could lead to potential interventions for crime and victimisation prevention.

There needs to be a better understanding of the role of selection and causation in the processes that relate subsequent offending among victims and subsequent victimisation among offenders (Jennings et al, 2012). The framework and analytic perspective proposed by SAT may be valuable for

advancing research in this area. SAT also explicitly links the environment and individual differences together – something that is missed by many of the current theories utilised for the explanation of the overlap.

The best current explanation of the overlap from the literature reviewed is that individuals have differential propensities to offend and vulnerability to victimisation. These are the outcome of interaction between the person and their environments and can show both consistency and change over time. When an individual with a propensity to offend is exposed to a criminogenic environment crime happens. When an individual with a propensity to be victimised is exposed to a victimogenic environment victimisation occurs. To become a victim-offender individuals' need both a propensity to offend and to be victimised – in addition they need to be exposed to environments where these can occur. The degrees of vulnerability, propensity and exposure of the individual affects how much victimisation and or offending the individual experiences or engages in.

Chapter 4

Prioritising targets – harm indices

A key component of EBP is knowing who to target, whether this is places, times, or individuals (Sherman, 2007). Deciding who to target for individuals could be based on the number of crimes committed by or to them. A consistent finding is that a small proportion – whether that be people or places - account for a disproportionate number (e.g Dudfield, Angel and Sherman, 2017; Farrell, 2015). An EBP approach would advocate focussing resources to these, however this approach focusses entirely on the number of crime and discounts that some crimes are far more harmful than others (Sherman, 2007). An offender could be a very frequent offender yet only have committed 100 shoplifting offences, while another may be less frequent but responsible for three incidents of rape. Targeting by number alone the latter would be far down the priority list. The addition of a measurement of harm adds an extra dimension when deciding whom to target and may allow police to focus not just on where crime concentrates most densely but to where the greatest damage is (Sherman, Neyroud and Neyroud, 2016).

Harm and severity a brief note on definitions

Within the literature both terms harm and severity have been used to refer to the measurement of crime seriousness. Arguably both can be used interchangeably since the broad meaning is essentially equivalent – harm means "*an act that causes loss or pain*" or can be used to refer to a physical or emotional injury (Merriam-Webster, 2020a), while severity is the *"condition of being very bad, serious, unpleasant or harsh"* (Merriam-Webster, 2020b). Both terms can refer to the magnitude of an effect – normally an adverse one. Primarily the term "*harm*" will be used here to refer to measurement of crime seriousness, although severity will used in instances where an index specifies the term "*severity*".

Introduction to the basic concept of harm indices

While numerous authors (Sherman, 2007; Wolfgang and Sellin, 1964; Wolfgang, 1985; Ramchand, Macdonald, Haviland and Morral, 2009; Ratcliffe, 2015) have argued for the benefits of creating a method of measuring how

harmful crimes are, creating a clear scale to do this has proved complex. Victimisation causes both physical and visible harms – a physical injury or a monetary loss - can be measured by the size of the wound or the value of the loss and intangible harms which can range from feeling unsafe and insecure to developing post-traumatic stress disorder (Echeburua, Corral and Amor, 2003; Ruback and Thompson, 2001). Effects of crime are personal and are not consistent across individuals (Turnanovic and Pratt, 2013; Ruhs, Greve and Kappes, 2017) – for example suffering a burglary can be more distressing to a frail pensioner who fears being severely injured (LaGrange and Ferraro, 2016). Creating a metric to measure such diverse experiences is not an easy task.

Yet it is necessary to have a measure of harm - crimes are not created equal - compare shoplifting to homicide. When measured by number in crime statistics both count as a single point. In the UK there 3,578,000 incidents of theft each year and 729 homicides in the year ending September 2019 (Office for National Statistics, 2019). An increase or decrease of 500 shop thefts makes little difference to the overall crime count and has little effect on police resources. Conversely 500 extra homicides would have huge consequences though overall the crime count would show little change.

Total crime counts can also reflect proactive enforcement strategies (such as those targeting offenders carrying drugs or knives) these can increase crime counts by "*state action*" rather than crimes reported by the public (Sherman, Neyroud and Neyroud, 2016). A reduction in proactive enforcement for example due to severe budget cuts can also lead to an apparent decline in crime due to decreased detection rates (Sherman, Neyroud and Neyroud, 2016). Overall total crime counts by number can confuse what happening in the crime statistics, and to get a more informed picture require a "*harm index*".

How can we use a harm index

As well as examining changes in crime statistics over time**,** measurement of harm has uses both in practise by law enforcement and government and in criminological research. Adoption of a harm index can allow the targeting of high harm offenders, victims, victim-offenders, areas, and times, and can be

used to make decisions regarding the allocation of resources (Sherman, Neyroud and Neyroud, 2016). Knowing where – "*harm spots*" areas were crime harm concentrates disproportionately to other areas, and who – "*the power few*" to target is critical for making effective decisions around resource allocation. Especially in a time where police forces in England and wales are feeling the bite of severe budget cuts, while facing difficult challenges such rises in knife crime, increased reports of serious sexual offences and ongoing struggles with preventing terrorism. Furthermore, harm tends to be more concentrated than number of crimes. This could provide far narrower targets for intervention with potentially greater gains if harm can effectively be reduced (Weinborn et al, 2017).

Anecdotally from police officers actively using harm indexes to score offenders, victims and places, areas and individuals are highlighted that would have never previously been of concern. Allowing them to create lists of the people and places who are causing or conversely suffering the most harm. Lists can be handed to specialist officers who examine the details and decide where best to expend resources. Utilisation of a harm index approach combined with educated police discretion may be a successful strategy and uses evidence to inform policing decision making.

While some authors e.g Sherman, Neyroud and Neyroud (2016) and Dudfield et al (2017) for example suggest that police forces should focus primarily on prevention of harm and the power few of harm, arguably a better policy is to target crime based not only on harm but also number. Numbers of crimes provides a context for how the harm is occurring – through lots of frequent crimes adding up to a high harm score or a single harmful event (Weinborn et al, 2017). Furthermore, places and individuals suffering frequent low harm events cannot be discounted since the harm from frequent low-level events such as anti-social behaviour can be cumulative and highly distressing (Donoghue, 2013). One possible way to approach this in practice is to break harm and frequency into categories – as suggested by Weinborn et al (2017) with regards to places. Weinborn et al (2017) proposed dividing areas into 5 types: type 1 priority areas - which are both high in harm and high in frequency,

type 2 hotspots – high crime but low harm, type 3 harm spots which are high harm and low crime, type 4 which are low harm and low crime, and finally type 5 which are no crime and no harm areas.

Weinborn et al (2017) recommends that different tactics could be applied to each type of area, for example routine patrol may be appropriate for type 2 “hotspots”. Type 1 “priority spots” should be of critical importance for reducing crime and should be strongly targeted. While for type 3 “harm spots” further analysis is recommended since there could be a one-off event, for example a double homicide which is skewing the data. Due to the rarity of the events as well it may be impossible to intervene to prevent one off high harm events that are occurring in areas with no other known criminal activity (Weinborn et al, 2017). The same approach outlined above could also be applicable to individuals – looking at how harm and frequency are distributed within a sample can provide information for a potential targeted triage scheme.

For experiments looking at treatment effectiveness

Currently both the Home Office and researchers consider interventions which significantly reduce the prevalence and or frequency of reoffending to be successful as a criminal justice intervention, (see Shapland et al (2008) and Sherman and Strang (2007) reporting on the success of restorative justice). However, by considering frequency and prevalence alone there may be results missed. The CARA experiment in Hampshire targeted low level perpetrators of domestic violence did not produce statistically significant reductions for either prevalence or frequency, yet when a harm index was applied the treatment group had significantly reduced harm from offending post treatment (Strang et al, 2017). An additional consideration is an intervention could produce a reduction in frequency and prevalence but have a backfire effect by increasing harm.

How can harm be measured?

Historically many different researchers and organisations have tried to create indexes for the measurement of harm. The true seriousness of a crime arguably cannot be directly and precisely measured since seriousness and harm are

subjective concepts. Instead, indexes rely on a method of approximating the harm from crime (Sherman, Neyroud and Neyroud, 2016). Numerous aggravating or mitigating factors can make one crime event worse. Take two incidents of grievous bodily harm in one crime during one there is an unprovoked sustained and repeated assault using a weapon on a victim who was targeted due to their sexuality. While in the other the eventual victim sustained a single serious wound during a fight they instigated. Both cases are charged and recorded as grievous bodily harm (GBH) with intent but clearly the first case has a more serious set of circumstances surrounding it and arguably causes more "harm" than the second. In an index both crimes would score the same despite the differential harms caused by the crimes because the aim is not to measure the harm from individual offences, but instead to create an overall approximation of how many less harmful crimes of a particular type or classification there are compared to the more harmful ones.

Sherman, Neyroud and Neyroud (2016) propose that any method used needs to meet a three-pronged test to be considered a legitimate measure of harm. These are that the metric must meet a democratic standard and "*reflect the resolution of conflicting viewpoints by a process reflecting the will of the people*". It should also provide a *"reliable measure that can be consistently applied to each unit of analysis – people, place and time with the same results for the same levels of harm*". Finally, the metric should be able to be easily calculated and adopted at minimal cost to the end users – the cost test. Outside of the Sherman, Neyroud and Neyroud's (2016) proposed three-pronged test any index needs to provide a measure of both the tangible and intangible harms of any crime. The scale should also have an adequate range to reflect the increase in harm between the least and most serious crimes.

Generalised issues with harm indices

Changes in how crimes are classified can impact harm scales – for example in 2007 in England and Wales there were substantial changes in the categorisation of violent offences, and clarification given to the definition of "intent" for grievous bodily harm (Office for National Statistics, 2008). Which led to an increase in crimes being recorded as grievous bodily harm (GBH) with

intent rather than actual bodily harm (ABH). There is a large increase in the harm scores associated with GBH intent compared to ABH in the Cambridge Crime Harm Index. This led to a dramatic jump in crime harm from 2007/08 from that in 2006/07, primarily due to the changes in the classification of GBH with intent.

Public perceptions of crimes also change. For example, in Wolfgang et al. (1985) index using surveys of the public, a plane hijacking by an armed hijacker where the crew was held for ransom, but no injuries occurred was scored as 32.7 – higher than a serious rape (30.0) where the victim required hospitalisation. The serious rape also scores higher than cases where a woman stabs and kills her husband (27.9) also significantly lower than the score given to a male stabbing and killing his wife (39.2). Reflecting both perceptions related to the time and significant differences in perceived harm related to the gender of the offender.

An additional consideration would be how to apply an index in different countries. Across countries different penalties are applied for crimes, some acts are crimes in some societies and not in others. This poses issues to the creation of a global index for scoring crime. Instead, researchers could look at creating indexes for different countries. In the cases such as that of the United States where sentencing can vary significantly by state (National Centre for State Courts, 2006; Frase, 2005) may necessitate an individual index based on the state. It may be an impossible task to create a globally applicable harm index, and not one that perhaps should be attempted given the cultural distinctions attached to crime in different places, which will likely affect how the harm from such crimes is perceived.

Survey methods

Some have used survey methods on general population samples to rank crime harm (e.g Wolfgang et al, 1985). This is both a time a consuming and costly approach, however it would reflect the "*will of the people*" (Sherman, Neyroud and Neyroud, 2016). Bias may pose an issue if individuals are asked to score the seriousness of crimes that may have happened to them. It is unrealistic to

expect that there will be a single view of how harmful an offence is within the general population. Surveying the general population means asking individuals who are not experts on sentencing or the criminal justice system to give their opinions. A way to ameliorate the issue of surveying the general population who may not be experts in sentencing is to survey the judges who are handing out the sentences. Anecdotally some have attempted to do this however issues with low response rates presented difficulties, and the large number of different offences creates practical issues with this approach. Furthermore, the role of judges is not to quantify how serious crimes are but instead to take account of the sometimes-unique circumstances surrounding each charge and then impose a sentence (Courts and Tribunals Judiciary, 2020).

Perhaps the most problematic issue with public opinion surveys is that public opinion is subject to fluctuation over time. The severity scale produced by Wolfgang et al. (1985) from a survey of over 60,000 individuals attached to the National Crime Survey in 1977 readily demonstrates this. As previously discussed, the hijacking of a plane where no passengers were harm scored higher than a very serious rape, and uxoricide – killing one's wife scored over 12 points higher than mariticide – killing one's husband (Wolfgang et al, 1985). If the same questionnaire was used today the scores could show significant variation to those found by Wolfgang et al (1985).

Monetarily

Estimation of harm from the economic costs of crimes has been attempted sporadically (Brand and Price, 2000). It is possible to estimate the monetary cost to society caused by lost wages by the victim, the prosecution and punishment of the offender etc (Heeks et al, 2018). However, such costs are subject to inflation and would require repeated and frequent review. This method is also better suited to crimes where cost data is available; crime without a specific victim – e.g drug offences are more difficult to estimate. It is difficult to even estimate the cost of a crime that considers the full impact on victims reflecting both the tangible and measurable damages and the unmeasurable ones for that can result from being a victim of a crime. Fundamentally not only does this appear to be an impractical method, it feels

morally wrong to apply a monetary figure to crime and say that a rape is “worth” £100,000 and a murder is “worth” £1,000,000.

Sentencing guidelines

One method of creating a harm index is to use the guidelines created by law for specific sentences. This was the method chosen by Sherman, Neyroud and Neyroud (2016) when creating the Cambridge Crime Harm Index (CCHI). In England and Wales sentencing guidelines are constructed through a multistage process involved initial research and drafting of a proposed guideline before the draft is discussed between council members, these members refine the draft and agree on the broad structure (Sentencing Council, 2019a). The council then consults the statutory consultees, criminal justice professionals and the wider public over a 12-week period (Sentencing Council, 2019a).

The responses from this stage are considered again by the council before a definitive version is created (Sentencing Council, 2019a). Once created usage is monitored through the crown court sentencing survey (Sentencing Council, 2019a). Creation of sentencing guidelines is a process that involves consultation both with experts in criminal justice and the wider public and are based on the current relevant legislation. The subsequence monitoring - even after a guide has been introduced - allows adaptations to be made if the guide is found to be unsuitable or have any unforeseen consequences missed during the earlier stages (Sentencing Council, 2019a).

There is a dilemma with whether to use the minimum sentence or the maximum sentence (Sherman, Neyroud and Neyroud, 2016). The maximum sentence could be seen to represent the maximum harm caused by a crime to society. However maximum sentences do not present enough variety to distinguish between more and less harmful crimes. For example, in England and Wales racially aggravated criminal damage can attract a penalty of 14 years imprisonment as can paying for the sexual services of a child, trafficking people for sexual exploitation, sexual assault of a child under 13 and handling stolen goods (Sentencing Council, 2019b; Sentencing Council 2019c). Clearly some of these crimes cause far more harm than others despite having the same

maximum sentence length, additionally the maximum sentence is only applied in rare incidences of the crimes featuring numerous aggravating factors (Sherman, Neyroud and Neyroud, 2016).

Sentence starting points are the point that the judge should begin when determining a sentence (Sentencing council, 2019d). They are based on a first-time offender pleading not guilty. They must then consider any aggravating factors that would raise the severity of the offence attracting a harsher penalty and any mitigating factors that could lead to a reduction in the penalty given (Sentencing council, 2019d). The judge should also then consider if a guilty plea was entered and at what point, with a maximum reduction of one third for a plea submitted at the earliest opportunity reducing to one tenth for pleas submitted "*at the door of the court*" (Sentencing council, 2019d). Since the plea of the offender is irrelevant to the seriousness and harm of the crime adding a reduction for a guilty plea is inapplicable when creating a CHI.

There is more variety in the sentence starting points than with the maximum sentences; racially aggravated criminal damage has a sentence starting point of Band B fine, paying for the sexual services of a child - 26 weeks custody or two years where penetration was involved, trafficking people for sexual exploitation - 26 weeks custody, and handling stolen goods can attract a sentence starting point of Band B fine for a lower tier offence ranging to 1 years custody for offences where the value of goods exceeds £100,000 (Sentencing Council, 2019b; Sentencing Council, 2019c). To construct the Cambridge Crime Harm Index the sentence starting point was decided to represent the best metric for the base value of the harm of the crime (Sherman, Neyroud and Neyroud, 2016).

While sentencing guidelines do provide an excellent metric for approximating crime harm, there are some limitations. They are often based on outdated legislation, take a long time to revise and may not reflect current public opinion. On a comparative scale they may not reflect harm from different crimes against each other precisely, for example having a leading role in the supply of a class A drug attracts a starting point sentence of 5 years and 6 months. The starting

point sentence for rape is 6 months shorter at 5 years (Sentencing Council, 2019b; Sentencing Counci,l 2019c). A further consideration is that there is not an adequate guideline – or even guidelines at all – in existence for certain crimes. A solution to this is to use alike crimes to approximate a sentence but this is clearly not ideal.

Actual sentences given by judges

A further method is to use actual sentences given to offenders who have committed specific crimes. Arguably this could be a method that could fulfil the three-pronged test proposed by Sherman, Neyroud and Neyroud (2016). The Office for National Statistics (ONS) (2016) submits that *"sentencing is an objective measure, reflecting how society views crimes differently, given that it is based on legislation set by Parliament on behalf of the public."* Actual sentences can also be used in circumstances where there are no sentencing guidelines available for use.

This method has been used to create both the Canadian crime severity (Statistics Canada, 2015) index and the Crime Severity Scores (CSS) produced by the office for national statistics (ONS, 2016). Both take five years of sentencing data and create a score based on the average length of prison sentence (Statistics Canada, 2015; ONS, 2016). Sentences involving a community service order or a fine are converted into a number of days in prison based on either the length of time taken to accrue the necessary funds to pay the fine, or by converting the length of the community sentences (Statistics Canada, 2015; ONS, 2016). A more refined method to construct an index is using sentences given only to first time offenders as suggested by House and Neyroud (2018), who produced an index based on median sentencing data for only first-time offenders. By using only first-time offenders the effect of previous criminal history as an aggravating factor is removed, however the other factors that could skew the scores remain.

Still there are some clear issues with using actual sentences. Sentences passed are based on not only the harm caused by the crime but on many other factors and are subject to the innate biases from those handing out the

sentences (Sherman, Neyroud and Neyroud 2016). Offenders with a previous history of offending more likely to receive more severe sentences. For crimes where offenders are likely to be recurring wrongdoers – e.g theft or burglary (Sherman, Neyroud and Neyroud 2016) - this can cause skewing towards a higher severity score (Ashby, 2018).

Using actual sentences also takes into account reductions in sentencing due to guilty pleas – in England and Wales offenders can receive up to 1/3 off their sentence if they plead guilty (Sentencing council, 2019d), adding in another factor to the score rather than just considering severity alone. The likelihood of pleading guilty may be influenced by numerous factors; the crime in concern, the mental health of the defendant (Reddich, Summer and Hoover, 2010) and the age of the defendant for example (Malloy, Shulman and Cauffman, 2014). Race may also play a role in plea negotiations, Frenzel and Ball (2008) found in a US sample that black offenders were more likely than white offenders to go to trial rather than straight pleading or negotiating a guilty plea. Offenders may also plead guilty to and be sentenced for a lesser offence than the offence they originally committed and are charged with for example an offender accused of rape may plead to a less serious charge of sexual assault.

Some offences are disproportionately dealt with outside of court, meaning that the cases sent to court may be more serious than the typical type of offence committed. So not only would sentencing data need to be used but also collection of data from sources outside of the court system would be necessary (ONS, 2016). Rerunning the sentencing data every year or so based on the most recent set of sentencing data, is a time-consuming process and may also lead to fluctuations in the score because of changes in judicial and public mood (Sherman, Neyroud and Neyroud, 2016). This may make comparisons in harm invalid over time.

Calculating total harm of an offence or offender

One of the issues of harm calculating is noted by Pease, Ireson and Billingham (1974) and Wagner and Pease (1978) "*additivity assumption*" may not represent a true measure of crime seriousness. This means to calculate the

total harm caused by an offence one can together the elements of the offence, i.e if the offender has within one incidence committed two murders, then the harm score total would be two times that of a single murder, using the CCHI this would be 10,950 points or two times 5,475. Pease, Ireson and Billingham (1974) through using vignettes illustrate that the additivity assumption is "*ill founded*", and that calculating total crime harm by using crime elements is not reasonable. In their vignettes only 31.8% of the time when people were asked to judge the relative seriousness of an offence to be twice as serious as the offence. However, it is arguable when using a harm index to decide prioritising targets it is simpler and more useful to add scores together since the question is about gauging the distribution of harm. Furthermore, an individual killed as part of a double homicide is just as dead whether they are the first or second victim killed, so why should the second homicide be considered less harmful when the offender has already killed one victim. This view may contrast with that found in Pease, Ireson and Billingham (1977) however is a more practical approach, since creation of an index that would accurately gauge how serious different elements of offences and commission of multiple ones would require significant additional investigation, likely through surveys with numerous questions to cover all different scenarios.

Harm indexes for England and wales

Currently in England and Wales there are two main indexes produced for measuring harm from crime. The first – the Cambridge Crime Harm Index (CCHI) – was created by academics at Cambridge University using sentence starting points (Sherman, Neyroud and Neyroud, 2016). These were then converted into days in prison for each type of crime. Offences where the sentence did not result in a period of detainment but instead either a fine or a community order were converted into either the length of time it would take to earn the money to pay the fine while working at the minimum wage or the number of hours required of unpaid work to complete the community order. Currently the CCHI provides scores for over 1140 offences with criminal justice codes and home office codes given where possible to assist matching of data from police systems to CCHI scores. Like CCHI the ONS also standardised their scores based on the number of days in prison; unlike the CCHI the ONS

used actual sentencing data. Taking the five most recent years of sentencing data the ONS has created scores for approximately 300 different offences (ONS, 2016).

Despite at first glance the two indexes appearing similar and showing a positive correlation between the scales of 0.981 measured by Pearson's (House and Neyroud, 2018) the two indexes produce substantially different results when all other factors are held constant. Ashby (2017) found using police data from national figures that in the results using CCHI rape counted for over one third of all crime harm but only one fifth when CSS were used. Domestic burglary was 16.1% of the harm according to the CSS but only 2.1% according to the CCHI (Ashby, 2016).

Neither index presents a perfect method of measuring crime harm; however, the ONS severity scores currently have critical flaws that bring the validity of CSS into question. A serious issue with the ONS severity scores is the separation by gender of male and female victims of sexual offences (table 3). The scores between the victimisation of male and female offences are noticeably different. The most egregious example is committing the rape of a male child under the age of 13 which scores 2397 on the ONS scale while the rape of a female child under 13 scores 3225. By basing the severity score on actual sentences the ONS scores highlight a serious issue with perception of harm against gender – generally the offences committed against males are receiving considerably lower sentences – in fact regarding the rape of a boy under 13 the sentences are actually lower than the suggested starting point (8 years or 2920[2]) for the offence.

In a harm index the scores should not be separated by gender as the effects of sexual assaults on either gender is equally harmful and can have serious long term effects (Schnieder, Ee and Aaronson, 1994; Davies and Rogers, 2006). Separating by gender strays into a murky area of gender politics where offences

[2] https://www.sentencingcouncil.org.uk/wp-content/uploads/Sexual-offences-definitive-guideline-Web.pdf

against men can be perceived by both the public (Davies, Rogers and Whitelegg, 2009; Davies and Rogers, 2006) and evidently judges carrying out the sentencing as being less harmful. It is justifiable to separate by age because there are unique differences between both actual and societal perceived vulnerability between children, adolescents, and adults (Green, 2012).

Table 3: A comparison of different harm scores for sexual offences taken from the ONS severity scores[3] and from the Cambridge Crime Harm Index.

Type of sexual offence	***ONS values Male***	***ONS values Female***	***Cambridge CHI values***
Rape	2975	3279	1825
Rape 16+	3192	2953	1825
Rape child <16	3895	3883	1825
Rape child <13	2397	3225	2920
Sexual assault 13 +	767	459	18.25
Sexual assault <13	862	1212	182

To underestimate the impact sexual victimisation of young boys is to ignore that many male sex offenders report a history of sexual victimisation prior to offending – this victimisation often begins in childhood. Although not every victim of childhood sexual assault (CSA) goes onto become offender in future the link between CSA and offending is consistent (Ogloff et al, 2012; Connolly and Woollens, 2008; Salter et al, 2003). This overlap is another reason that male sexual abuse cannot be disregarded and the harm from such crimes should not be underappreciated.

To have an index which scores male sexual offences as less harmful than those against females arguably undermines the credibility of such an index. Though

[3] https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/crimeseverityscoreexperimentalstatistics

these scores are calculated from the sentences applied by judges the score should be gender neutral. Especially when gender of victim is neither an aggravating or mitigating factor in sentencing guidelines. For no other kind of offence – e.g violence or theft - is there a division between the crime being committed on a male or female victim – why should this division exist just for sexual offences.

The ONS severity scores also include a score for buggery (3,413 points) and gross indecency between males (503 points). Historically both offences were used to prosecute homosexual acts between males (Baker, 2004). Given that both offences were repealed by the sexual offences act in 2003 (UK legislation, 2003), one wonders where the ONS found sentences to construct scores for these crimes – especially given that there are no recorded crimes of either buggery or gross indecency from 2009 (ONS, 2015) on the crime statistics published by the ONS. Due to the historic context of the crimes, it could be politically inadvisable to include them in the list of severity scores. With the revision of the sexual assault guidelines in 2003 non-consensual acts between men would fall under either rape or indecent assault, making the provision of a score for buggery and indecency between males redundant.

The CCHI is not without foibles either: lack of sentencing guidelines prevents scoring for some offences; for example, procuring an illegal abortion. Other issues are producing scores for broad category offences is complicated, large offence categories such as “bankruptcy offences”, “other triable either way (TEW) offence”, or “other indictable offence” because they could cover a range of offences (Sentencing Council, 2019a). A further issue is that by using sentencing guidelines the CCHI may miss some of the elements of harm associated with crimes that are captured by sentencing data. For example, if offences that typically involve substantial mitigating factors a sentencing guide may overestimate the harm score compared with actual sentences. One example of this is the offence of child destruction where serious mental health issues may reduce sentencing.

While Ashby (2017) concludes that "*both the CSS and CCHI have the potential to produce biased estimates of crime harm*" and that *"there does not appear to be any reason to prefer one measure over another*", however this author argues in contrast to Ashby the CSS has several serious problematic flaws that mean in its current form it is questionable if it is "*fit for purpose*". Some of these could be easily improved – ceasing to provide scores for sexual crimes based on gender would remove that aspect. Sexual crime scores could instead be provided for different age groups alone. The removal of the defunct crimes of buggery and gross indecency between males would also improve the index. Even if these adaptations were made the fundamental method of calculating the scores by using mean sentence length is problematic due to the addition of factors other than the harm of the crime being involved during sentencing. While the CCHI is not without its earlier acknowledged flaws and there is still plenty of opportunities to improve the accuracy of the scores and usability of the index. At this current time the CCHI is a more balanced measure of crime harm in the UK.

Victim-offenders and harm measurement

Specifically related to the victim-offender overlap a harm index can be used to firstly provide a measure of how harmful events both to and by the individuals are (Sherman, Neyroud and Neyroud, 2016). The victim-offenders may be a critical group to consider harm in, Hiltz, Bland and Barnes (2020) found victim-offenders had the highest average harm and despite accounting for only 6% of the total number accounted for 13% of total harm. Sandall, Angel and White (2018) found similar with victim-offenders having 75.4% higher average harm scores and 68% higher average crime counts. Identifying the overlap is imperative but knowing how harmful the victimisation suffered or offending harm caused is critical for resource allocation. Using numbers alone would fail to identify which of the victim-offenders are the power few, these would be the priority targets. An approach that also utilises number of victimisations alongside harm as advocated by Weinborn et al (2017) for places can allow a nuanced examination of the issues within the sample, identifying different groups of harm and number of victimisations. Sandall, Angel and White (2018) applied this approach, finding of those defined as high harm/high volume

individuals 49.9% (n = 208) were victim-offenders, concluding that the largest part of the high harm/high volume offenders are victim-offenders.

Harm Indexes Conclusion

For some time, criminologist and policy-makers have pondered this issue of harm and seriousness of crime (Sherman, 2007; Wolfgang and Sellin, 1964; Wolfgang, 1985; Ramchand, Macdonald, Haviland and Morral, 2009; Ratcliffe, 2015). It is desirable to have an effective measure of harm from crime since clearly not all crimes are created equal. The current method which involves counting one offence of common assault as having equivalent impact on overall crime statistics as that of one offence of homicide is intrinsically flawed (Sherman, Neyroud and Neyroud, 2016). Missing the fact that a homicide is clearly many times more harmful than the common assault and furthermore requires far greater resources. Such an index that would score this disparity would have numerous applications – both for researchers and for practitioners.

A harm index would allow the identification of where the most harm is being created (Weinborn et al, 2017) – harm spots, who is suffering or causing the most harm – the power few (Dudfield et al, 2017), as well changes in harm over time. Being able to identify the where harm concentrates among people, places and times would allow not only tracking of harm but also to target scarce resources more effectively (Sherman, Neyroud and Neyroud, 2016). Harm also adds an additional measure of success or failure for criminal justice interventions, so not only can outcomes be measured in terms of prevalence and frequency of offending but also harm. Interventions that failed to produce reductions in terms of prevalence or frequency of offending may still be producing positive effects on harm (Strang et al, 2017). Harm can also be integrated with number of crimes to categorise samples into different groups to indicate where resources can be focussed – especially since repeated frequent crime can be as cumulatively harmful as fewer more harmful crimes (Weinborn et al, 2017).

While the usefulness of an index is clear the metric used to create an index has been subject to much debate. Arguably any metric needs to fulfil three essential

criteria – it must be a represent a democratic measure, it must be consistent and finally it must be cost effected to use and calculate (Sherman, Neyroud and Neyroud, 2016). Clearly measurement of harm from crime is not an easy task and attempts to operationalise harm face numerous difficulties – primarily that harm is a subjective concept that varies. Despite these issues a reliable scale to measure harm from crime would have benefits both for academics and practitioners.

Several different methods have been proposed to create an index for measuring harm, survey methods both general population and of judges alone, monetarily, using sentencing guidelines or using data from actual sentences (Sherman, Neyroud and Neyroud, 2016; Brand and Price, 2000; Sellin and Wolfgang, 1985). All have their benefits and drawbacks. Currently the two methods that best fulfil these requirements are either using sentencing guidelines or sentencing data (Sherman, Neyroud and Neyroud, 2016). Use of starting point sentences may provide the best overall guide of to create a base harm for different offences, although this is not a universally accepted approach and poses difficulties for where there is no existing sentence guideline (Sherman, Neyroud and Neyroud, 2016).

In England and Wales two indexes are currently predominant. The Cambridge Crime Harm Index (CCHI) created based on sentencing guidelines and Crime Severity Scores (CSS) created using actual sentences (Ashby, 2018). While neither presents a perfect measure of harm and both have the potential to produce biased estimates of harm. Arguably in its current iteration the CSS suffers from some problematic flaws that potentially prohibit it's use in practice. Currently for measuring crime harm in England and Wales the CCHI is perhaps the best – albeit an imperfect – metric.

Chapter 5

The victim-offender overlap and the criminal justice system - treatment , triage and the gateway

The gateway to the CJS is where offenders enter the criminal justice system (CJS). It's smooth operation and utilisation of effective disposals is critical to promoting defendant desistence (Neyroud, 2015). Decisions made here could include whether to charge the offender, release without charge (NFA) or to divert the offender to an OOCD (Neyroud, 2015). Formal court processing is both costly and can be harmful for offenders (Petrosino et al, 2007), therefore the search for alternatives to court comprises an essential part of this gateway (Neyroud and Slothower, 2015). However, while those such as Neyroud (2015) have advocated for rethinking the gateway for offenders, little attention has been paid to how to approach victim-offenders. Given the high percentage of victim-offenders among low-level offenders who would be eligible for these OOCD (Neyroud, 2015) consideration victim-offenders is vital. Deciding how to triage and whom to prioritise is a further consideration. Should decisions be made based on what has already occurred, future risk or both? The critical question here is what a successful justice system looks like, and how victim-offenders fit within this.

How are victim-offenders treated within the criminal justice system?

Historically when dealing with individuals involved in both victimisation and offending arguably the CJS often fails to make the links between offending and victimisation (OCSB, 2015; Jay, 2014). Adversarial justice systems like that of England and Wales split individuals into either victims or offenders (Drake and Henley, 2014; Baxter, 2019). Usually missing the nuances and complications posed by that of the victim-offender overlap. Currently policy is written from the perspective that victims and offenders belong to discrete groups (Bottoms and Costello, 2010). The aim of the CJS as portrayed in policy is to punish and prevent offenders from offending while supporting and aiding vulnerable victims (Heber, 2013; Drake and Henley, 2014). This approach doesn't address the overlap effectively, and how individuals are treated by the CJS both as victims (Elliot, Thomas and Ogloff, 2014; Long, 2014; Bottoms and Costello, 2010) or

as offenders (Nagin, Cullen, and Johnson, 2009) could impact their future behaviour.

When involved as victim's failure to reach a satisfactory resolution through formal channels of justice can lead to individuals feeling the "*system has failed*" either exacerbating the effects of victimisation (Elliot, Thomas and Ogloff, 2014; Long, 2014), or leaving them to resort to unofficial methods for restitution (Jacobs and Wright, 2006). Approaching the CJS in the offender role often results in the application of sanctions. Sanctions can be responded to in different ways, individuals may be deterred, but they could be seen as irrelevant (Nagin, Cullen and Johnson, 2009), or worse result in defiance (Sherman, 1993). While victims may be met with a variety of reactions from sympathy and concern to disbelief, ambivalence and in some cases outright dismissal (Elliot, Thomas and Ogloff, 2014; Long, 2014).

Perceptions of offenders may mean police and others involved in investigating the crime may be less sympathetic when victims perceived as less than innocent are involved (Drake and Henley, 2014). Sometimes a history of victimisation may be seen as a mitigating fact – for example a previously abused individual who later retaliated against their offender may use the previous victimisation as a defence to justify their actions. Such as the "*battered woman's defence*" where a woman kills her abusive partner (Glancy, Heintzman and Wheeler, 2019).

There are practical consequences the lack of awareness of the victim-offender overlap, for example the child sexual exploitation (CSE) cases in Rotherham and Oxford. Both reports found services often identified these young women as truants, involved in offending, missing from home or care, under the influence of drugs or alcohol (OSCB, 2015; Jay, 2013), and missed making the connection between the rebellious behaviour of the girls' and the serious sexual victimisation. Girls were labelled as troublemakers – an attitude which further alienated them. Though this was not the only failing noted, it was clear that perception and lack of understanding contributed significantly.

Illustrating again how the CJS fails to account for victim-offenders is that of that of compensation pay outs. Victims of serious crimes can apply to the Criminal Injuries Compensation Authority (CICA) for a monetary pay out to assist them. The CICA discriminates against those with criminal records by refusing or reducing payments (CICA, 2019). Stating that an applicant with a criminal conviction may have caused loss, distress, or injury to another person (Ministry of Justice, 2014). While it is justifiable that offenders who have committed serious and harmful crimes such as murder should not receive compensation. For those who have committed lesser offences – for example those involved minor thefts, drug or alcohol use this position is less palatable. By demanding "*model*" victims who have led perfect blameless lives the CICA are disadvantaging "*real*" victims. Whose crimes - given the victim offender overlap – may in fact be inextricably linked to their victimisation (Bottoms and Costello, 2010).

Some types of victim-offenders appear to be more accepted within policy such as that between childhood maltreatment and latter offending. The conclusion of a review by the youth justice board stated that past maltreatment is "*present in the life histories of a greater proportion of children in custody than in the general population…. And should be regarded as a critical and primary predisposing risk factor in relation to offending behaviour* (Youth Justice Board, 2008, pp5)." Acceptance of females as victims may also be more agreeable to policy makers as well due to cultural norms and perceptions (Dennis, 2008). The victim-offender overlap is not restricted to these more socially and politically acceptable types of victimisation-offending types (Drake and Henley, 2014). For example, men may be coerced into running drugs, be victims of serious sexual abuse or domestic abuse (Dennis, 2008; Killberg and Skillmark, 2017). It is irresponsible to not consider the full extent and potential manifestations of the victim-offender overlap.

A further consideration is that tacitly condoning offending against offenders could reinforce a situation where self-reliance and retaliation is the preferred response to dealing with victimisation rather than contacting the police (Bottoms and Costello, 2010). These subcultures should ideally be

discouraged, and to create a CJS that encourages legitimacy and trust in the police. Discouraging any type of offending – no matter whom that offending is directed against should be a priority. Hopefully preventing the perpetuation of the overlap.

How the CJS can effectively deal with victim-offenders is a critical question, arguably it begins with taking the victimisation of offenders seriously. Sympathy and understanding must be balanced against consequences for actions - even if an individual's offending is related to their victimisation, they have clearly still broken the law. Effective punishment and deterrence are as necessary for victim-offenders as for those involved in just offending. Critically offenders are citizens who have the same indisputable right to have their victimisations investigated and dealt with fairly (Bottoms and Costello, 2010). Policy must acknowledge that in any group of offenders or victims to whom a policy made be applied, there will be a meaningful number involved in the overlap. Uncomfortable truth though it may be as Bottoms and Costello (2010) state "*the systemic evasion of uncomfortable truths is very rarely a good policy, either in personal or political life*".

Shifting from the offender only focus within intervention research

With the focus on "*evidence-based policing*" and "*what works*" the victim-offender overlap should be a central component in research on crime prevention. Policy and interventions designed to tackle offending should unambiguously linked to victimisation. Interventions into offending or victimisation may be failing because the assumptions behind the intervention does not account for the overlap (Lauritsen and Laub, 2007). Perhaps far more successful interventions could be created if the overlap is addressed. There is a necessity to investigate not only the impact on offending of interventions but also that on victimisation and consider both when constructing new interventions (Lauritsen and Laub, 2007).

Currently research looking the effect of criminal justice interventions focuses on either offending or victimisation. For example the set of randomised controlled trials examining restorative justice (RJ) looked primarily at the impact on

offending (Sherman and Strang, 2007), and in some instances included a measurement of post-traumatic stress syndrome and harm done to the victims in terms of increase fear of crime (Sherman, Strang, Angel, Woods, Barnes, Bennett and Inkpen, 2005; Angel, Sherman, Strang, Ariel, Bennett, Inkpen, Keane, and Richmond, 2014). Yet did not measure if there was any reductions or worse increases in victimisation among the offenders, or reduction in the likelihood of victims experiencing RJ going on to become offenders.

Currently only one study has openly used the victim-offender overlap to consider both offending and victimisation in their results. Mckillop et al. (2016), used two groups of male youth one of which attended the Griffin Youth Forensic Services (GYFS) for sexual offences and a comparison group who were referred but not accepted for treatment and received "*treatment as usual*" via standard youth justice interventions. Due to the study's design being that of a level 3 experiment rather than a RCT a higher proportion of the treatment group had experienced victimisation, suggested by authors to be due in part to the referral process which prioritised high risk high need clients (Mckillop et al, 2016). Despite their higher victimisation start point the treatment group was to be victimised less frequently post treatment based on police records, and that continued offending was the strongest predictor of victimisation post treatment (Mckillop et al, 2016). The authors concluded that "*offending and victimisation share common risk factors that may be addressed simultaneously within offence focussed treatment*" (Mckillop et al, 2016 p3).

The GYFS approach followed the "*risk-needs-responsivity model*" and targeted a number of individual, family, peer, organisational and sometimes neighbourhood factors relevant to the risks for future sexual and violent offending (Mckillop et al, 2016). The service is field based and the clinician travels to where the client resides, so interventions take place outside of the CJ setting, which providers theorised improve comfort and potential for engagement. Individualised, multisystemic assessment and treatment approaches are used in collaborate with several key stakeholders in the client's environment. This appears to be a successful approach both for reducing

victimisation and for offending (Allard, Rayment-McHugh, Adams, Smallbone and Mckillop, 2016).

Effective deterrence

How to deal with the breaking of rules is something that is subject to much debate. There are three aspects of punishment that are generally considered: severity (how bad), certainty (how likely) and celerity (how fast) (Nagin, 1998). Overall research suggests that the certainty and celerity of punishment matter more to how effective the punishment is than severity (Nagin, 1998; Nagin, 2018). Beyond this punishment should also "*relate to the crime*", be transparent, fair, and consistent (Sherman, 1993). Hopefully if all these aspects can be achieved the punishment should be effective and not backfire.

The deterrence-based approach to preventing re-offending is not universally agreed upon to be the most effective method (Cullen et al, 2018). The theory underlying the deterrence-based approach requires that individuals are making somewhat rational choices (Wikstrom, Tseloni, and Karlis, 2011). Reviews of the literature suggest that deterrence orientated correctional interventions have weak, null, or even iatrogenic effects on recidivism (Lipsey and Cullen, 2007). Instead, some advocate for programs emphasizing a therapeutic approach (Mckensie and Farrington, 2015; Lipsey, 2009). Overall a critical weakness of deterrence-based programs is that the intervention is not necessarily targeting the strongest risk factors related to recidivism (Cullen et al, 2018).

Deterrence does still matter however, Wikstrom, Tseloni and Karlis (2011) found youths' crime involvement was generally influenced by their perception of being caught. However, for those who lack a propensity to commit a crime – and do not see crime as an action – how likely they think they are to be caught deterrence appears not to matter (Wikstrom, Tseloni, and Karlis, 2011). Potentially the most successful interventions will be those that reduce the individual's crime propensity as well as creating a deterrent effect, rather than trying focus on one or other aspect alone.

Effective victimisation approaches

Victimisation prevention may include approaches such as target hardening e.g installation of better locks or alarms to prevent burglary or education so aiming to inform potential victims about risky behaviour (Farrell, 2013). Two different approaches to preventing individual victimisation are possible a whole group i.e class of school children as in relationship violence prevention may be targeted or targeting can be restricted those who have already been victimised. Another approach is to target the environment, police activity such as hot spot policing (Braga, Papachristos and Hureau, 2012) or problem orientated policing can be used to reduce victimisation risk within the environment (Hinkle, Weisburd, Telep and Petersen, 2020).

Revictimization is a consistent issue and repeat victimisation against the same target often occurs quickly (Farrell, 2013), so the most cost-effective strategy may be to target resources to those who have already experienced victimisation rather than a blanket approach for some victimisation types e.g burglary and violence (Pease and Farrell, 2016). Relative to EBP focus on repeat victimisation can automatically allocated resources to the most victimised people and highest crime areas (Farrell, 2013).

While repeat victimisation is a consistent finding (e.g Farrell and Pease, 1993; Pease and Farrell, 2016), less attention has been paid to effective strategies to tackle repeat victimisation. Within the literature more focus has been placed on environment-based prevention for burglary rather than individual prevention for a wider range of offences. Possibly since burglary is a crime with high rates of reporting, and broad range of possible prevention tactics (e.g better locks and bolts) and takes place at a known and fixed location making identifying repeats simple (Farrell, 2013). Advice and education for victims alone (e.g providing leaflets on preventing burglary) are not effective, and some victims do not have the means or want to adopt preventative measures (Farrell, 2013).

Some approaches that show potential for reducing victimisation include the GYFS model (Mckillop et al, 2016), and prenatal and home visitation programs for socially disadvantaged women and children (Olds and Kitzman, 1990). The

first demonstrates that a comprehensive approach using the "*risk needs responsivity*" model can improve victimisation alongside offending in those who are already involved in sexual offending (Mckillop et al, 2016). While the second takes intervention back to before the point of birth by working with young mothers (Olds and Kitzman, 1990). Early intervention can be one approach with numerous benefits for example Olds and Kitzman (1990) found their early intervention reduced child abuse and neglect, reduced emergency department visits and hospitalisation for injury, reduced unintended subsequent pregnancies and increased mothers' participation in the workforce. Early intervention for specific high-risk families may be a critical component in a program for victimisation prevention.

Approaches that may alleviate negative consequences include Restorative Justice (RJ), which although victimisation rates post intervention were not measured did successfully reduce PTSS among the victims (Angel et al, 2014). Reduced PTSS may prevent development of negative coping strategies that may lead to criminality such as drug or alcohol use (Turonovic and Pratt, 2013). Therefore, RJ may be one possible approach to assist when victimisation occurs.

Victimisation prevention theories have less clarity and cohesion than those for offending prevention. Research into victimisation prevention is less advanced in some ways than that of offending, however a couple of clear recommendations can be seen. There may need to be consideration of multiple levels -both at the person and environment to prevent victimisation. For individuals the approach will need to be adapted to specific circumstance of the victimisation. Secondly education for victims alone may not be sufficient to prevent revictimization and significant long-lasting interventions may be the best approach.

How to approach low-level victim-offenders?

Within the CJS the gateway the entry point needs to be reconsidered not just for offenders but for victim-offenders as well. Formal court processing can in fact be harmful for offenders. Petrosino et al (2007) for juvenile offenders found

there did not appear to be any crime control effect and in fact almost all results were negative as measured by prevalence, incidence, severity, and self-report outcomes. Therefore, sending offenders to court can not only be a costly process – the Law society of England and Wales (2018) estimates the average cost of a day in court as £2,692 in 2018 a figure which doesn't consider police or Crown prosecution time in preparation of the case. In the UK the current court processes are also hampered by numerous delays – even minor cases may take up to a year or more to be resolved. While funding cuts to critical aspects of the court process such as legal aid – spending on legal aid has shrunk by more than one billion over the last five years (Pratt, Brown and Sturge, 2018) – make the search for successful alternatives attractive. One such alternative to formal court processing is the out of court disposal (OOCD). OOCD allows offenders to be dealt with "*informally*" outside of the official court process and may be particularly suitable for low level offenders.

While OOCD have several benefits over traditional court processing such as the speed of the disposal, reduced cost, and that police can process offenders without CPS involvement (Neyroud and Slothower, 2015). However research in to OOCD are suggests they lack structure and are perceived by some to be "*letting offenders off*", plus there are questions about their effectiveness to deter future offending (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). Use of OOCD may also produce "*net widening*" – the introduction of the OOCD may increase numbers of individuals formally processed by drawing in individuals that would have otherwise not had their cases progress (Neyroud, 2015). Critically there is a lack of vigorous research testing the effectiveness (Neyroud and Slothower, 2013). Potentially a more robust OOCD would be a worthwhile tool, not only to reduce costs but also with careful design to deliver swifter and more certain consequences to offenders.

The framework of TPP was designed to combat these common criticisms and combined an offender desistance policing (ODP) approach with conditions given to tackle the criminogenic causes of their offending (Neyroud and Slothower, 2013; Neyroud and Slothower, 2015). This combination of swift and certain justice combined with conditions to tackle the needs of the offender was

theorised to be the most effective and rigorous model (Neyroud and Slothower, 2015). The initial TPP experiment conducted in Birmingham (UK) that will be the subject of this thesis produced results indicating the OOCD increased victim satisfaction, produced significant cost savings and reduced harm but had no effect on the prevalence or reoffending frequency (Neyroud, 2016). The results indicated that in the TPP model OOCD are as good as sending offenders to court and can be delivered at a significantly reduced cost.

The repeat of TPP in Durham – Checkpoint followed the same ODP approach however instead of offender managers as in TPP, special "*navigators*" independent from the police were used (Weir, Routledge and Kilili, 2021). The "*navigators*" aimed to offer substantial contact, support, and encourage the formation of prosocial bonds to reduce reoffending. The results from the finished RCT published in June 2021 found a reduced reoffending rate of 10.3% for prevalence and a reduction in risk of reoffending of 30% (Weir, Kilili, Cooper, Crowe and Routledge, 2021). No significant results were found for frequency of offending or harm. Checkpoint demonstrates the effectiveness of the ODP approach, again producing results that showed no backfire effects from OOCD and was substantially better than court on some measures of reoffending.

Moving the responsibility from offender managers to specially trained navigators may have played a role in results from Checkpoint (Weir et al, 2021). As offenders may be more willing to work collaboratively with non-police officers. Additionally, those working on the second experiment took learning from the original TPP to improve their OOCD model and learning on how to successfully implement RCTs in policing. Checkpoint arguably had a more vigorous protocol and implemented more effective tracking than the original TPP. Treatment integrity is critical to experimental success, and this may have contributed to the positive findings on prevalence and risk of reoffending found here.

While the OOCD model used in TPP and Checkpoint was offending focussed, there is no reason that this with some evidence-based adaption could not be used to approach victim-offenders. Given the victim-offender overlap some of

the conditions given may be inadvertently or explicitly targeting victim-risk (e.g in Checkpoint navigators looked at criminogenic needs including mental health, alcohol, drugs, and exploitation) alongside that of offending, and significant adaption may not be necessary (see table 4 for the critical pathways used in Checkpoint and how they may relate to victimisation risk). These eight critical pathways used in Checkpoint provide an excellent starting point for construction of the OOCD, although to tackle victimisation additional pathways may need to be considered. This thesis will aim to identify any extra pathways that may be important to consider for low-level victim offenders.

Table 4: The critical pathways used in the Checkpoint experiment alongside theoretical links to victimisation and victimisation risk

Critical pathways	*Link to victimisation*
Accommodation	Victimisation is not equally distributed in environments and certain places may increase the risk of victimisation to the offender. Unstable accommodation or homelessness may also make the offender more vulnerable.
Alcohol	Drinking extensively is known to increase victimisation risk (Sampson and Lauritsen, 1990)
Relationships (children and families)	Bottoms and Costello (2010) identify known offenders as a key mechanism for the victim-offender overlap. These known offenders could be partners, peers, or family and increase victimisation risk.
Attitudes and behaviour	Some behaviours may place individuals at higher risk of victimisation or provoke offending behaviour in others (Van Gelder et al, 2014).

Drugs	Drug use may be part of a coping mechanism in response to victimisation and may make individuals vulnerable to victimisation (Turonovic and Pratt, 2013).
Employment, training, and education	Stable employment is suggested to be a turning point that may reduce risk of future victimisation (Daigle, Beaver and Hamilton, 2008), this may also apply to training and education.
Finance (budgets and debts)	It is less clear how finances relate directly to victimisation risk but stability in finances and lack of debt may reduce motivation to offend and reduce exposure to risky situations where victimisation can occur.
Mental and physical health	Issues with mental or physical health can increase risk of victimisation (Silver et al, 2011)
Exploitation (including CSE, and modern-day slavery)	This directly relates to the exploitation of low-level offenders and identifies issues such as CSE.

Checkpoint and TPP were focussed on low-level offenders and for higher harm victim-offenders a more intensive and targeted approach like that used by GYFS may be necessary. Yet for low-level offenders use of an OOCD to divert offenders from court appears a successful approach, and one that could be utilised wider. Both TPP and Checkpoint have currently only focus on the impact on offending from the OOCD and expanding the results to include measures of victimisation should assist in identifying any backfire effects or if as in the GYFS intervention victimisation decreased in tandem with offending (Mckillop et al, 2016). Given TPP produced null effects on offending prevalence and frequency it may be this will be consistent with the findings in victimisation.

Selective targeting and triage

Evidence based policing advocates for an approach that puts resources into those suffering disproportionate amounts of crime (Sherman, 2007). This could be in terms of numbers, harm, or both (Weinborn et al, 2017). A new focus of targeting for EBP is not just towards "*power few*" victims or the "*felonious few*" offenders but to identify victim-offenders (Sandall et al, 2018). As harm tends to concentrate within the victim-offenders, and there is the potential to reduce both future victimisation and offending through targeting those that both concentrate within. Although how precisely what interventions are most effective for victim-offenders is hindered by a significant lack of evidence currently. Knowing how much victimisation and offending has been caused to or committed by decisions can be made firstly about eligibility for OOCD and secondly who to triage to more comprehensive interventions. These are approaches that identify and make decisions on what has already occurred. Ideally it would be beneficial to not just know how much offending or victimisation has happened but also what is likely to happen in future.

An additional consideration is that targeting based on previous high harm may not be the most effective strategy. Liggins, Ratcliffe and Bland (2019) found that individual members of the "*felonious few*" rarely maintained that positioned year on year, and over 95% of each year's list is composed of new offenders. So targeting based on harm caused may not be the most effective strategy, if such offenders are likely to desist or due to detention prevented from further offending (Liggins, Ratcliffe and Bland, 2019). Currently no investigation has been undertaken to see if the patterns found for offending also hold true for victimisation. Furthermore, for victim-offenders it could be beneficial to know who if high harm victim-offenders persist each year or like the offenders in Liggins, Ratcliffe and Bland (2019) are subject to substantial change. Therefore, prediction of whom is likely to be high harm – either offending, victimisation or both – may be more useful in practice than just basing resourcing on prior events.

If who is likely to be victimised, offend, or become a victim-offender in future can be identified then better decisions about eligibility and how much resource to use can be made. Currently decisions about what interventions to offer and who to triage are generally made based on a clinical decision-making process or a structured judgement approach (Oswald et al, 2018; Grogger, Gupta, Ivandic and Kirchmaier, 2021). Decisions are made by humans who have a high degree of error (Oswald et al, 2018), instead some advocate for the use of actuarial tools or predictive algorithms to assist (e.g Neyroud, 2015; Oswald et al, 2018).

Using actuarial tools or prediction to improve decision making in policing has long been a controversial topic (Neyroud, 2015). Opponents argue that such tools are both inaccurate, help to embed bias and reinforce social and racial inequalities (Brayne and Christin, 2020). Any prediction tool is making forecasting decisions about the future based on past data and is subject to a degree of error (Brayne and Christin, 2020), and vulnerable to the comprehensiveness and accuracy of the data. Those for emphasize the benefit of "*smart statistics*" to improve risk assessment and decision making (Brayne and Christin, 2020) allowing the more objective and effective deployment of resources. With the inaccuracies of human decision-making alone, actuarial or prediction tools are arguably necessary to improve accuracy (Oswald et al, 2018). Possibly the best model of decision making uses the tool to inform, rather than leaving an algorithm the arbitrator of any decision (Oswald et al, 2018).

In the UK policing context, the use of algorithmic decision-making tools is at a developmental stage with limited implementation on a force-by-force basis (Oswald et al, 2018). One demonstration algorithmic decision making is HART (Harm Assessment Risk Tool). HART uses 34 predictor variables covering demographics such as age, gender, and offending history to categorise offenders into three categories; low – the subject will not reoffend during the following 24 months, moderate – the subject will offend during the following 24 months, and high subject will commit a serious offence during the following 24 months. This prediction of low, moderate, or high allowed the identification of

eligible offenders for the Checkpoint experiment to be identified. Researchers wanted cases where the offender would be considered as medium risk of re-offending due to desiring a group where offending is likely to occur to measure the effect of their OOCD. HART was overall found to be a successful tool to support police decision-making (Oswald et al, 2018), although not without some implementation difficulties to overcome.

As well as prediction offending risk researchers have investigated the potential of using algorithms to predict violent victimisation. For example, Grogger et al. (2021) compares risk assessment using DASH to those made by computers for predicting domestic violence. The risk assessments using DASH inaccurately predicted 11.8% of cases (n = 1,702) – cases where DASH assessment indicated "lesser" risk, yet violent recidivism occurred. Significantly 7.2% 1,165 cases were predicted as high risk yet had no violent recidivism. In only 215 of the 1917 incidents of recidivism were accurately predicted by DASH. The overall error rate from DASH prediction was 17.7%, with the authors concluding the results indicate that using "*the DASH risk grade performs little better than random guessing*" (Grogger et al, 2021). Grogger et al (2021) present a range of models using both random forest and logistic regression set with different parameters, all models showed significantly more prediction accuracy than DASH, with false negative errors reduced from 11.8% using DASH to 7.7% to 7.9%. In numerical terms prediction using machine learning can reduce the number of false negatives from 1,702 from DASH to 634, the authors stating that overall, ten years their prediction models would reduce false negatives by 10,680 cases (Grogger et al, 2021).

Two other key findings result from their study which may be applicable to using prediction and machine learning for victim-offenders. Firstly, models built using criminal history data provided better forecasts than if the data from the DASH risk assessment was used. Secondly adding the DASH data to criminal history data did little to improve the forecasts over those based on criminal history alone (Grogger et al, 2021). This means that for building forecasting tools for victim-offenders it may be possible to have a high degree of accuracy based

on criminal and victimisation histories alone, and not necessitate addition of other variables.

Conclusion

There is a need for evidence-based exploration of the best CJS approach to the victim-offender overlap. An evidence-based approach to the gateway of the CJS is critical to its effectiveness, and how to target more accurately both current and forecasted victim-offenders is critical to support their desistance from offending and reduce their harm suffered from victimisation. Preventing future harm both to the individual and the wider community. OOCD disposals such as those utilised by TPP and Checkpoint may be one approach, with potentially a more intensive intervention for higher harm victim-offenders. While there are caveats and concerns with use of prediction in policing, given the inaccuracies of current risk assessments e.g DASH careful use of algorithms and forecasting tools is essential to improving decision-making. As previously discussed, this may be best positioned as part of a tool to use for guided discretion. Using the tool to inform decision making and giving the human the ability to override the outcome indicated by the tool if necessary.

Chapter 6

Methods

This chapter will introduce the analytical approach, data sources, data organisation, methodology and key research terms used in this thesis. Data from the TPP will be using with a quantitative approach to explore the victim-offender overlap. Results will be presented in four parts:

1). Repeat of the initial victimisation study, with the addition of harm scores using the CCHI
2). Matching overall offending to victimisation
3). Investigation of the effect of the OOCD on victimisation
4). Prediction of victimisation and victim-offenders

As well as presenting the analytic approach and methods this section will outline limitations presented by the sources used and justify the use of police records to answer the questions posed by this thesis.

Analytic approach

This thesis will primarily use quantitative data collected from police records to investigate the overlap. Analysis will be broken down into four stages (see figure 1) and will be focussed on quantitative analysis using police data. A range of statistical test will be used throughout this thesis to effectively answer the questions outlined. A quantitative approach was chosen for this thesis since questions concerned numerical research questions. Such as how much victimisation was reported by low level offenders to the police. The first two sections of the results (chapters seven and eight) will present simple analyses. While chapter nine will present the results of the randomised control trial, both using effect sizes and a survival analysis. The final chapter ten will present multiple regression models to understand the impact of different variables on outcomes post intervention.

Figure 1: Presenting the four stages of the thesis

Chapter 7

Stage 1: Repeat of the intial victimisation study, with the addition of harm scores using the CCHI

Key research question:

1). What does victimisation look like in low-level offenders when explored through police records in terms of prevalence, frequency, types and harm?

Aim: to understand how serious and probelmatic victimisation is for low level offenders.

Chapter 8

Stage 2: Matching overall offending to victimisation

Key research question:

2). What are the patterns and relationships between victimisation and offending in this sample?

Aim: Identify relationships between victimisation and offending in this sample and present possible mechanisms.

Chapter 9

Stage 3: Investigation of the effect of the OOCD on victimisation

3). What is the impact of an out of court disposal that aimed to be as effective at reducing offending as sending individuals to court on victimisation?

Aim: Investigate the frequency, prevalence and harm from reporting victimisation post randomisation. To understand if OOCD are producing positive, backfire or null effects on victimisation.

Chapter 10

Stage 4: Prediction of victimisation and victim-offenders

Key research question

4). Can victimisation be predicted, and can who is most at-risk of becoming victim-offenders be predicted?

Aim: identify if it is possible to predict future victimisation and becoming a victim-offender from variables known before randomisation.

The Turning Point Project

This thesis will utilise data from the Turning point project (TPP). This was a randomised control trial (RCT) based in Birmingham (UK). The TPP tested the effectiveness of an OOCD against court processing. The police staff were responsible for main running of the project, with custody sergeant's responsibility for making decisions on eligibility and offender managers (OM) responsible for organising plans associated with the out of court disposals for adults and the Young Offender Teams (YOTs) responsible for juveniles. The researchers (the author and one other primary researcher) were responsible for the collection of offending data and monitoring the project, as well as providing training with the police custody sergeants carrying out the randomisation process assisted by 14 questions to determine eligibility. Victimisation data collection was collected only by the author for use in this thesis and the initial 2015 study.

Study setting

Birmingham is an ethnically diverse city with a population of approximately 1 million [4], with a relatively young population compared to comparable areas. According to the 2010 English Indices of Deprivation Birmingham is the 9th most deprived local authority in England. As well as issues with deprivation there are areas with particularly high concentrations of unskilled workers – especially towards the Eastern parts of Birmingham. The unemployment rate in Birmingham from 2018/2019 stood at 8.1% compared to 4.1% for the UK[5] – the employment gap in UK figures and those in Birmingham has been a consistent feature.

Within the West Midlands Policing area for local policing units (LPUs) were selected to take part in the project with the randomisation process occurring within the custody suites in these stations. The four LPUs selected were; Steelhouse – the central LPU in Birmingham responsible for the city centre and

[4] https://www.birmingham.gov.uk/info/20057/about_birmingham/1294/population_and_census
[5] https://www.nomisweb.co.uk/reports/lmp/la/1946157186/printable.aspx

nearby areas, Bournville – a "*model village*" type area based around the Cadbury factory, Sutton Coldfield – a large town and civil parish in the Northern part of Birmingham and finally Kingsheath in the south of Birmingham.

Turning Point structure

This study was a randomised control study (RCT) – this is suggested to be the gold standard on the Maryland scale (Farrington et al, 2003) for examining the effectiveness of an intervention. Participants are randomly assigned to either a treatment or a control group, theoretically eliminating variability between the two groups, allowing for the only difference between the groups to be the intervention (Weisburd and Britt, 2007).

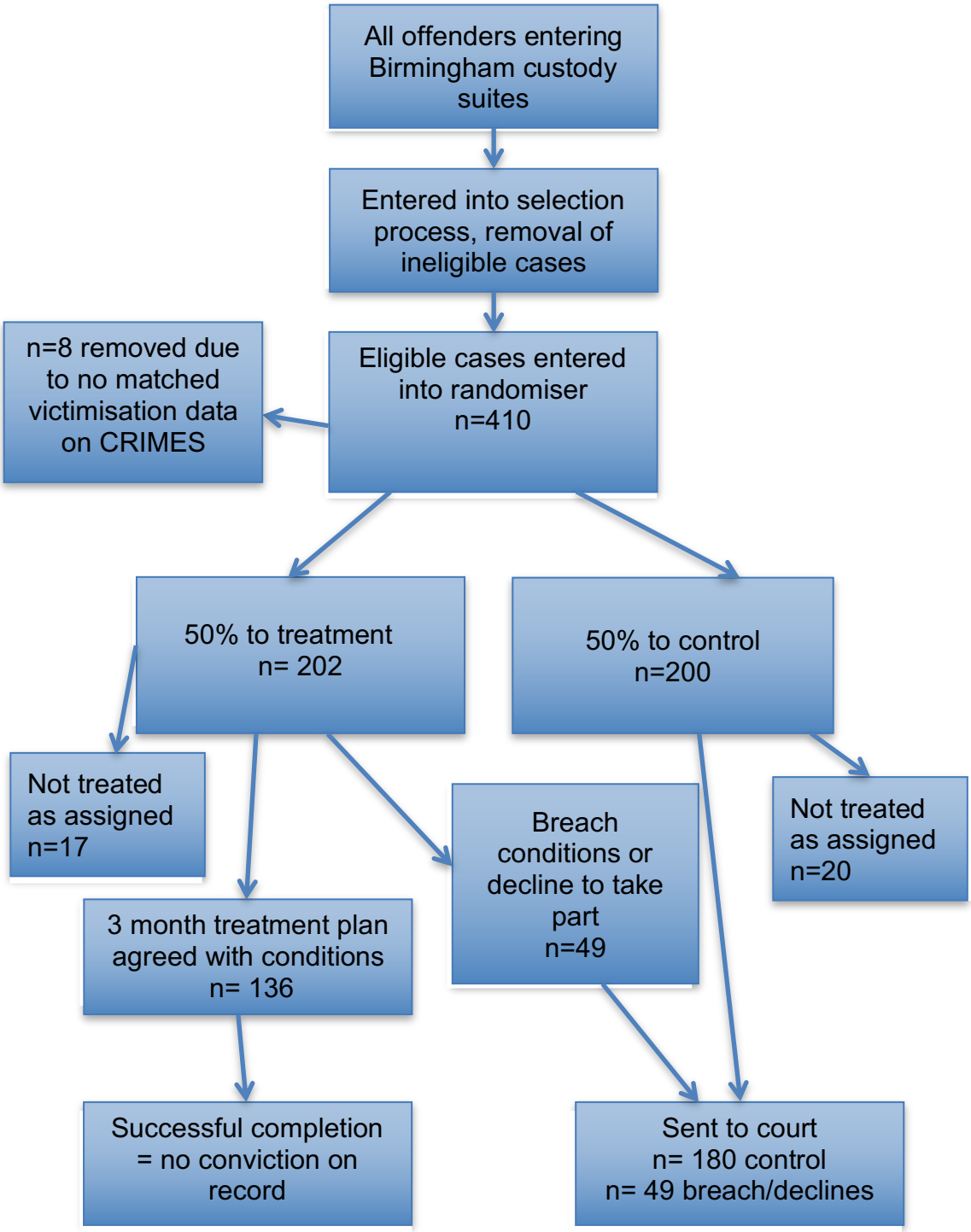
Sample selection

Sample selection took place from May 2013 to July 2014 and occurred within four local policing units (LPU). The study was run by the University of Cambridge in conjunction with West Midlands Police. Subjects were selected using a series of questions to determine eligibility against the set criteria (see appendix A for the list of the 14 questions). The exclusion criteria removed offences for which were likely to be given a custodial sentence. Specific offence types – domestic violence, driving offences, offences involving the use or threatened use of a weapon, offences contributing to a death of any person, offences connected to terrorism or official secrets, sexual offences and hate crimes – were also excluded. Previous offending history was also considered. Adults with greater than one previous conviction in the past five years were excluded, while juveniles were if they had been convicted of more than one offence in the prior two years. Those currently on police bail, bail to court for an offence, on licence or serving a court-imposed deemed were deemed ineligible.

The randomiser was also designed to include a question at the end – question 14 – which allowed custody sergeants to remove cases that otherwise would have been eligible if there were circumstances that deemed the case unsuitable for TPP. If this question was used then a justification for the decision had to be provided, and these were reviewed both by the research team and other police officers to ensure Custody Sergeants were exercising their discretion fairly.

There were primary cases (n=410) – which were the first offender eligible for TPP criteria, and then secondary cases which were if the offence had been committed with eligible co-offenders (n=39). They would also be given the same assignment as the initial offender entered the TPP to ensure fairness of treatment. Offending records were only collected for the primary cases, but victimisation records were collected for both primary and secondary ones, and both will be analysed in the initial analysis on victimisation. Treatment as assigned was 91.6% in treatment and 90% in control. Of treatment cases 49 (25.3%) breached or declined the plans, resulting in them being referred to formal processing, 67.3% of cases completed successfully.

Figure 2: The randomisation process for the Turning Point Project

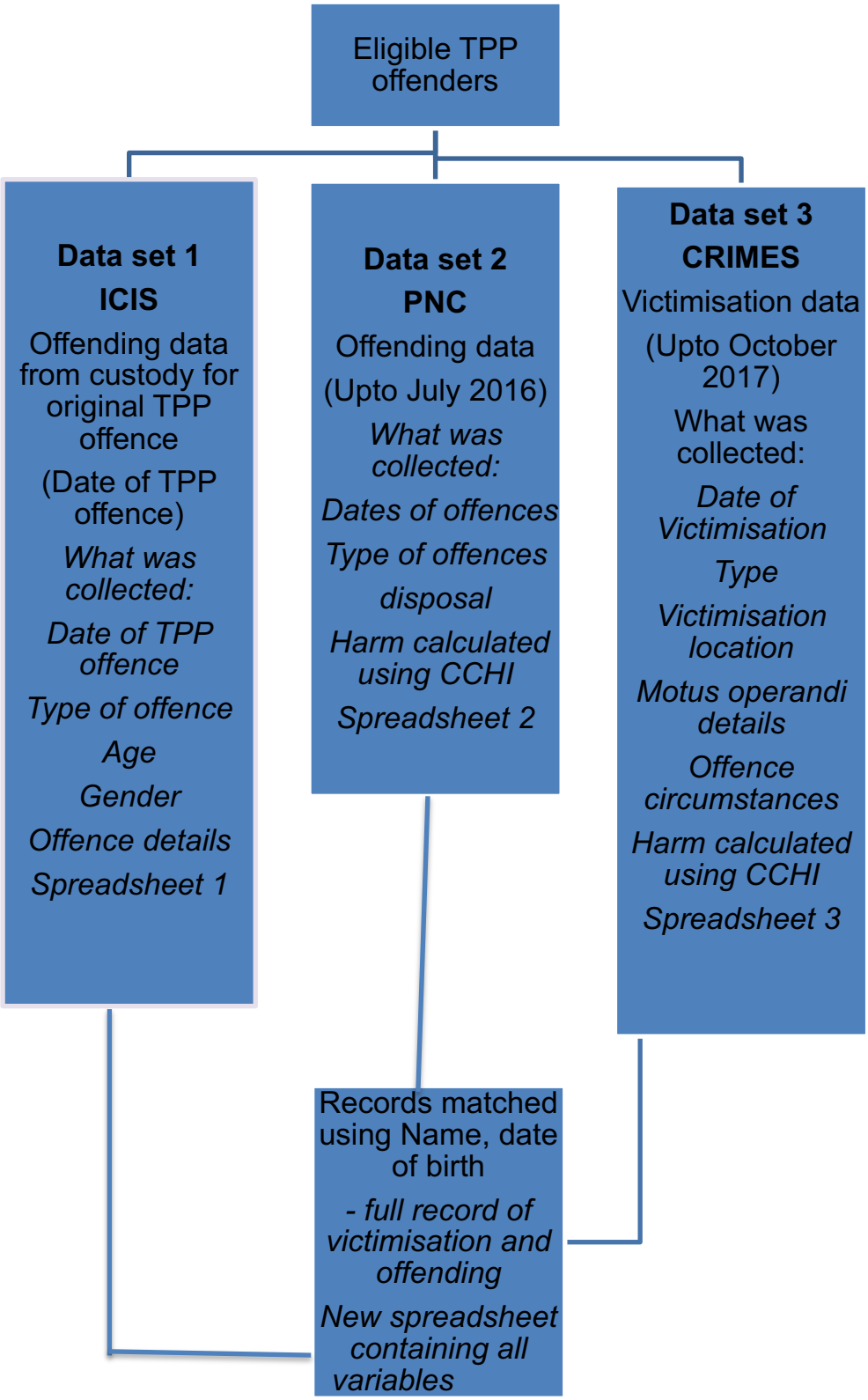


Data collection and limitations

All data was collected from police records held on the West Midlands Police's data systems. Several different systems were used to collect the data (see figure 3). Victimisation data was collected from CRIMES, while offending history and reoffending data was collected from the police national computer (PNC),

data on the offence the individual was deemed eligible for TPP was collected from the custody system ICIS. All data was organised into an excel spreadsheet for analysis. Offending and victimisation data were matched using the excel function VLOOKUP. Everyone has a unique reference number, here the original custody number was used, that allowed the records to be matched. Matching was double checked manually to ensure accuracy. Once the master spreadsheet had been created this was then imported into the statistics program R and an R script was created to run any tests and examine the variables. All data was non-parametric therefore tests such as Fisher's exact test was used to calculate odd ratios, the Wilcoxon signed rank test was used to compare distributions and Spearman's rank correlation coefficient was used to test correlations between variables (Field, 2013).

Figure 3: Data collection and data organisation methods



Victimisation data

Data collection for victimisation took place from April 2017 to October 2017 for victimisation. To collect data on victimisation a police data system called CRIMES was used. On this system name and date of birth was used to search for individuals, where aliases were identified these were also searched for. This method returned a high number of matches with only six individuals not found on the CRIMES system. These records were removed from the research and analysis due to the lack of a match. Once a record had been identified and matched data for victimisation only was recorded into an excel spreadsheet. Victimisation events were identified as those where the role was listed as VICT (victim) or VICTA (additional victim). Data began to be recorded in CRIMES in 1996 so any victimisation events prior to this year will not be available for access. The youngest of the TPP sample was 13 years old in 2013 so for some of the sample no records before 2000 would be available. CRIMES data was also limited to victimisations reported in the West Midlands Policing area, there was no access to other victimisation data systems available that would have shown offences occurring outside of this police force area.

The following data categories were collected from CRIMES: date of victimisation, Types of victimisations and Modus operandi of the victimisation, were collected for all victimisations. Extra data for the most recent five years of victimisations was also listed on CRIMES and was collected for the following categories: case outcome, case resolution. Additional details were available for the more recent victimisations and were collected for location of offence, alcohol involved, drugs involved, public place violence, offence occurring at the home address of victim, domestic violence, offender known to victim, Child Sexual exploitation, and mental health issue.

Offending and demographic data

Offending data was collected from the Police National Computer. Both the offending history and reoffending up to two years post intervention were collected. The decision was made to count only offences that the police charged the individual for rather than by arrests or convictions. The police may arrest an individual and question them but find the individual didn't commit the offence or there is not enough evidence leading to the case being deemed no further

action (NFA). Convictions may be influenced by magistrate or jury decisions, and take a considerable time to proceed through court, so for some of the more recent offences the court data was not available. Under UK law the police and/or the Crown Prosecution service can only charge an offence if there is sufficient evidence to provide a reasonable chance of conviction (Police and Criminal Evidence Act, 1984). Therefore charges - rather than arrests or convictions - were suggested to provide the best measure of what offences the individuals had committed. For offending it was possible for one individual to be arrested and charged with multiple offences at the same time. If this occurred – so for example if an individual was arrested once and charged with ten counts of shoplifting and one drugs offences – each would be added up together – in this instance totalling 11 charges.

Demographic data was collected from the WMP custody system ICIS, this included the name of the offender, age/date of birth, police recorded ethnicity and gender. This system was also used to collect data on the turning point offence including the date of the offence, type of offence, and offence details. The demographic data used here will be limited to age and gender since police recorded ethnicity showed considerable variability across systems and records, e.g an offender could be listed as black on their turning point offence but mixed race on a CRIMES record recording victimisation. It was therefore considered too inaccurate to be utilised for analysis.

Data limitations and issues

The first limitation presented in this study is limiting the data to police records only. A significant proportion of victimisation and offending goes either unreported or undetected by the police (Hart and Rennison, 2003), for a variety of reasons. These include; lack of trust in the police, fear of the offender, fear of retaliation, not wanting the offender to get in trouble or not perceiving what occur to them as an offence (Knoth and Ruback, 2016). For example, for violent offences the ONS using the CSEW estimated that only 38% of violent were reported to the police (ONS, 2018). This may be particularly relevant to offenders who may be especially unlikely to report crime to the police (Jacobs and Wright, 2006; Hart and Rennison, 2003). Estimates of this figure of

unreported crime vary from 52% of violent crime in the US (Langton et al, 2012) to 54-62% of violent crimes, 36% of burglaries, 59% of bicycle thefts (Tarling and Morris, 2010), 6% of vehicle thefts, 66% of vandalism in the United Kingdom (Office of National Statistics, 2013) going un-reported.

Some may argue that offenders are especially unlikely to report their victimisation (Jacobs and Wright, 2006), however it should not be assumed that the reporting of crime to the police is an unusual proposition for all offenders (Bottoms and Costello, 2010). This may be particularly true for low-level offenders since they are likely to be less involved in crime and may have fewer negative associations with the police. Offenders may also make calls to the police for aid prior to first arrest. Calls to the police may also be made by third parties who are witnessing offences occur. So, it likely that some proportion of the victimisations experienced by low-level offenders will appear on police computers. While there are likely to be gaps these records can provide a first look into the victim-offender overlap. Research also suggests there can be good concordance between self-reports and official offending records (Payne and Piquero, 2016; Piquero, Schubert and Brame, 2014), indicating that police records may be a better source of information than believed at first glance.

Whatever method is used to collect data on victimisation is unlikely to capture the entirety of victimisations suffered by this sample, - whether that is police records or self-reports. For police records victimisations will be missed due to non-reporting, or data entry errors. If using self-reports there may be issues persuading individuals to disclose sensitive topics to researchers, and to contact the individuals. The decision for this research to rely on police alone was due to ease of access and to identify what types of victimisations low-level are reporting to the police. Examining these records can provide vital information on what types, how harmful and how much victimisation low-level offenders are reporting to the police.

At the time of this study police statistics did not meet the standards set by the ONS for national statistics (UK Statistics Authority, 2014) – and still don't in 2019 (ONS, 2019). The ONS state that the quality of crime recording by the

police has improved with regards to compliance with national crime recording standards – meaning that a greater proportion of reported crimes are being accurately recorded by the police (ONS, 2019). However, the ONS (2019) suggest that offences are still significantly underreported. Caution must be taken when interpreting the results from this study since it is likely that there are crimes that have been reported to the police but either incorrectly or not recorded. The ONS do suggest that police recorded crime data are believed to provide a more reliable indication for trends in relation to higher harm by less common types of violence such as those involving guns and knives (ONS, 2019). The results of this study may be more accurate with respect to the higher harm crime types suffered or committed by this sample. One method to alleviate these issues would be to survey either the entire sample or a representative proportion of the sample, to understand what proportion of victimisation is currently being reported to the police. It would also be interesting to explore the motivations behind why offenders report or conversely do not report victimisation to the police.

An additional issue is with the police data systems themselves. Linking offending records to victimisation records is a complex task since the records of victimisation and offending are discrete systems. Each record had to be manually searched using surname and date of birth and then linked back to the offending records. Police systems – like any data base –suffer from issues with data entry, surnames, first names and dates of birth were at times entered incorrectly meaning possible - and indeed probable – that some records were missed due to misspelling or mis entered data. Individuals may also use aliases or nicknames – Micky Mouse can become Mickey Mouse, Mic Mouse or Mike Mouse quite easily or in some cases the name given may undergo a complete change to Donald Duck. Known aliases verified on the police national computer were also searched for. However again it is likely that there are some aliases that went undiscovered and victimisations that went unrecorded.

Reliance on police data kept only by West Midlands Police (WMP), means that if a participant moved during the study and were victimised in another policing area this information would not have been available to the researcher, since

CRIMES the system used to collect victimisation data only covered the WMP area. The participants in the study did reside within the WMP area when the study began. There was no access to data providing information of whether any left the area during the initial study and follow up.

Due to reliance on police data this thesis will not be able to analyse the impact variables used in prior survey studies e.g self-control, depression, and anxiety (Schreck, 1999, Van Gelder et al, 2014). The focus instead will be on quantifying and understanding victimisation reported to the police, if there are any differences in reported victimisation following an OOCD and finally if this data can be used to predict future victimisation or victim-offender status. Limiting to police data allows the identification of what data sources are readily available to police and researchers for investigation of the overlap. As suggested by Grogger et al. (2021) criminal history alone may present an adequate source for accurate prediction so these records may be adequate by themselves.

Demographics of the final sample

The total sample of all the TPP cases was 454; of these all but 8 could be matched to victimisation records on CRIMES, leaving a sample of 446. Of these 446 the majority (76%) were male, and only 24% female. The minimum age of participants in 2017 was 16, and the maximum 83, however 75% of the sample were under the age of 37.

Definitions

Term	***Definition used***
Offender	An individual in this sample will be defined as an offender if they have been arrested and charged for committing an act defined within English law as a criminal offence. Entry to TPP despite the individual not being officially charged per se counts in this circumstance. Since the evidentiary threshold to charge would have been met at the point they were considered for entry.

Victim	An individual in this sample will be said to have suffered victimisation if they appear on the police data system CRIMES with their role listed as VICT (direct victim) or VICTA (indirect victim). Indirect victim is used by the west midlands police to refer to those present at the victimisation incident and involved but not the main party. This could be an incident of domestic violence where children are present during but the argument is between the caretakers (parent or guardian), or if a shop was robbed the police often refer to the cashier as the VICTA and the shop as the direct victim. It was decided to count those defined as VICTA as victims because they are also experiencing the impact of the victimisation and in the case of the cashier may be the ones directly threatened by the offender even if the monetary loss is primarily the shop's. All reports of victimisation on CRIMES are taken to have occurred as the report says. While this may mean the study includes some false reports it is thought that this is a small percentage of total crime, and the bigger issue is underreporting (Bottoms and Costello, 2010). The identification of the event listed on CRIMES within the event description was presumed to accurately portray the level of damage incurred.
Victim-offender	In this study a victim-offender will be those listed on police systems with both a record of committing offences and are also identified as a victim. All the individuals in this sample have committed at least offence therefore they are all considered offenders. The term victim-offender will be applied regardless of the ordering of events – i.e if they

	offend and are latter victimised, or if they are victimised and latter offend.
Low-level offender	In the context of the TPP a low-level offender was those offenders who either did not have a previous or had one previous conviction that was at least five years ago for adults or two for juvenile offenders. This was at the point of selection during 2013/14, after selection some of the offenders have escalated in either their frequency of offending or in how harmful their offending is. Initial research into offending concluding in January 2015 suggests that this is a very small proportion of the sample.
Gender	Police records were converted into a binary variable with 1 coding for male and 0 for female. The determination of male/female was made based on custody sergeants' reports on ICIS custody.
Treatment	Individuals randomly assigned to the treatment group were offered the chance to take part in an OOCD disposal consisting of a three-month plan agreed between the individual and an offender manager. If the plan was successfully completed and no more offending occurred during the period, there would be no formal sanction given for the offence. If they did not agree to take part or breached either through failure to attend appointments, to complete the plan or reoffending then they would be sent through the normal court process.
Control	Individuals randomly assigned to the control group had to proceed through court process as usual, with their eventual outcome and possible punishment dependant on the court's decision.

Types of victimisations recorded

The types of victimisations recorded were quite diverse. Only one main type of victimisation was listed on CRIMES for each offence, therefore if the offence consisted of both an assault and a robbery only one would be recorded under the offence type on CRIMES. This could have led to underreporting of victimisations since it is possible individuals to experience multiple types of victimisations during the same event. Offence identification was made by the officer recording the details of the offence.

Victimisation grouping

For ease of analysis victimisations were grouped into six main classes, for all crime groups both a binary - 0=has not reported, 1= has reported this type of victimisation and a cumulative count variable were created. These groupings were based on the Office of National Statistics (ONS) guidelines (Criminal Justice Inspectorates, 2013).

Offence type	*Description*
Offences against the person (Violence)	These were violent offences including; murder, attempted murder, grievous bodily harm (GBH) with/without intent, malicious wounding, wounding, actual bodily harm (ABH) and common assault.
Acquisitive	These were offences where the primary motivation was to obtain goods and this included; robbery, burglary dwelling, burglary non dwelling, theft from the person, theft of pedal cycle, theft other or theft from shop. While robbery is generally considered a violent crime from reading the offence descriptions there was very little harm or threat involved in the cases defined as robbery in this sample, so it was suggested to fit closer to the theft category.

Sexual	These offences involved a sexual element and included, indecent assault, sexual assault and rape.
Motor	These were events that were carried out on motor vehicles and included theft from motor vehicle, theft of motor vehicle, taking without consent, aggravated vehicle taking and criminal damage to motor vehicle. Criminal damage to a motor vehicle was grouped into this section rather than the general criminal damage class because it required a motor vehicle to be carried out.
Verbal threats and harassment	These were events that involved either verbal threats or harassment and included threats to kills, harassment involving fear or provocation of violence.
Criminal damage	Criminal damage offences were offences that involved general criminal damage, criminal damage other, criminal damage dwelling, or arson.
Other and miscellaneous offences	There were a small number of crimes that didn't fit any of the above categories, these included being attacked by a dangerous dog, sexual activity between teenagers and were classified into other offences.

Non crimes victimisations

On the WMP data systems the victim type may be listed as a non-crime incident. This refers to an incident that has occurred but does not fulfil the definition of a criminal act under English law. There are three kinds of these events listed, Domestic violence, child abuse, and vulnerable adult.

Non crime type	*Description*

Child abuse	These were listed for events that were brought to police attention but weren't technically classified as criminal. The types of events that were recorded included where the individual was missing either from care or from home if there was suspected neglect or other issues at home and if there concerns about the behaviour or safety of the child. This did also include recording if sexual exploitation of the child was thought to possibly be occurring.
Domestic violence	Domestic violence non crimes were used when police attended an argument -usually within the home setting – where there were no criminal offences occurring. These were typically recorded for intimate partners, but a few were also listed for incidences between others – such as parent and child or between siblings.
Vulnerable adult	Vulnerable adult non crimes were used for events happening to over 18s that that were brought to the attention of the police, this could be concerns over mental health, or if the individual was at risk of self-harm or suicidal, and for safeguarding issues - i.e if a vulnerable individual was potentially being exploited or if they didn't seem to be able to care for themselves adequately.

Types of offences

Some of the offence and victimisation categories were the same between offending and victimisation. However, there were some additional types of offences which the Home Office Crime tree defines as *"other crimes against society"* rather than *"victim-based crime"* (Criminal Justice Inspectorates, 2015). The following victim-based offence groupings remained consistent between offending and victimisation, offences against the person, acquisitive,

motor, sexual, verbal, fraud, and criminal damage and other. Six additional crimes against society groupings were created; drugs, driving, weapons, breaching a CJS sanction, obstruct a police officer, and public order offences. For each of these fifteen categories both a binary – 0 = not charged with 1 = charged with this type of victimisation and a cumulative count variable were created.

Offence type	*Description*
Drugs	These offences involved the possession, supply or manufacture of illegal drugs.
Driving	Driving offences were separated from motor offences since they did not involve a direct victim like the motor do. Instead driving offences are classified under other crimes against society. These offences included; driving with no insurance, driving with no MOT, driving with no or a suspended licence, driving under the influence, dangerous driving, careless driving and also not having a correctly taxed vehicle.
Weapons	These offences were concerned with possession of an offensive weapon, this could be either a bladed knife, a firearm or other offensive weapon such as knuckledusters or nunchucks.
Breaching a Criminal Justice Sanction	This involved the breach of a CJS sanction such as a youth rehabilitation order, a supervision order, breaching bail, failure to surrender to court or breach of a conditional discharge.
Obstruct Police Officer	A separate category was created for this offence, potentially it could have been grouped in with breaching a criminal justice sanction, however it

	occurs during different circumstances to the CJS breaches – generally during arrests.
Public Order	This category consisted of public order offences such as; drunk and disorderly, affray and violent disorder.

Part 1: Analysing victimisation (Chapter 7)

What does victimisation look like in low-level offenders when explored through police records in terms of prevalence, frequency, types and harm?

The first analysis focussed on a basic analysis of prevalence and frequency. The overall prevalence and frequency of victimisation was calculated first. Then a second prevalence for criminal victimisations alone was calculated. From the frequency of victimisations graphs were created in Microsoft excel to show the distribution of victimisation within the sample.

Types of Victimisations

The prevalence of different types of victimisations was calculated in R and converted into a percentage of the total sample. How different types of victimisations related to each other was calculated using fisher's exact test to produce odd ratios (Field, 2013).

Victimisation and gender

The basic prevalence and frequency for each gender was calculated, the fisher's exact test was used to identify if there were any significant differences between genders (Field, 2013). Firstly, for any form of victimisation, then criminal victimisations alone, and finally for each type of victimisation. The mean number of events reported by each gender was also calculated, and Wilcoxon's rank test was used to identify if there were any significant differences in distributions between the two samples (Field, 2013).

Non-criminal and criminal victimisations

The relationship between reporting non-events was examined with fisher's exact test used to calculate the odd ratios between criminal and different types

of non-criminal events. This was carried out firstly for domestic violence non crimes, followed by child abuse non crimes, and vulnerable adult non crimes.

Circumstances and locations of victimisation events

Data on the circumstances and location of victimisation events was recorded from CRIMES. Circumstances involved in the offence were alcohol, drugs, offender known to victim, domestic violence, child sexual abuse, mental health issue. While location was classified as either public place violence, or as occurring at the home address if the residence of the victim matched the location of the offence. Each category was coded as 1 for yes present and 0 for no not present. Percentages were then calculated for each of the main offence types (violence, acquisitive, verbal, motor, sexual, criminal damage, domestic violence non crime, child abuse non crime, vulnerable adult non crime).

Analysis using Fisher's exact tests to relate offender-victim relationship, offence location, likelihood of offence resolution and domestic violence involved were used to explore relationships between these variables. Finally, analysis splitting the sample by gender using fisher tests to show the effect of gender on different offence circumstances and locations was used.

Crime harm scores

Crime harm scores were calculated using the Cambridge Crime Harm Index (Sheman, Neyroud and Neyroud, 2016), offence descriptions were matched to the CCHI scores (see appendix 2 for full list of values used). Once the harm scores have been calculated the scores are summed together to provide a total harm score. Cumulative harm score graphs for the whole sample to demonstrate the distribution of harm were calculated in R and Microsoft excel.

Categorising victims by harm and number

Victims were split into five categories – high harm and high number victimisation, high harm and low number, low harm and high number, low harm and low number, and finally those with no reported victimisation. Identification of high or low harm was made by separating the sample into those greater than one standard deviation from the mean (high) and those below this point as

lower harm, based on the methodology used by Weinborn et al (2017) for places. Percentage of total harm and number of victimisations for each category was calculated and added to the diagram created.

Part 2: Analysing offending and the victim-offender overlap (Chapter 8)

What are the patterns and relationships between victimisation and offending in this sample?

Matched offending and victimisation data were available for 402 of the 444 members of the TPP project. This analysis was limited to those 402 who both types of data was available for in this project. Only a basic analysis of the offending data will be done in this project, since the main project evaluation will be reporting on offending, and the offending results provided here are only for context within the victim-offender overlap.

Firstly, preliminary analysis of the offending results was carried out investigate the frequency, types, and total amount of offences charged. The program R was used for the statistics and Microsoft excel to create graphs. The prevalence of different types of offending was calculated in R and converted into a percentage of the total sample. The cumulative frequency of offending was calculated and plotted onto a graph.

The correlation between victimisation and offending was tested using Spearman's rank correlation co-efficient in R. The power few offenders and victims were compared to identify an overlap between the two groups which was then plotted onto a scatterplot, with the power few groups and overlap highlighted. The different types of offending and victimisation were then examined for relationships with Fisher's exact test and correlation using Spearman's rank correlation co-efficient in R.

Violent victimisation and offending

Those reporting violent victimisations were separated from the rest of the sample, then further separated into those belonging to the violent victim-offender overlap, and those who were only victims. Violent victims only were compared to those in the violent victim-offender overlap using Fisher's exact

test to calculate odds ratios for; gender, victimisation only at home address, victimisation in public only, victimisation at both public and home address, and offender known to victim.

The three types of offending (violence, criminal damage, and verbal) showing the strongest relationships and correlations to violent victimisation were analysed by gender. Both odds ratios for each gender using Fisher's exact test and correlation using Spearman's rank correlation co-efficient in R were calculated.

Finally, the correlations between domestic violence non crimes, violent offending and violent victimisation were examined. Diagrams indicating the strength of the relationships were created, before the sample was separated by gender and a gender analysis was used to identify differences between these three variables for males and females.

Part 3: Victimisation and randomisation (Chapter 9)

What is the impact of an out of court disposal that aimed to be as effective at reducing offending as sending individuals to court on victimisation?

The sample was separated into two groups using assignment with those assigned to the treatment group coded to 1 and those assigned to control coded to 0. The date randomised was assumed to be the date the individual was entered through the randomiser. This date was used to determine if victimisation events occurred pre or post randomisation. Victimisation events occurring before this date were classified as pre randomisation, while events occurring afterwards were classified as post. Events occurring on the same date as randomisation were not counted since it could not be determined from the data, whether these occurred before or after individual was entered into the randomiser. Results will be considered through survival analysis, prevalence of victimisation, frequency of victimisation and harm from victimisation to provide a full picture of the effect of the OOCD on victimisation.

Survival analysis

This part of the research will use survival analysis to analyse if the treatment or control groups experienced worse outcomes. Survival analysis has been selected in addition to the other methods since the Mckillop et al (2016) study also utilised survival analysis, and by using this method direct comparisons can be made. Furthermore, there were varying follow up periods some of the sample would have entered early 2013 and others 2014. With the final date of data collection being October 2017 there will be three years of data available for all participants and closer to four to some of the earlier entries. Survival analysis allows the full data to be used and can cope with the differing follow up periods (Ferreira and Patino, 2016). Survival analysis is also useful when the time between the exposure and the event is of interest.

Censoring and sample selection for survival analysis

When the victimisation records were searched this resulted in a final sample size of 402 – with 200 assigned to the control group and 202 to the treatment. The individuals will be considered as exposed to the risk of victimisation throughout the follow up period. While for offending it may be necessary to exclude the periods when members of the sample were imprisoned, since the period of detention reduces their opportunities to offend. Here even while detained the sample was still at risk of victimisation, and therefore such periods will not be excluded from this sample. This decision is supported by the fact there were two incidences victimisation reported while the individual was detained. Reports during detainment may either refer to the disclosure of historic offences occurring prior or offences occurring within the prison during the sentence period:

1). Incident of GBH occurring to a male

Offence details: Broken jaw. At the time stated the IP (injured person) was on the phone when the offender walked up from behind and punched him to the jaw once. IP fell to the floor, bleeding from the mouth and offender was taken to managers office.

2). Rape disclosed while in prison to a female

Offence description (shortened to remove identifying details of the assault): IP who is currently serving prisoner disclosed a historic rape and serious sexual assault committed by an ex-partner.

One offender is known to be deceased with a record indicating they committed suicide in 2014. The decision will consider this individual's exposure to victimisation to be terminated at this point and they will be censored from the analysis at the date of the suicide. No other information on deaths is currently available to add to this analysis but it may be an avenue to pursue in future study, for now the decision is to consider all individuals apart from the known suicide exposed to the risk of victimisation from randomisation until the date of final data collection.

This survival analysis will focus on two different events firstly time to reporting any form of victimisation to the police including marker/non-criminal incidents, and secondly time to reporting a criminal victimisation to the police. Both will be considered since theoretically due to the greater contact time between offender managers (OM) or youth offending teams (YOTs) and the individuals there may be an increased disclosure of non-criminal incidents compared to the control group. Therefore, it is important to consider both types of victimisations – the criminal which generally require a call for service or a disclosure by the victim, and the non-criminal events such as child abuse non crimes that may be recorded because of non-victim-initiated contact with the police.

Comparison of prevalence, frequency, and harm of victimisation

Victimisation prevalence, frequency and harm was calculated for Over three years of victimisation data was captured for all the individuals participating in the TPP. To standardise only three of data post randomisation was counted with events occurring over three years post not included in the counts. Prevalence of victimisation was compared using Chi square tests, while frequency and harm were compared using the non-parametric Wilcoxon signed rank test. Effect sizes were calculated using the formula:

$$r = Z/\sqrt{N}$$

Where r = the effect size, Z = the Z statistic and N is the sample size.

Identifying the outliers and establishing the impact of female victimisation

Within the results it was identified that the female treatment group was driving significant differences between the treatment and control groups. Therefore, further analysis was conducted to identify differences between treatment group females and the other three groups prior to randomisation. This was performed using both survival analysis and other statistical tests.

Part 4: Prediction of outcome for victimisation and offending (Chapter 10)

Can victimisation be predicted, and can who is most at-risk of becoming victim-offenders be predicted?

Further identification of variables affecting victimisation survival

Cox's regression

Using a cox's regression allows the effect of multiple variables to be compared and the overall effect of the variables on the outcome to be analysed. An initial single variate analysis in R comparing each of the 21 independent variables outlined in table 5 to be compared. The single variate analysis was calculated for both criminal only and any type of victimisation. The single variate analysis highlighted potentially significant variables to be added to the Cox's regression.

Binomial logistic regression

As well as considering the survival analysis and cox's regression the results were also coded to victimised yes or no to allow the consideration of a binomial logistic regression model. This was performed for both criminal victimisations only and non-criminal, creating two additional models (three and four). Stepwise AIC both direction selection was used to indicate significant variables to add to the model and to prevent overfitting. With the process indicating that nine variables of the twenty initially suggested provided the best fit for model 3, and only

Building models for prediction of group membership

For this part of the research to match with offending, the victimisation data post was limited to a two year follow up. Categorisation was based on outcomes within two years of randomisation. Individuals were classified into one of four categories (table 6). Total harm for each category for the two years follow up was calculated using the CCHI, to compare to prior studies (e.g Sandall, Angel and White, 2018; Hiltz et al, 2020). Independent variables included all of those listed in table 5 with the except of those related to offending behaviours post randomisation.

The twenty-three different variables

From the earlier research 23 different variables were used for the survival analysis and earlier binomial regressions. Since the models are now predicting offending alongside victimisation measures of offending post will be excluded leaving 20 variables for the models.

Table 5: Data points and variables used for survival analysis and binomial logistic regression

Variable	*Variable measuring*	*Rationale behind variable*
Assignment (treatment/control)	Whether the individual is assigned to the treatment or control group. (1 = treatment, 0 = control)	To identify if assignment to the OOCD or assignment to court processing was associated with victimisation or victim-offender outcomes.
Gender	Gender (male/female) (0 = female, 1 = male)	Previous studies have identified significant gender differences. There are indications that female offenders may be vulnerable to different types of victimisations, and their reporting behaviour may vary.
Age *Categorised into:* *Under 25* *Under 35* *And over 35*	If the individual is under or over the age specified for the duration of the study (0 = over, 1 = under)	Younger offenders may be more involved in the victim-offender overlap. Therefore, it is critical to identify if this is true for this sample of low-level offenders.
Offending pre	If the individual had an offence of any type recorded (1 = yes, 0 = no)	Individuals with prior experience of the criminal justice system as offenders may be more exposed to victimisation.

Criminal damage offending prior	If the individual had committed a criminal damage offence prior to randomisation. (1 = yes, 0 = no)	The prior study (Neyroud, 2015) on this sample of low levels offenders identified a potential relationship between victimisation and criminal damage offending. This will allow further exploration of the impact of committing criminal damage.
Violent offending prior	If the individual had committed a violent offence prior to randomisation (1 = yes, 0 = no)	Neyroud, 2015 highlighted the impact of violence in the population, so the impact of committing a violent offence is certainly a key variable to consider identifying if violent offenders are more at risk of victimisation or becoming victim-offenders.
Victim offender prior (any point)	If the individual was recorded as both a victim and offender prior (1 = yes, 0 = no)	It is possible that prior experience of being a victim-offender increases the risk of becoming a victim offender in the follow up period.
Victim-offender within three years prior	If the individual was recorded as both a victim and offender within three years of randomisation date. (1 = yes, 0 = no)	Timing of events may be important, with events closer to randomisation having more significant effects than those more distant in time. Therefore, as well as a general variable to measure if the individual could be categorised as a victim-offender prior it was also identified if this occurred within three years to randomisation date.
Offending one year prior	If the individual offended within one year of assignment (1 = yes, 0 = no)	Timing of events may be important, with events closer to randomisation having more significant effects than those more distant in time.

Offending 3 years prior	If the individual offended within three years of assignment (1 = yes, 0 = no)	Timing of events may be important, with events closer to randomisation having more significant effects than those more distant in time. Therefore, as well as a general variable to measure if the individual offended prior it was also identified if this occurred within three years to randomisation date.
Offending post	If offending continued post randomisation (limited to a two year follow up) (1 = yes, 0 = no)	Mckillop et al (2016) identified continued involvement in offending as being the most significant predictor in their research identifying those who continue to be involved in victimisation.
Violent offending post	If the individual violently offended post randomisation (limited to a two year follow up) (1 = yes, 0 = no)	It is possible that some forms of offending have more significant effects than others, and violent offending may be the most impactive. Other forms of offending e.g sexual may also show significant impacts however there is a very small number of that class of offence in this sample which would limit potential analysis.
Victimisation prior (any time)	If the individual was a victim of any type of crime including no crimes. (1 = yes, 0 = no)	Previous victimisation is known to increase the risk of future victimisation.

Victimisation within 3 years prior	If the individual was victim of any type of crime including no crimes within three years (1 = yes, 0 = no)	Timing of events may be important, with events closer to randomisation having more significant effects than those more distant in time. Therefore, as well as a general variable to measure if victimised occurred it was also identified if this was within three years to randomisation date.
Victimisation Non crime (marker) pre	If the individual recorded a non-crime marker prior to randomisation (1 = yes, 0 = no)	Non-crime markers appear to be an area where harm specifies concentrates, therefore identifying if having a non-crime maker prior to intervention date effects outcomes could be important for quantifying the effect and risk that these pose.
Violent victimisation pre	If the individual recorded a violent victimisation prior to randomisation (1 = yes, 0 = no)	Neyroud, 2015 highlighted the impact of violence in the population, so the impact of being violently victimised is certainly a key variable to consider identifying this is associated with increased risk of victimisation or becoming victim-offenders.
Violent victimisation pre (excluding those with non-crime markers)	If the individual recorded a violent victimisation but did not have a co-occurring non crime marker prior to randomisation (1 = yes, 0 = no)	Co-occurrence of violent victimisation and non-crimes markers was common, so this variable was to identify if the greater impact was from the non-crime marker or from the violent victimisation.

Victimisation pre (excluding violent and non crime marker)	If they were victimised prior but this was a non violent and not a non-crime marker. (1 = yes, 0 = no)	Some types of victimisations may be less harmful, therefore victimisation was separated into 3 main categories – violent (e.g common assault, ABH, GBH and sexual), non-violent (e.g theft, theft of motor and criminal damage) and non-criminal. This allowed the identification of if the impact was from any kind of victimisation or specific types.
Victimisation pre not within 3 years prior	If they were victimised but that victimisation occurred greater than three years before randomisation. (1 = yes, 0 = no)	Timing of events may be important, with events closer to randomisation having more significant effects than those more distant in time. Therefore, as well as a general variable to measure if victimised occurred it was also identified if this was greater than three years to randomisation date.
No known involvement in victimisation or offending	If the individual was not listed as either an offender or a victim before randomisation. (1 = yes, 0 = no)	Individuals with no prior involvement in victimisation or offending may be at lower risk of becoming victimised, offending or becoming a victim-offender.
Number of victimisations prior	The total number of victimisations prior to randomisation recorded by that individual (0 – 25)	A higher number of victimisations recorded prior to randomisation may increase the risk of negative outcomes i.e revictimization and offending.

Prediction of group membership

Four binomial logistic regression models were used to identify which different variables are associated with each of the four categories. Stepwise AIC both direction selection was used to identify the most relevant variables.

Table 6: Group coding and group criteria for the binomial model outcomes

Group	*Group criteria*
Non involved (0=no, 1= yes)	Reporting no victimisation and was not charged
Offender only (0 = no, 1 = yes)	Only charged
Victim only (0 = no, 1 = yes)	Only reported victimisation
Victim-offender (0 = no, 1 = yes)	Reported both victimisation and was charged

Four different models (five, six, seven and eight) were created rather than trying to create one model to predict outcomes, this allowed the comparison of significant variables across the four models, and to identify if prediction of one category was more accurate than others. Stepwise AIC both direction selection was used to indicate significant variables to add to the model and to prevent overfitting.

Chapter 7

Analysing the victimisation in the TPP sample

This first section of results and discussion will focus on the victimisations that are occurring in the TPP sample and will aim to build on the earlier research on this sample (Neyroud, 2015). The current research presented here will aim to answer the following seven main questions around victimisation. This section will also use the Cambridge Crime Harm Index to investigate the distribution of harm from victimisation in this sample.

1. *Does an overlap exist between victimisation and offending?*
2. *What is the prevalence, types and harm of victimisation being reported to police by the TPP sample?*
3. *How do types of victimisations relate to each other in low level offenders? And do non-criminal incidents relate to criminal victimisations?*
4. *What is the relationship between gender and victimisation within this sample of low level offenders?*
5. *Does harm concentrate more than number of victimisations?*
6. *Can individuals be placed into different categories depending on how many victimisations and how harmful the victimisations they are suffering are?*
7. *What are the circumstances and location of the victimisations suffered and do these vary by type of victimisation or gender?*

The key aim is to investigate if victimisation can be identified among these low-level offenders using only police records, to quantify how prevalent, how frequent, and how harmful. As well as looking at patterns in victimisation distribution within the sample and the types of victimisations reported. This section will present the updated results on victimisation from the original 2015 study (Neyroud, 2015), as well as adding additional findings on harm.

Victimisation prevalence and frequency

There is an increase in prevalence of victimisation from the prior 2015 study which reported a prevalence of 56% (n=251) (Neyroud, 2015), with 63% (n=281) of the sample now reporting either criminal or non-criminal victimisations. This percentage is larger than the 41% McKillop et al. (2017) found for any victimisation listed on police records for their sample of 535 male youth sexual offenders – which is surprising since McKillop et al. (2016) used a sample of more serious, male only and younger offenders who the overlap may be expected to be larger amongst (Berg and Mulford, 2020). Potentially these types of young male sexual offenders are less apt to be reporting victimisations to the police than the older, mixed gender, lower-level offenders in TPP.

A total of 969 victimisation events were reported, these ranged from minor offences e.g common assault, to far more a few more serious incidents including one attempted murder and several incidences of rapes. Even if there is a portion of victimisation unreported the individuals reported significant numbers of victimisation. Contrary to what some authors argue that offenders would be unlikely to report victimisation to the police due to ideas about street code values and reluctance to "snitch" on fellow criminals (Jacobs and Wright, 2006). These low-level offenders are contacting the police to report victimisation. As Bottoms and Costello (2010) argue using Matza's 1964 warning – "*we should not necessarily assume that offenders, even some persistent offenders, inhabit a totally different social and moral world that the rest of us*." Therefore, potentially police records can provide a first look at the victim-offender overlap in a sample of low-level offenders.

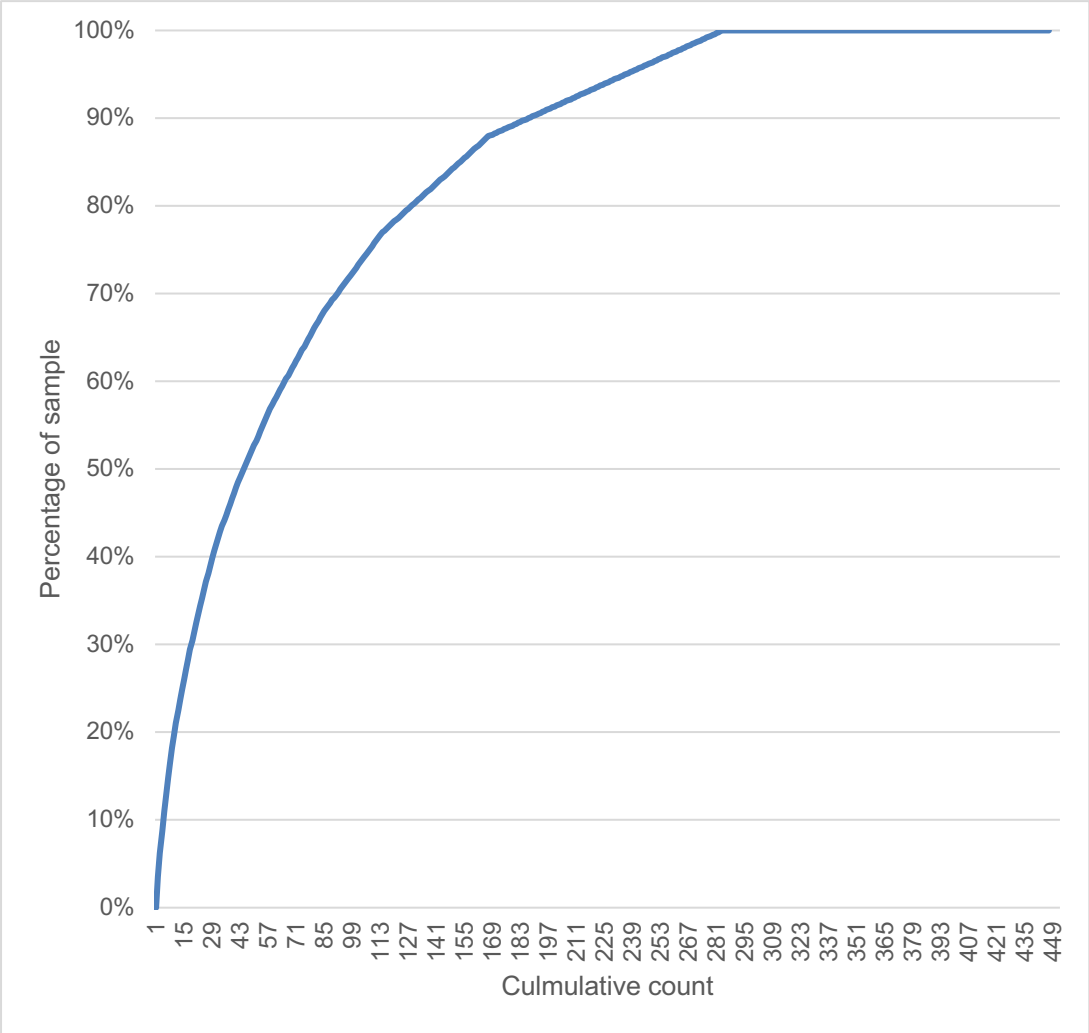
Figure 4: Frequency of different numbers of victimisations including non-crime events

Victimisation frequency ranged from 0 to 34 for when non crimes are included, and 0 to 23 for criminal victimisations. This is an increase in the total number suffered from the initial study (Neyroud, 2015), which found a maximum of 21 events. Evidently within the two years some individuals have been heavily victimised. The distribution of the victimisation events follows the classic J or Pareto curve, with the majority reporting 0 or very few events and a small percentage a significant number. When non crimes were included 74.9% (n=334) had two or fewer victimisation events recorded on their records, with 26.2% (n=117) of these appearing only once and 36.7% (n=164) recording no events.

Only 20 individuals recorded 10 or more victimisation events, but this small proportion of the sample recorded over one third (32.5% or n=315) of all victimisation events. This small proportion of the sample reporting a disproportionate amount of victimisation would be identified by Sherman (2007) as the "*power few*". This uneven distribution of victimisation is a classic phenomenon in criminology, and it is clear here that this sample of low-level offenders from TPP also follows this pattern (Sherman, 2007; Farrell and Pease, 1993; Tseloni and Pease, 2005). Figure 5 identifies the pattern shown

to be akin that found by Tseloni and Pease (2005) work using self reports from the British Crime Survey.

Figure 5: Identifying a power few for victimisation including non-crimes events

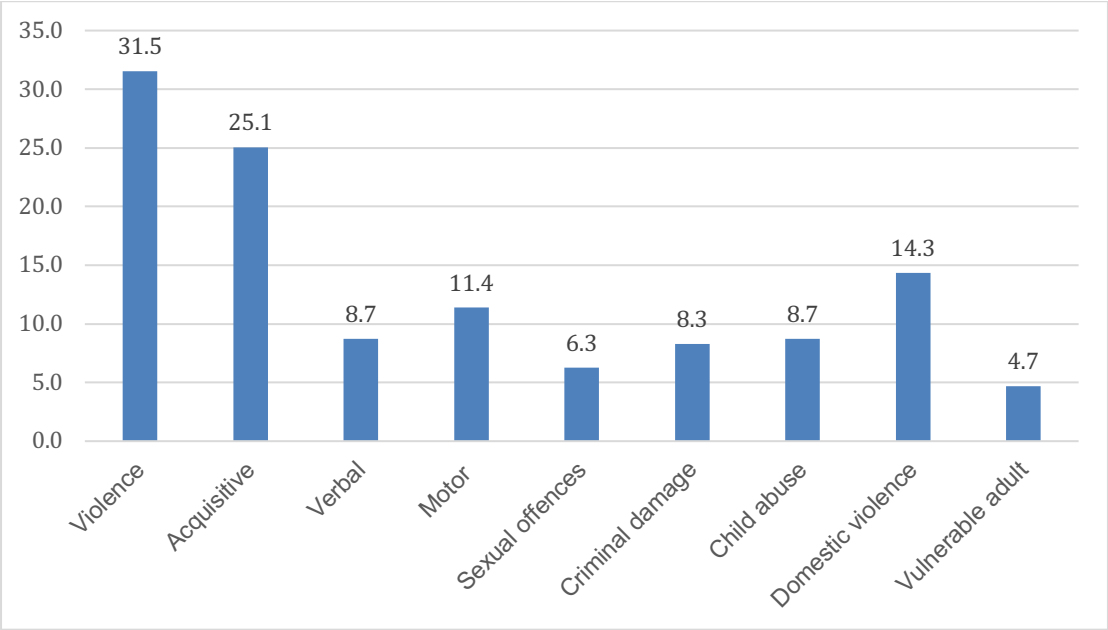


A substantial amount of victimisation is occurring among the Turning Point sample. Potentially a triage scheme where the individuals reporting high amounts of victimisation are given the most intensive interventions, while a less intensive approach may be most appropriate for those reporting less victimisation (Sherman, 2007). This would be an approach that would aim to balance resources against need to prevent future victimisation and alleviate the effects of previously suffered victimisation.

Types of victimisations suffered

Consistent with Neyroud (2015) the most prevalent type of victimisation reported was violence with 31.5% (n = 140) reporting a form of violent victimisation. Within this the severity of injury varied with predominantly ABH and common assaults being reported; however, there were a significant number (n= 41) assaults involving a serious injury. A serious assault here classified as either an incident or attempted incident of GBH with or without intent, wounding, malicious wounding, or murder. The second most common type reported were acquisitive at 25.1% (n=111). Incidents involving motor vehicles (theft of or from or taking without consent) were also commonly reported, with 11.4% (n=50) reporting an event.

Figure 6: Percentage of sample reporting different types of victimisation events occurring



Non crime victimisation events were prevalent with 14.3% (n=63) having an incident of domestic violence non crime recorded. It needs to be remembered that these were incidents primarily between intimate partners where an argument had occurred but no physical damage to either party, crimes committed and or admitted. Assaults involving actual physical injury would be recorded as ABH, GBH or common assault depending on the amount of harm incurred and if it was believed to be committed with intent. Distinguishing

physical assaults involving domestic violence is difficult since always recording on police data systems who has committed the assault and identifying them as a current or ex-partner is inconsistent. Therefore, while domestic arguments are common in this sample, it is more complex to identify for actual physical violence and requires analysis of the incident details to identify partner on partner violence. This is not consistently recorded in the MO details limiting exploration of this area.

Incidents recorded as child abuse non crimes and vulnerable adult non crimes occurred for 8.7% (n=38) and 4.7% (n=21) respectively. For child abuse these incidences concerned reports or events of suspected child sexual abuse, repeated missing events, child abuse, involvement in a gang, mental health or behavioural issues, alcohol or drug abuse, family arguments, homelessness, involvement in an abusive intimate partner relationship, school truancy or possible radicalisation was suspected. With regards to vulnerable adults, incidents concerned events involving mental health issues, self-harm, or suicide, false or frequent calls to the police, if there was a learning difficultly or any other concerns over the vulnerability of the individual (i.e if it was suspected the person to be suffering from dementia) (Neyroud, 2015). While none of these reports for these two types of victimisations concerned events that the police could charge as criminal, these two types allowed the recording of concerns for future reference or for concerns to be passed to the appropriate agencies. Both child abuse and mental health issues are regularly noted in populations of offenders (Widom, 1995; Na and Cho, 2019), so it would be likely that these types of issues would be identified in this sample, and some certainly were in the no crimes details, however due to lack of data true prevalence of mental health issues in this population is unknown.

Relationships between types of criminal victimisations

Victimisation types can be linked together with some being associated with greater risk of others occurring (Finkelhor et al, 2009; Reiss, 1980). This data does rely on self-reporting which adds the additional factor that some crimes are less likely to be reported and some people are less likely to be reporting (Goudriaan, Wittebrood and Niewbeerta, 2006; Tarling and Morris, 2010). The

findings indicate some types of crimes are more likely to be reported as co-occurring.

Table 7: Relationships between types of victimisation (Odd ratios calculated using Fisher's exact test (= p <0.05, * = p < 0.1)**

	Violence	*Acquisitive*	*Verbal*	*Motor*	*Sexual*	*Criminal damage*
Violence	N/A	2.05**	4.48**	1.2	11.66**	1.2
Acquisitive	2.05**	N/A	2.54**	1.75*	3.82**	2.20**
Verbal	4.48**	2.54**	N/A	1.47	4.98**	2.74**
Motor	1.2	1.75*	1.47	N/A	0.58	5.2**
Sexual	11.66**	3.82**	4.98**	0.58	N/A	1.3
Criminal Damage	1.2	2.20**	2.75**	5.2**	1.3	N/A

Here the strongest association is violent and sexual victimisation with individuals suffering a violent victimisation 11.66 times more likely to also be reporting a sexual victimisation. This finding is consistent with Reiss (1980) who also noted a relationship between sexual and violent victimisation, finding that somewhat more rapes than expected in households reported two or more victimisations were followed by an assault, and actual rape were far more likely to occur in households that next reported a serious assault. This could relate to the kinds of partners and individuals that the sample are associating with (Walters, 2020) and are exposed to during their day-to-day activities (Lauritsen, Laub and Sampson, 1992), and possibly due to innate vulnerabilities that make them attractive targets for both violent and sexual victimisation (Finkelhor et al, 2009). It seems likely that victimisation proneness to assault also relates to vulnerability to sexual assault.

Violent and sexual victimisation reporting also seems to accompany an increase in verbal victimisation reporting. There are few possible explanations for this, if the victimisations are committed by a previous or even current intimate partner verbal threats and violence can occur alongside physical violence (Brewster, 2000). These individuals may have characteristics that make them vulnerable to both sexual, violent, and verbal victimisation

(Finkelhor et al, 2009) – or for violence and verbal they may be provoking conflicts in others and becoming the victim (Schreck, 1999).

Criminal damage and motor related offences do not appear to be related with the reporting of either violent or sexual offences. However, for both motor and criminal damage offences there is small increase for acquisitive offences. With an odds ratio of 5.2, motor related offences and criminal damages appear to be strongly related. This could possibly relate to ownership of houses, desirable items such as phones and cars being associated. The environments that the cars and the individuals are in may have a higher rate of criminality than other areas (Braga and Weisburd, 2010), exposing them to greater risk of having an offence occur.

The reliance here on self-reports alone adds a confounding factor that complicates unravelling the true relationships between different types of victimisations. Yet it is still clear that some types of victimisations are reported to co-occur more regularly. Victimisation risk here could relate to both individual factors increasing risk of victimisation and the environments exposed to. This method of analysis does not give the time ordering of events and further investigation into whether victimisation type A is more likely to proceed victimisation type B could be useful to further explore the complicated relationships here. This was the approach used by Reiss (1980) for households and may highlight what forms of victimisation is likely to proceed certain risk of future revictimisations.

How is harm from victimisation distributed in the TPP sample?

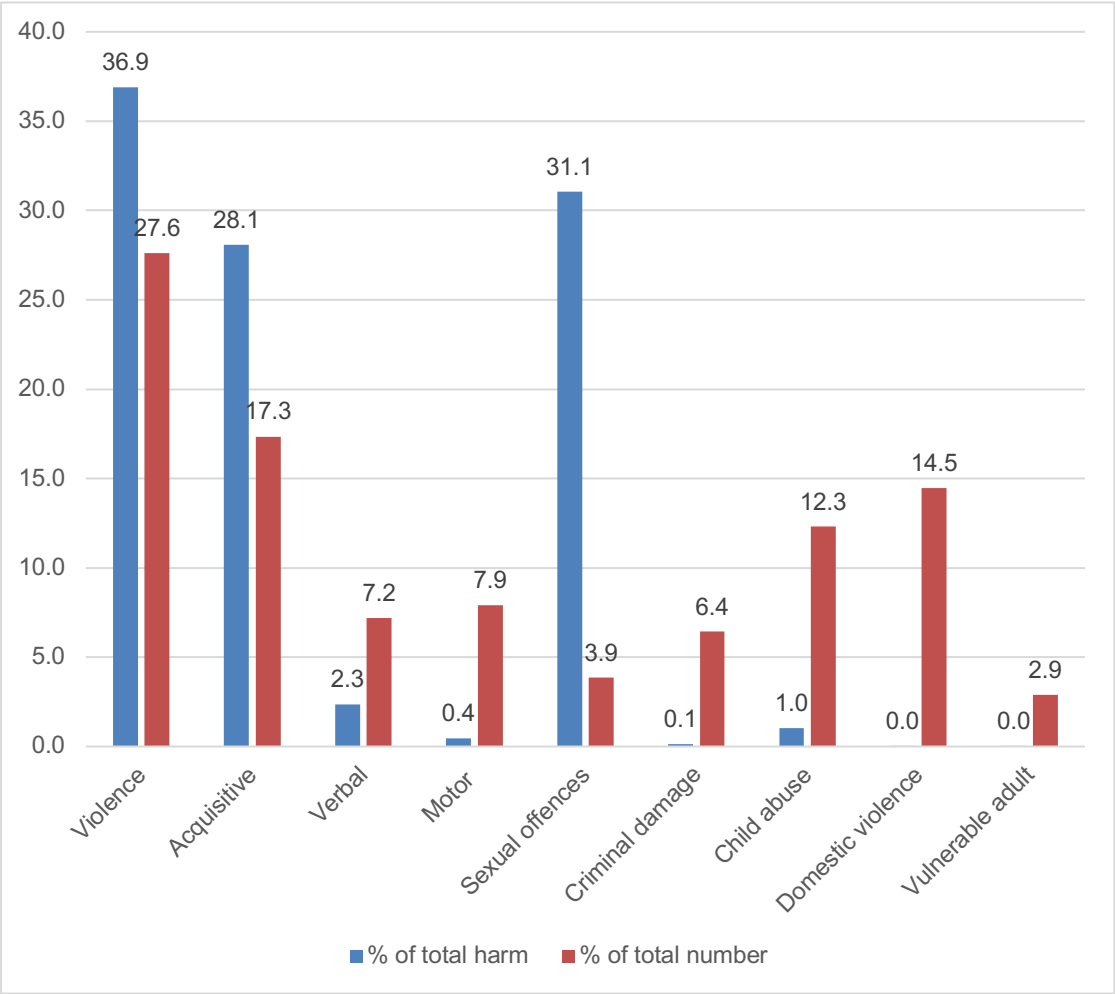
Using the CCHI the 969 victimisations reported were converted into harm scores. The total harm was 82,180.5 CCHI points – the equivalent to 15 homicides or 45 rapes on the CCHI scale. There was a mean of 183 CCHI points per person – a score equivalent to just over six months imprisonment. The individual experiencing the most harm was a 19-year female who scored 5,548.3 CCHI points, with much of the harm coming from the three rapes reported that occurred in a two-year period (2014-2016).

The type of crime that accounted for the most harm in the TPP sample was violence against the person with 36.9% of the total or 30,307 CCHI points. The offence types within the violence category are quite diverse and range from common assault (1 CCHI points) to attempted murder (3285 CCHI points). Violent offences had a mean of 117.46 per offence – a score approximately equivalent to 11.7 individual incidences of ABH (10 CCHI points).

The second most harmful type of victimisation was sexual victimisation which accounted for 31.1% of the total harm and 25,521.5 CCHI points. Sexual victimisation in this sample was rarer than violent victimisation with only 36 incidences in total and accounting for 3.9% of the total number. Although this type of victimisation was more infrequent the harm from these victimisations scored highly in the CCHI. Sexual victimisation is problematic in this sample due to the high amount of harm associated with such offences.

The third most harmful type are acquisitive victimisation which accounted for 28.1% of the total harm and 23,078.25 CCHI points. The average harm per incident of victimisation was 142.5 CCHI points. Within these category 61 incidents of robbery accounted for much of the harm - 22,265 CCHI points. As previously discussed, including robbery in the category of acquisitive offences may be a controversial decision since robbery is generally considered a violent offence. The incidences of robbery in this study from the MO reports showed the primary motivation here was theft of goods with very little or no physical harm done to the victim.

Figure 7: Total percentage of victimisation for both harm and number



Using a sample consisting of all victims from the Dorset policing area for one-year Dudfield et al. (2017) found that much of the harm (58%) suffered came from sexual victimisation, followed by from violent victimisation (22%) and acquisitive (16%). Comparatively, a greater percentage of the harm in the TPP sample is from violence (36.9%). Although with regards to the composition by number the percentages are very similar with Dudfield et al. (2017) finding that violence represented 33% of the total number of victimisations and 3% for sexual offences. While violent victimisation was prevalent in the Dudfield et al. (2017) sample there was a tendency for the reported violent crimes to be more minor and therefore score a lower CCHI score, than the acts reported by the TPP victims.

This may be due to differences between where the studies were located - Dudfield et al. (2017) used a sample based in Dorset while the TPP sample was from the West Midlands areas. There are potentially differences between the two locations given that West Midlands is a large metropolitan area, while Dorset is a mixture of metropolitan and rural areas. Although a look at the police statistics per force for Dorset and West Midlands give comparative figures per 1,000 for both violent and for sexual offences. With West Midlands recording 27.6 violent and 2.7 sexual, while Dorset is 24.6 and 2.7 for the year ending June 2019 (ONS, 2019).

A more probable explanation is rather than geographical based differences is Dudfield et al (2017) used a sample involving all types of victims, while the TPP sample were all also offenders – albeit predominantly low-level ones - which may increase their risk of more serious assaults. This also suggests that any study looking at victim harm should also consider identifying if the individuals being victimised are also involved in offending, since they may be subject to more serious assaults.

It is clear from both samples that violence and sexual victimisation is where the most harm concentrates - with sexual victimisation having the highest score per individual event. How to effectively process and prevent sexual victimisation in the criminal justice system would be key to reducing harm for this sample. Yet due to the nature of where these types of sexual victimisations tend to occur – often in a private setting between victims and offenders who are known to each other (Smith and Skinner, 2017) - this could be a difficult task for the police, and prevention of sexual victimisation may be a near impossible task. Perhaps the most effective approach for sexual victimisation could be to consider how best to detect and to encourage the reporting of sexual victimisation. There should also be attention to best support victims. Sexual assault can be associated with serious negative effects (Wright, 2019; Chaudary et al, 2017) and mitigating the damage should be a critical consideration to support victims, prevent revictimization and prevent the victims from developing negative coping strategies (Turonovic and Pratt, 2013) which could include offending.

Despite increasing numbers of rapes being reported, a review of all rapes committed in London in 2016 found only 3% of rape allegations ended with a conviction for the offence (Mayor of London office for policing and crime, 2016). Over half (59%) of victims withdraw allegations and in almost one third of cases police or CPS decide no further action (NFA). Given the low percentage of serious sexual assault cases proceeding through the CJS how to prevent attrition should be a serious concern (Taylor and Gassner, 2010). Preventing attrition in the criminal justice system has no easy or simple solution, especially for incidences of rape where often it is the victim's account positioned against the perpetrator's (Smith and Skinner, 2017).

Looking at the data from the most harmed individual (a 19-year-old white female) who reported the three rapes all are listed as resolved on CRIMES however none of the cases proceeded to court with evidential difficulties preventing further action and lack of victim support cited for two and lack of named suspects for the other case. It is not a surprising finding that none of the three reported rapes resulted in a successful conviction. Of the other 11 rapes reported in the sample none of these ended in a conviction either. Still the key questions of prediction and prevention should be considered, it would be interesting to know what steps could have been used once the first serious sexual assault had occurred to assist the most harmed TPP victim. Potentially use of a harm score such as the CCHI could have flagged this type of victim for appropriate action through identifying her as being highly harmed (Dudfield et al, 2017).

Distribution of harm through the sample

From figure 8 harm is not distributed evenly throughout the sample, and instead follows a classic J or pareto curve (Sherman, 2007). As with Dudfield et al (2017) a high percentage of the total harm is concentrated within a small number of the victims. Analysis of the data for TPP found that 14.7% (n=66) suffered 90.94% of the total harm (74,377.7 CCHI points) while the remaining 381 individuals made up the other 85.3% of the sample but accounted for only 9.49% (7,802.8 CCHI points) of the total harm.

Figure 8: line graph showing cumulative harm for the TPP sample

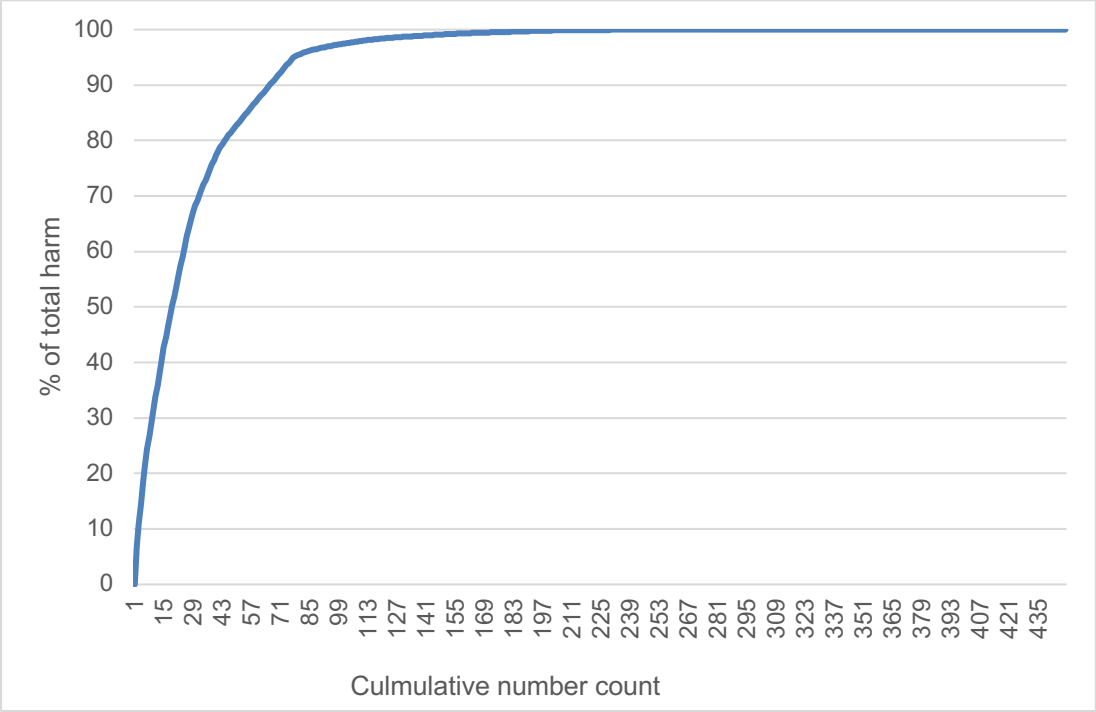
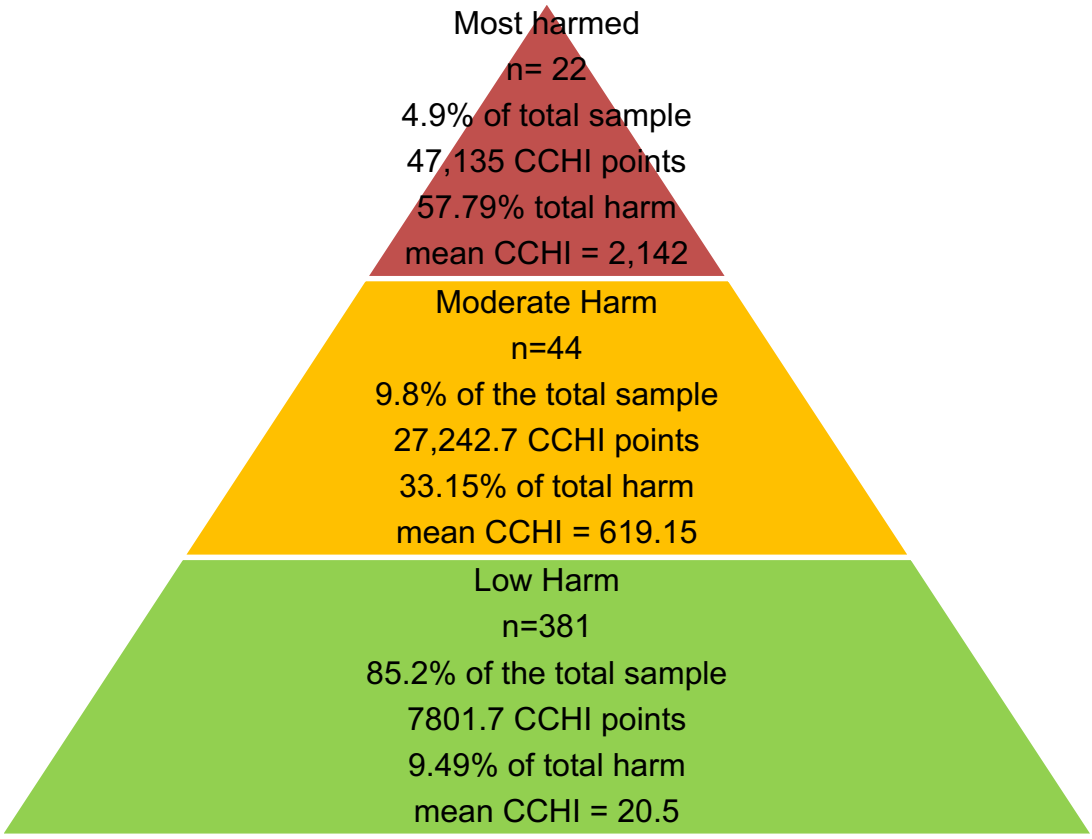
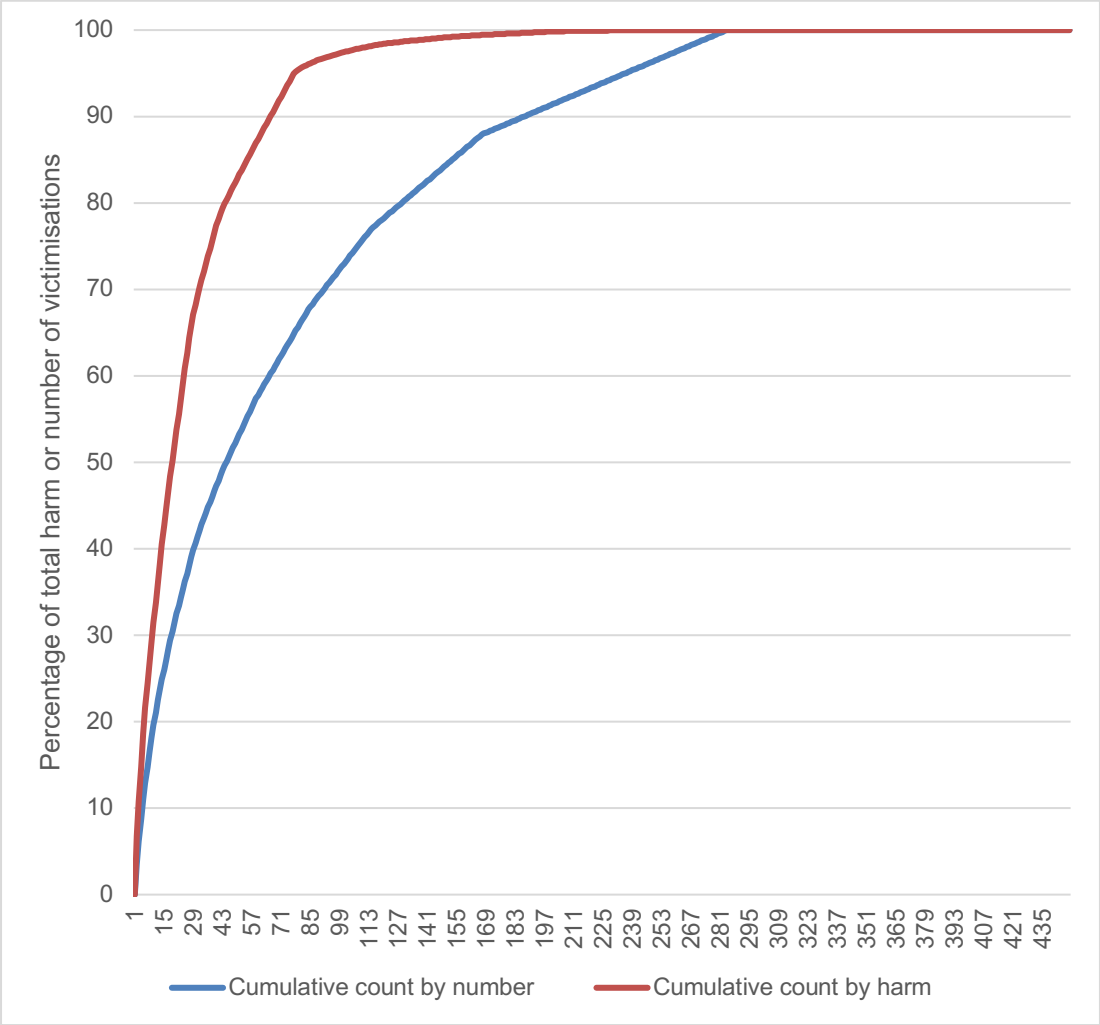


Figure 9: Diagram demonstrating a way to break down the sample to show the most harm to the least harmed



The sample can also be further broken down and it is found that less than 5% of individuals accounted for 57.79% of the total harm. Clearly these 22 are experiencing significantly more harm compared to the rest of the sample. Diagram 5 presents a suggested way to break down the sample into most to least harm.

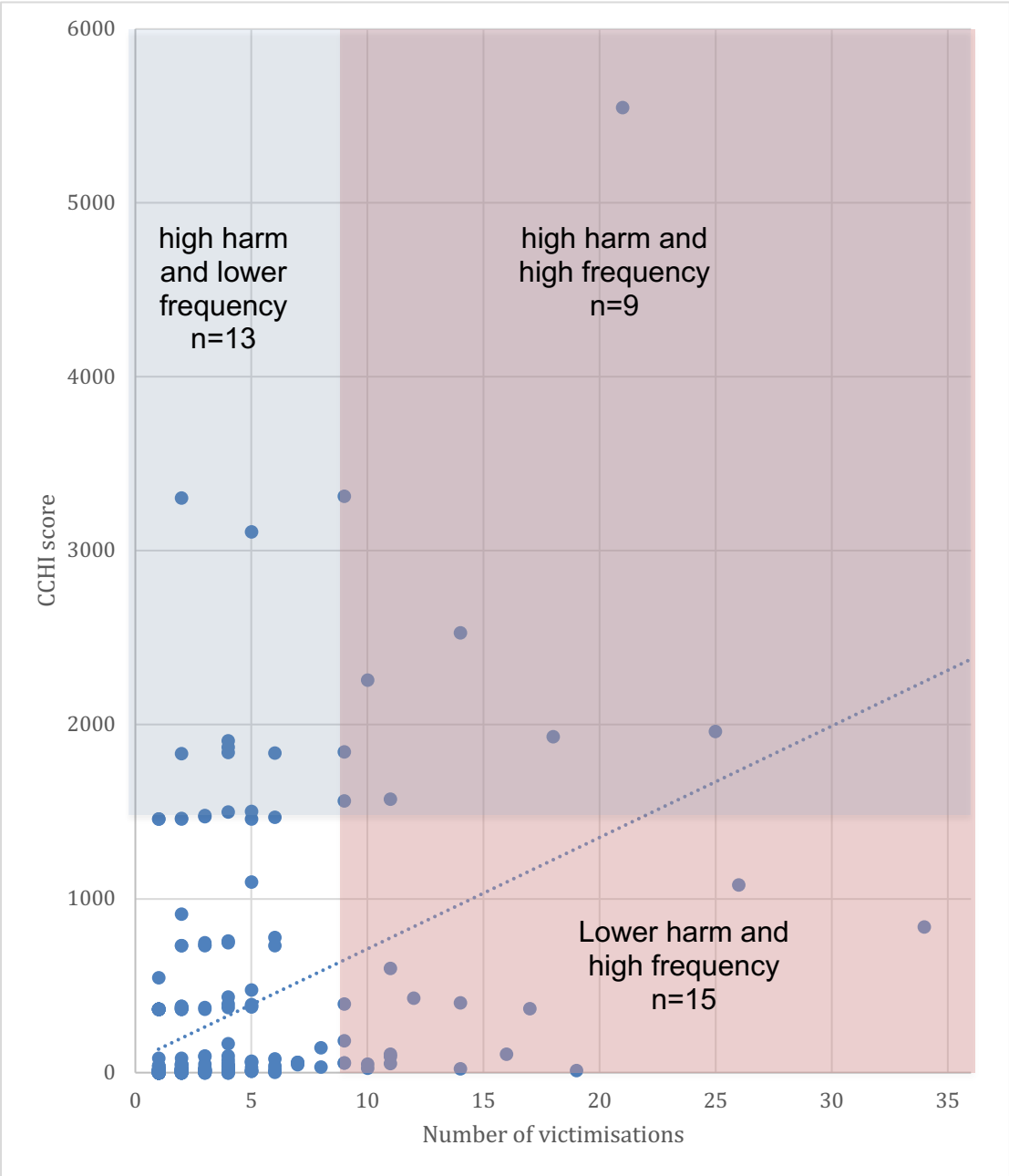
Figure 10: Comparison of cumulative counts for crime harm and number of crimes both converted to percentage for comparison



While victimisations do show a J curve for distribution by number, chart A shows distribution by harm is even more disproportionate. This greater concentration by harm than by number is also consistent with harm distribution by place. Weinborn et al (2017) found that half of all events concentrated within 3% of all street segments, but half of all harm was detected in just 1%. Dudfield et al (2017) also found that the concentration of harm was greater than the concentration of crime frequency in their sample of victims from Dorset. Further

research is needed into a wider variety of samples using CCHI, but it may be a consistent fact that harm is more concentrated within populations and places than number of crimes. Giving a smaller area or number of individuals to target, potentially with a greater return in harm reduction than if just numbers of crimes are used.

Figure 11: Scatterplot showing crime harm against number of victimisations



Tests using spearman's rank correlation test shows that there is a positive correlation between numbers of victimisations and crime harm (S= 1694800 rho = 0.886, p<0.001). Indicating that in this sample as victimisation number increases harm also tends to increase. However, this is not a perfect correlation and as chart Z shows there are individuals who are reporting a high frequency of victimisation but not a significant amount of harm and vice versa. In fact, if the 22 most harmed individuals are looked at only 7 of these are also the most repeated against victims.

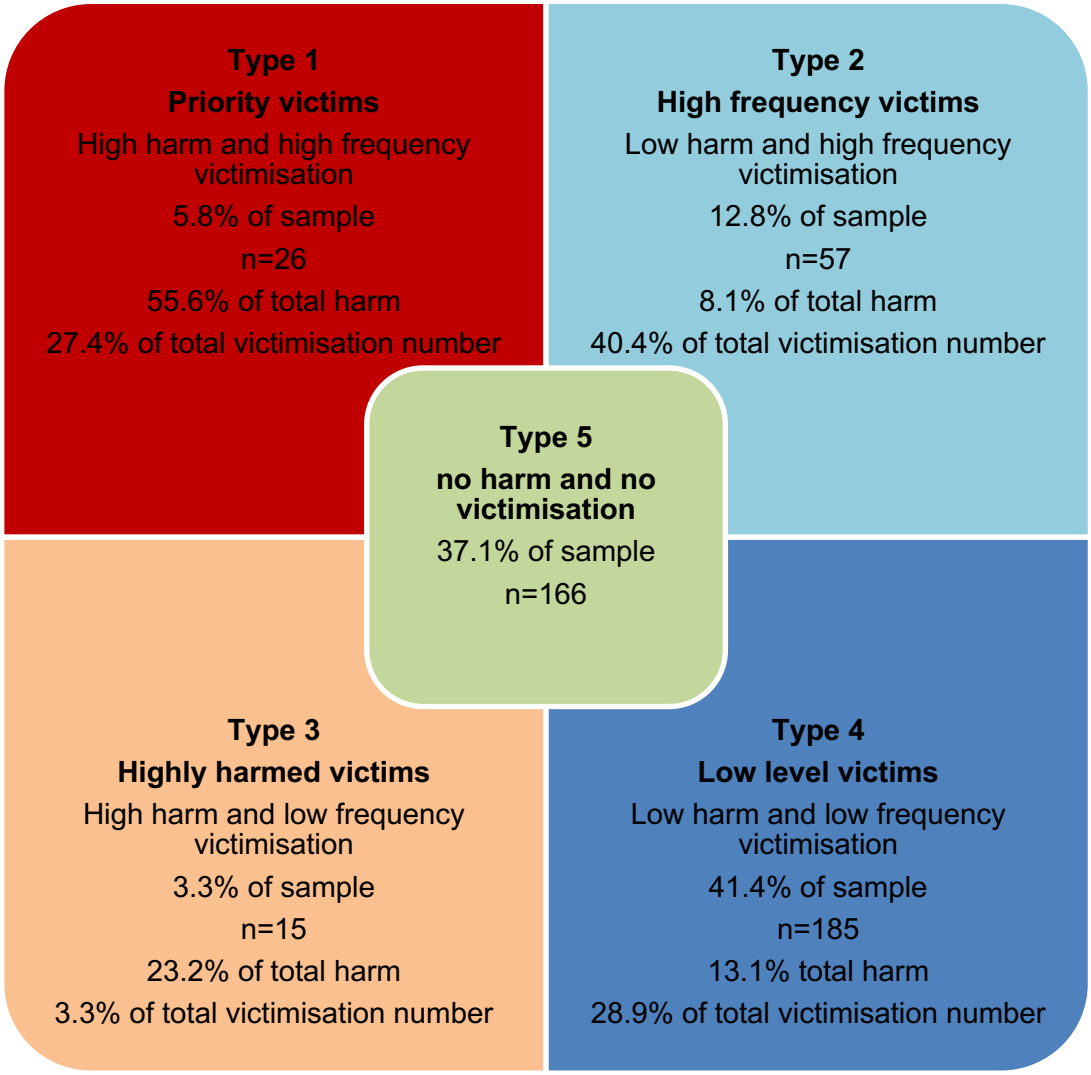
Examining numbers of victimisation against harm from victimisation

Sherman, Neyroud and Neyroud (2016) and Dudfield et al. (2017) argued that the police should shift their focus from targeting crime by number to targeting crime by harm. From the earlier data reported here and studies (Dudfield et al, 2017) there is support for this idea to an extent; firstly, that harm tends to concentrate more than number which means a smaller number of individuals to target (Dudfield et al, 2017; Weinborn et al, 2017). Secondly that reductions in harm can be larger than reductions in number potentially delivering greater returns (Dudfield et al, 2017).

Yet this would be an approach that would ignore those who are experiencing significant numbers of repeat victimisation. Repeated victimisation can be just as harmful as single high harm events and cannot be ignored in any strategy to reduce crime (Donoghue, 2013; Weinborn et al, 2017). Furthermore, repeatedly attending addresses or victims involved in repeat victimisation is costly use of police resources. Finally, it should also be considered that single high harm events (e.g a single double homicide on one street segment) may never re-occur and therefore an intensive police intervention may be an ineffective use of resources (Weinborn et al, 2017).

Arguably the best strategy would be to take account of both high harm and high number victims, and then would match resources to the needs of those victims. Using Weinborn et al's. (2017) approach to categorising street segments by both harm and number produces five different types of victims (figure 12) – firstly type 1 priority victims (5.8% n=26) those experiencing both high harm and high frequency, type 2 victims (12.8% n=57) who are high frequency and low harm, type 3 (3.3% n=15) who are experiencing high harm but low frequency victimisation, type 4 who are both low harm and low frequency (41.4% n = 185), while type 5 (37.1% n=166) are those within the population reporting no victimisation.

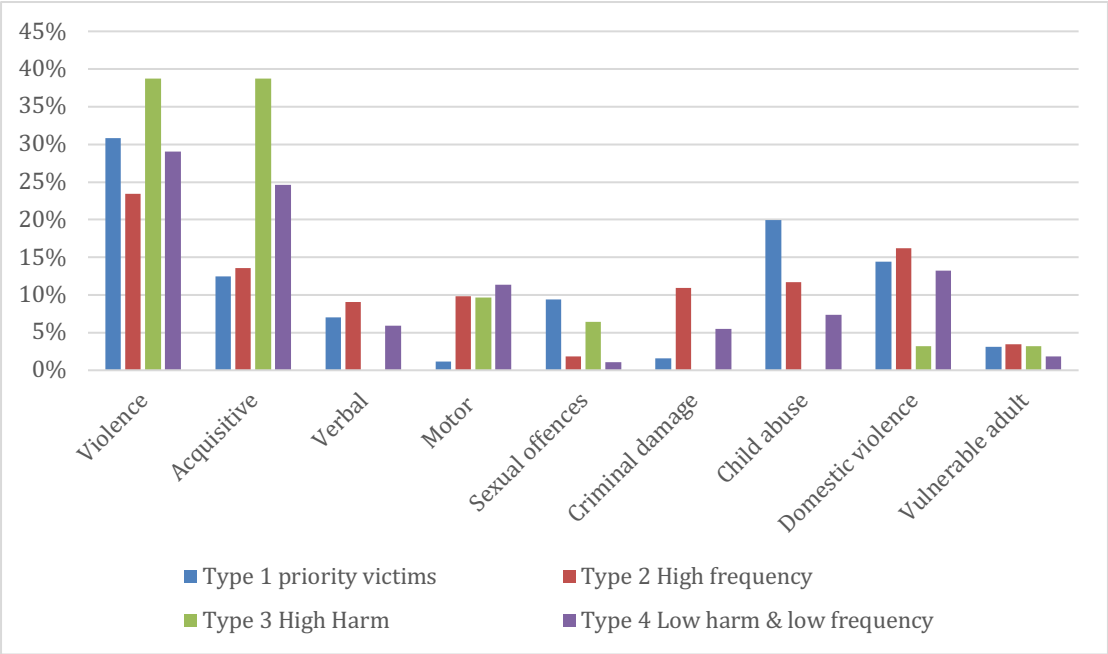
Figure 12: Demonstrating Weinborn et al. (2017) approach as it could be applied to victims (High harm or high count was here defined as any score greater than one standard deviation away from the mean).



Type 5 clearly do not require any intervention, and it is likely that type 4 who experience little victimisation can be lower priority– giving almost 80% of the sample that could have little or no attention given. However, type 1, type 2 and type 3 could form the basis for targeted interventions. Type 1s would clearly be a priority due to them suffering both frequent and harmful victimisations. Accounting for not only over half of the total harm (55.6%) but also almost one third (27.4%) of the total number. Type 2 could be targeted in a different manner to identify why they are suffering repeated victimisation. This may be from repeated missing episodes, non-criminal domestic violence or repeated low harm crimes such as antisocial behaviour.

While Weinborn et al (2017) suggests that type 3 areas should be investigated to see if they are one off harmful events and such areas may not require intervention. For victims suffering a single harmful victimisation event intervention may be needed to alleviate the harm. Ethically not aiding individuals suffering a single harmful crime would a problematic approach as well. A further consideration is the likelihood of revictimization once a high harm event has occurred (Finkelhor et al, 2009). Aiding after a single harmful crime event could be essential to preventing further reoccurrences. The policy taken from a harm index approach should not be to wait until a second rape has occurred but instead to look at intervening for specific harmful crimes even if just one event has occurred.

Figure 13: Examining which types of victimisation account for number with regards to the different types of victim grouping



Within the categories there are differences for what type of victimisations the harm and account for the number of victimisations suffered. For example, for type 1 priority victims most of the harm - 51% - comes from sexual offences with 34% from violent victimisation. Harm per sexual offence for the priority victimisations is high per event since they account for only 9% of the number of crimes, but such a significant proportion of the harm. While for type 2 high frequency victims acquisitive victimisation is causing the most harm, but

numbers wise both violence, acquisitive, domestic violence non crimes account for significant proportions of the total number. For type 3 high harm victims violent victimisation appears to produce the most harm here – 69% of the total harm. For priority victims a focus on violent and sexual victimisation would be needed, while for type 2 frequent victims the focus would need to be more towards frequent low harm events involving a variety of different types of victimisations. While for high harm victims how to approach single high harm, violent events are of greatest importance.

At only 446 in the sample some of the categories have small numbers, however this approach could easily be expanded to include a greater number of victims – as demonstrated by Weinborn et al (2017) who used 121,607 street segments. Using both harm and number for victimisation can provide a better context for how these victimisations are occurring. Harm could be created by a singular or small number of, numerous less harmful or a combination of both frequent and harmful events. All of these can be suggested to require different approaches to tackle effectively (Weinborn et al, 2017).

Victimisation and gender

Including non-criminal events, a higher prevalence of victimisation was found among females with 77.4% (n=82) of the 106 females reporting victimisation and only 58.9% (n=201) of the 340 males reporting victimisation. Females were 2.4 times ($p<0.05$) more likely to have reported any type of victimisation event. For only criminal victimisation events 68% (n=72) of the females and only 52.8% (n=180) of the males reported criminal victimisation. Criminal victimisation was 1.9 ($p<0.05$) times more likely to be reported by females. Not only were females more likely to report victimisation events, but they also tended to report a greater number of events (mean = 4.4 events for females and 1.5 for males) (W = 115240, p-value <0.001). Of the 20 most victimised individuals in the sample 75% (n=15) were female.

Figure 14: Frequency of different numbers of victimisations separated by gender

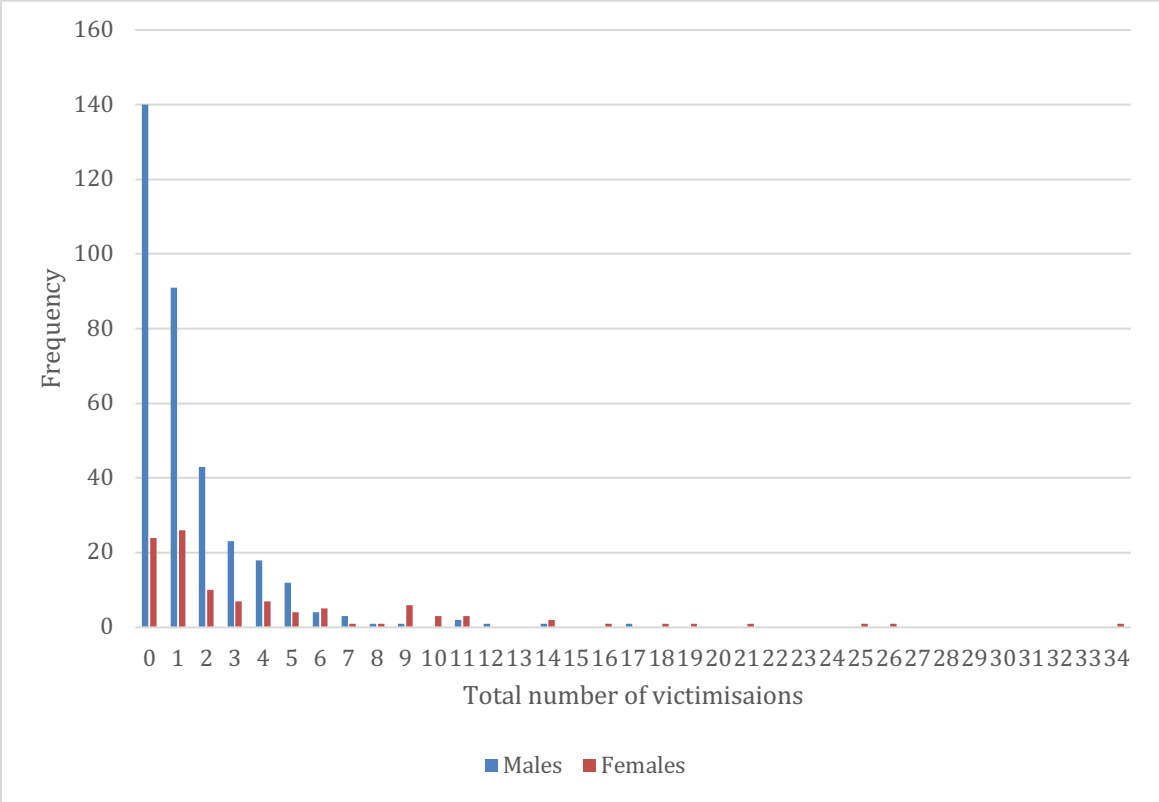
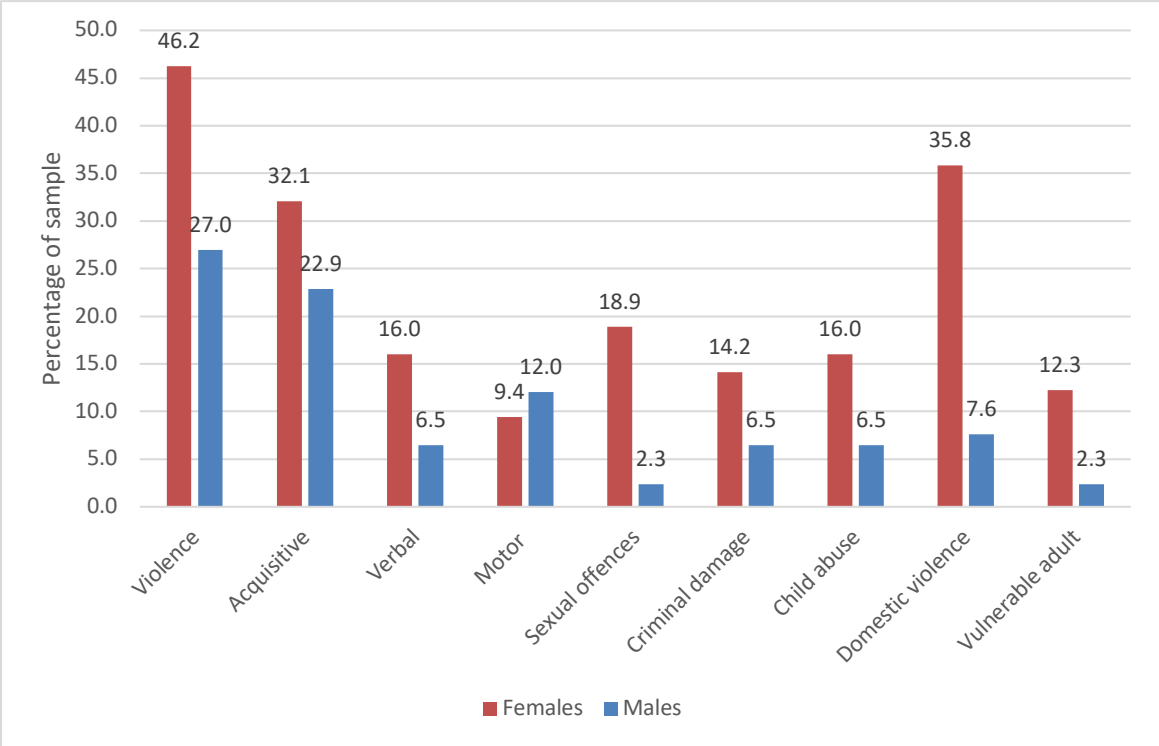
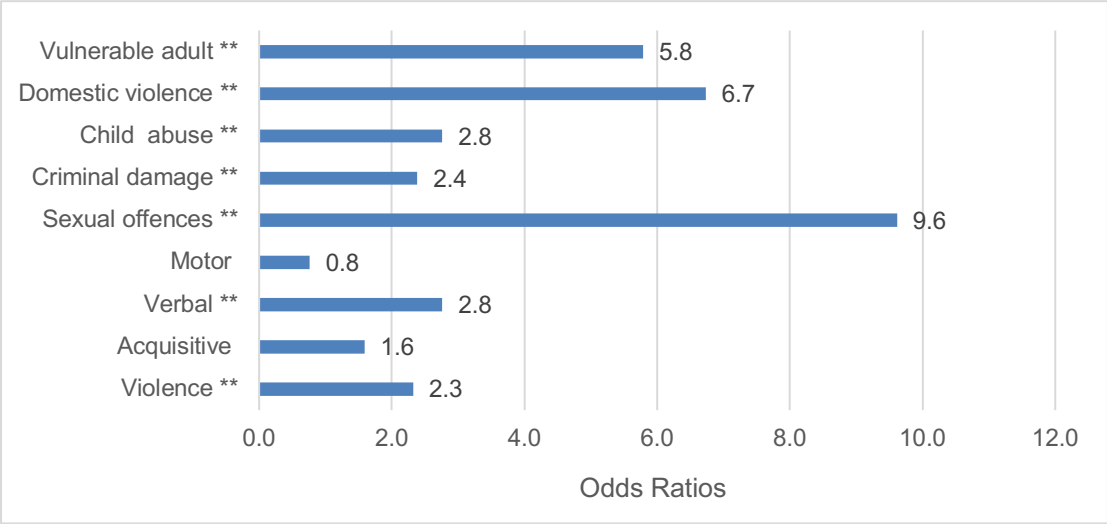


Figure 15: percentage of sample experiencing different types of victimisations separated by gender



With reference to specific crime types a larger percentage of females reported for all types of victimisations (violence, acquisitive, verbal, sexual, criminal damage, child abuse and domestic violence) the only type that males reported more were motor victimisations. Significant odds ratios were found for the differences in prevalence between males and females for violence (see chart 6). The differences between acquisitive and motor victimisation were found not to be significantly different.

Figure 16: Odds ratios showing the likelihood of different types of crimes being reported by the females in the sample comparative to the males (** = p<0.01)



Examining gender differences for harm

For number of victimisations the TPP sample showed significant differences for the likelihood of reporting certain types of victimisations based on gender. There are similar differences seen for harm, females tend to have higher harm scores with a higher mean and median CCHI scores. The types of victimisations where the harm is coming from differ as well with sexual accounting for 64% of the total harm suffered by females but for male's only 10% with violent and acquisitive accounting for more of the harm (see figure 17 and 18).

Table 8: overview for harm for females and males

	Females	***Males***
Range of harm values	0-5548.3	0-3303.75
Mean harm per individual	303.23	146.734
Total harm for whole sample	32,143.85	50,036.3
Mean harm per crime	69.27	63.65
Standard deviation	795.85	420.33
Median harm	12.05	2

As with numbers of victimisation the same questions remain, are females in this sample more vulnerable to these harmful forms of sexual victimisation or are males less likely to report those kinds of offences? Further research would be necessary to unravel which accounts for this pattern. Females in this sample are reporting higher harm from victimisation than the males, and the harm tends to be coming from different types of victimisations – with sexual rather than violence victimisation causing the most harm among females.

Figure 17: Percentage of total harm from different crime types for the 106 females in the TPP sample

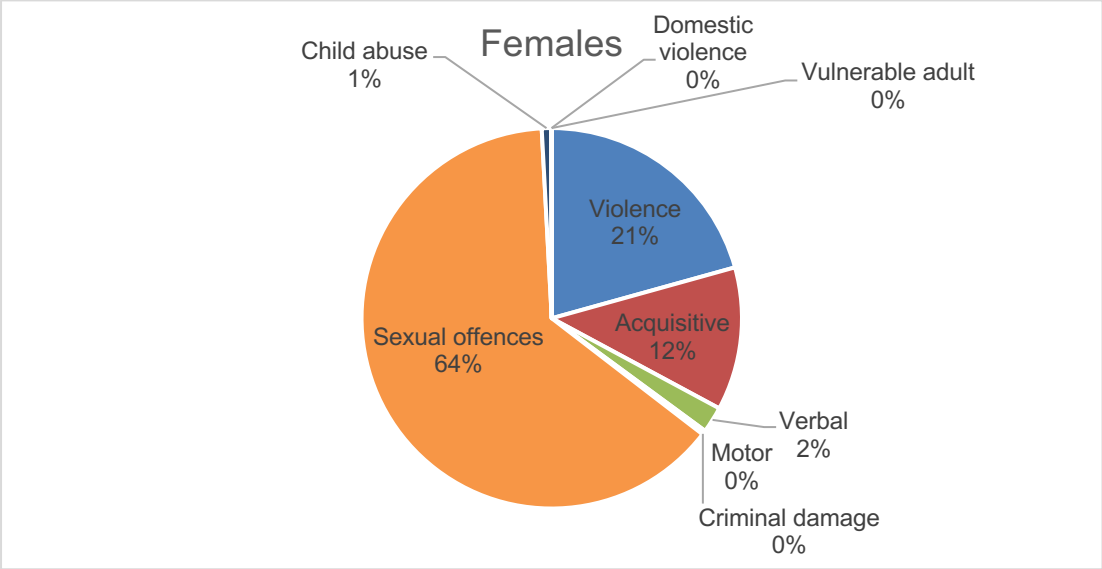
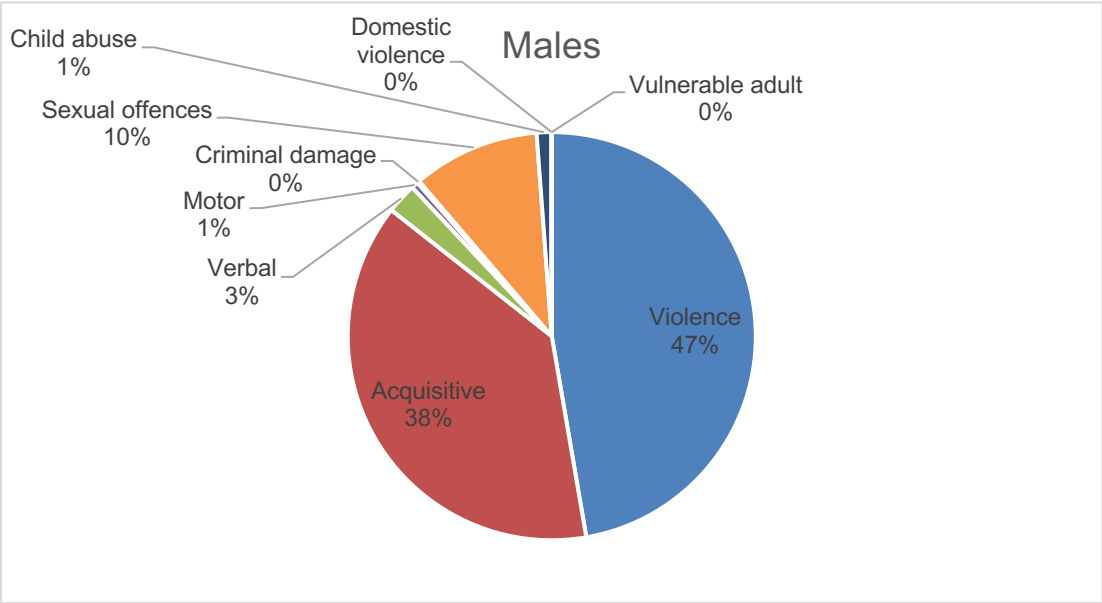


Figure 18: Percentage of total harm from different crime types for the 331 males in the TPP sample



There are some significant differences distinguishing victimisation between males and females in this sample. In the TPP sample it appears females are both more likely to report any type of victimisation and tend to report greater number comparative to the males. National data reports a difference in gender ratios for violent victimisation for self-reports versus police reports. Data from the ONS (2019) shows that in the year ending 2018 offences recorded by the police had more female victims (53%) than male victims (47%). The Crime Survey for England and Wales (CSEW) found the other direction, estimating that 65% of victims of violence were male but only 35% female (ONS, 2019). In Turning point 48% of violent victimisations targeted a female victim, while 52% involved males. The TPP results ratio is more comparative to that from national police records than self-reports. However, in the TPP sample under one third of the participants were female (26%), while the data from the ONS is based on national records where the population of females reporting incidences would be representative of the population. The 2011 census[6] suggest that 51% of the UK population are female and 49% male. If the TPP was more representative

[6] https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/demographics/male-and-female-populations/latest

of the national gender ratios it seems likely that the low-level females are more likely to be reporting victimisation than the non-offending population.

The ONS proposes that the differences between police statistics and the CSEW is potentially due to females being more likely to be the victims of domestic abuse which accounts for around one third of violence recorded by the police, and the CSEW currently underestimates the number of domestic violence related incidents (ONS, 2019). Currently finding an accurate national measure of gender risk of violence is unlikely. Methodology - self-reports versus police statistics influences gender ratios and may play a role in the gender differences in this study.

There are a few possible explanations for the gender differences found in this study. Firstly, due to society and their own perceptions and ideas about their vulnerability and ability to perceive themselves as victims' males may be less likely to report victimisation (Green, 2012; Davies, 2010). Being a victim is an idea that sits uncomfortably against masculine ideals internalised by society (Javiad, 2017; Davies, Roger and Whitelegg, 2009). Existing research suggests that help seeking strategies differ between males and females (Turonovic and Pratt, 2013), and they are unique to the gender/victim-offender relationship (Knoth and Ruback, 2019). So, some crimes are more or less likely to be reported depending on who is victimised and who is committing the offence against them.

By limiting data to police records this study is clearly reliant on the police knowing about the victimisation – which generally relies on the individuals contacting the police themselves to make a report. Males may be less willing to contact the police – particularly for certain kinds of victimisation e.g domestic violence, or sexual (Javaid, 2017). The two types of offences where no significant difference between males and females – acquisitive and motor - were offences where the person was not the direct victim, these types of offences may be seen as more acceptable for male to report. These types of offences also tend to require a police report to claim on insurance, which may be a motivating factor.

A second explanation is that the females in this sample are actually more vulnerable to victimisation, it is known from previous studies into offending that females are consistently less likely to involved in offending or to commit violent offences (Heidensohn and Silvestri, 2012; Heindensohn and Gelsthorpe, 2007) and may be more vulnerable to some kinds of victimisation (Turonovic and Pratt, 2013). Specific to the victim-offender overlap females tend to belong predominantly different types of victim-offenders and follow different trajectories into offending (Jennings et al, 2010). The types of offenders that this study aimed to recruit would clearly tend towards less serious offenders and offences where significant violence was not involved.

It may that the selection process for this study inadvertently ended up selecting a sample of females where victimisation was highly prevalent. Perhaps due to the differences between male and female offending if the study had sampled from higher harm offenders (Heidenson and Gelsthorpe, 2007) then victimisation could potentially have been more prevalent among the males. Victimisation could be more of a feature for female offenders than males (Turonovic and Pratt, 2013). This difference could be similar independent of the types of offenders under study, and females may simply be more vulnerable to victimisation overall than males.

Both theories (under reporting and differential vulnerability) are plausible, and it is likely both are responsible for the differences. Further study using self-reports in similar samples could help to quantify which is most influential. Making reporting crimes to the police -admitting vulnerability - for males a more societally acceptable response to victimisation could also be a valuable approach. While victimisation from police records is lower among males, it is still considerable and should not be dismissed.

Relationships between criminal victimisation and markers

Within the sample there are several non-criminal victimisations recorded, as previously discussed these falls into three types of events – domestic violence, child abuse, and vulnerable adult. While none of the events recorded for non-crimes are not actually criminal events, they consist of events that can indicate increased risk of a criminal victimisation or a vulnerability to victimisation.

Domestic violence victimisation markers

Examining the relationship between domestic violence non crimes and violent crimes, individuals with a domestic violence non crime recorded were 4.3 times more likely to also have a violent victimisation reported. Yet when the sample was broken down by gender the relationship remained statistically significant ($p<0.01$) for females only. There are several possible explanations for this firstly that males may be less willing to report incidents of domestic violence and violence (Driiber et al, 2013; Barber, 2008), females may also be more likely to be perceived as the victim in incidents – leading to them being recorded as the harmed party in domestic disputes rather than the aggressor (Muller, Demarais, and Hamel, 2009; Barber, 2008) and finally violent victimisation for males could be associated with different factors than females. For female's violence may be more likely to be committed by their partners while males in this sample may be more likely to be subject to violence from acquaintances or strangers (ONS, 2019).

Table 9: Fisher test values for domestic violence victimisation against criminal victimisation types (- P<0.01, * P<0.05)**

Type of victimisation against domestic violence marker	Whole sample	Females only	Males only
Violence	4.3**	6.15**	2.11
Acquisitive	2.0	2.0	1.55
Verbal	2.3	2.3	0.56
Motor	1.1	1.9	0.95
Criminal damage	2.1	1.7	1.22
Sexual	7.3**	4.5**	1.75

Child Abuse victimisation markers

The relationship between child abuse non crimes and criminal victimisations is interesting, firstly there is no overlap having a child abuse non crime and being a victim of a motor offence – this is likely due to the age of the individuals they are too young to own their own vehicles. The largest increase in odd ratios is between sexual victimisation and child abuse non crimes (10.9 times p<0.01) for the females in the sample.

From this it can be suggested that females with reports of child abuse non crimes are disproportionally likely to be recorded sexual victimisation. These females are also disproportionately likely to report both violent victimisation (7.1 times p<0.01), acquisitive (3.8 times p<0.05), verbal (3.1 times p<0.05) showing that they are at increased vulnerability to a range of different victimisations not just sexual. For males they only appear to report more violent victimisation (2.4 times p<0.05). Overall individuals with child abuse non crimes seem to be at particular risk of some types of victimisation comparative to rest of the sample.

Potentially the child abuse non crimes could be marking events that relate to increased risk such as being repeatedly missing from home. They could be highlighting factors associated with increased instability in the lives of these individuals such as being placed in care (Segura et al, 2015; Griffith et al, 2009).

Or they could be highlighting factors that place the individual at greater risk of victimisation such as mental health issues, or behavioural issues that could make them an attractive target to motivated offenders (Van Gelder et al, 2015). They may also be being exposed to increased risk of victimisation from the peers around them (Attar-Schwartz and Khoury-Kassabri, 2015; Bottoms and Costello, 2010). Finally, the child abuse non crimes could be recording incidents that the police are speculating could later become criminal for example suspicions of child sexual abuse, or involvement in a potentially violent relationship.

Table 10: Fisher test values for child abuse victimisation against criminal victimisation types (- P<0.01, * P<0.05)**

Type of victimisation against Child abuse marker	Whole sample	Females only	Males only
Violence	3.9**	7.1**	2.4*
Acquisitive	1.8	3.8*	0.73
Verbal	3.1*	2.6	2.5
Motor	0	0	0
Criminal damage	0.9	1.3	0
Sexual	8.9**	10.9**	2.11

Vulnerable adult victimisation markers

For vulnerable adult non crimes only females had significant results – this could be due to the small number of males in the sample with vulnerable adult non crimes listed (n=8). Females with vulnerable adult markers appear to be at increased risk of reporting a violent (7.8 time p<0.01) or sexual victimisation (6.9 times p<0.01). While not reaching a significant result, individuals with vulnerable adult markers appear to be less likely to report motor vehicle offences occurring. Perhaps these individuals have insecure lifestyles that are less conducive to ownership of a vehicle.

Table 7: Fisher test values for vulnerable adult victimisation against criminal victimisation types (- P<0.01, * P<0.05)**

Type of victimisation against Vulnerable adult marker	Whole sample	Females only	Males only
Violence	5.9**	7.8**	2.8
Acquisitive	2.3	2.8	1.1
Verbal	2.6	1.7	2.1
Motor	0.38	0.8	0
Criminal damage	1.2	0.5	2.1
Sexual	9.5**	6.9**	0

Circumstances and locations of victimisation events

Considering the data on the circumstances and location of victimisation events can reflect how these events fit into the lives of this sample, and whom they are most vulnerable to being victimised by. This information also provides some insight into the mechanisms that may be underlying the victim-offender overlap in low level offenders.

Table 12: circumstances and location of the victimisation by type of offence

	Total number of victimisations	*Alcohol involved*	*Drugs involved*	*Public place violence*	*Home address of victim*	*Domestic violence*	*Offender known to victim*	*Child Sexual abuse*	*Mental health issue noted*
Violent offences	217	16%	0%	37%	36%	24%	41%	0%	0%
Acquisitive offences	106	1%	1%	23%	40%	2%	7%	0%	0%
Verbal offences	56	0%	0%	14%	55%	16%	39%	0%	0%
Motor offences	65	0%	0%	3%	55%	2%	6%	0%	0%
Sexual offences	30	0%	3%	10%	23%	10%	23%	7%	10%
Criminal damage	20	10%	0%	0%	85%	20%	25%	0%	0%

Child abuse	114	1%	2%	0%	84%	1%	7%	27%	0%
Domestic violence	115	16%	1%	0%	71%	59%	69%	0%	0%
Vulnerable adult	20	10%	5%	0%	70%	0%	5%	5%	35%

Involvement of alcohol and drugs

For TPP 16% of violent offences were tagged as alcohol involved this is very similar to national police statistics which were 14% and 16% for the year ending March 2018 and March 2017 respectively. It is likely that this is an underestimation since the CSEW found that victim believed the perpetrator to be under the influence in 39% of violent incidences (ONS, 2018). It is surprising that alcohol involvement in violent offences seems to be comparative to that in overall police statistics, since it could be hypothesised that among offenders rates of alcohol related offending to be higher (Moore and Foreman-Peck, 2009; Whiteside et al, 2013). Suggesting that this samples risk of being involved in alcohol related victimisation is comparative to general population statistics and that the underlying causes of this overlap are not primarily related to alcohol use or misuse.

However, involvement of alcohol is common component in some kinds of victimisation in this sample – violence, criminal damage, domestic violence non crimes, and vulnerable adult non crimes are where alcohol is most prevalence. Surprisingly it is not noted for verbal incidences, because of alcohol it would be expected that alcohol could increase the likelihood of verbal disputes between parties (Moore and Foreman-Peck, 2009). This may be due to recording practices, where alcohol involvement could be more likely to be noted by the police where a more serious offence has taken place. The police information does not note whether it was offender or victim or even under the influence. There are some characteristics of the effects of alcohol that may increase the likelihood of an individual becoming a victim or an offender (Moore and Foreman-Peck, 2009). Knowing whom is under the influence in the offence details could be useful information to further understanding of the effects of alcohol on victimisation and offending within this sample.

Drugs are noted to be involved in a very small number of cases here, as with being under the influence of alcohol it seems likely this is an underestimation since the CSEW based on self-reports found that 21% of victims thought the offender was under the influence of drugs at the time of the offence (ONS, 2018). It may be possible that self-report victims are overestimating the number of offenders who are under the influence, however it still seems likely that police reports present a significant underestimation of the number of offences. Again, on police systems it is not noted whether it was the offender, victim, or both whom the police identified as under the influence.

Offender known to victim

Police tagged the offender as known to the victim most frequently for violence and verbal victimisations – 41% and 39% respectively. The dynamics of violence for both violence and verbal offences suggest that they often involve a prior relationship between offender and victim (Berg, 2012), which is consistent with the findings from this study. Who the individuals in this study knew and associated with does seem relevant to the mechanism underlying the overlap. Bottoms and Costello (2010) proposed that three different factors could be applied to why individuals may commit offences against those known to them these were; inside information, proximity, and impulsiveness, and finally dispute related. These could clearly be seen occurring in the victimisations in this sample too. Although Bottoms and Costello (2010) were applying these to theft and household offences and inside information is likely more relevant for acquisitive offences. The latter two are certainly also relevant for other types of victimisation. Using the MO details provided by the police these different types of mechanism are clearly operating in the TPP sample too, below are some examples:

Inside information (Robbery personal property)

"Known offender has attended the address with a further 3 females and 2 males. When IP has answered the door, all offenders have forced entry and remained with IP. Male offenders have robbed IP of telephone."

Proximity and impulsiveness (Assault ABH)

"Offender is IPs stepdad, during verbal altercation offender has punched IP several times to the head and grabbed IP round the neck. IP has left home address and gone to a friend's where the police were called."

Dispute related (Assault ABH)

"During material times at offence location, known offenders have approached a group of people, three persons from within the group of victims assaulted by means of punching. This was in relation to an ongoing investigation, persons advised to withdraw their previous complaints, offenders then made good escape."

From the MO details there were other clear examples of ongoing disputes between individuals, and domestic violence incidences which involved the same victim/offender dyad. However, whom the offenders knew is a not a blanket cause that can explain the entirety of the overlap, and some individuals were targeted by people they did not know or have a previous history (Bottoms and Costello, 2010). Furthermore, why these individuals associate together is an important question (Schreck and Fisher, 2004). Is it a question of proximity i.e. they live in the same areas and come into contact that way, due to a familial relationship, or are there elements of self-selection occurring where individuals select certain types for partners or friends?

Public place versus home address of victim

Different types of victimisations were more likely to occur in different settings, for example criminal damage was mostly likely at the home address. A lower percentage of motor offences occurred at the home address, this may be due to the car being parked on street parking near the home location, or the offence may have occurred when the car was located away from the home address. Most of the child abuse non crimes were also recorded as occurring at the home address. This may be due to how child abuse non crimes are recorded, likely due to the home address being the location that the report was made from - even if it concerned a missing child or other event that was occurring away from the address.

Sexual offences were most likely to occur away from the home address, and only 36% of violence offences occurred at the home address with a further 37% identified as public place violence and the rest occurring in other locations. Evidently where the victimisations were mostly likely to occur was related to the type of victimisation, suggesting that the environment the individual is located effects their risk of victimisation and what type is likely to occur (Lauritsen, Laub and Sampson, 1992).

Linking together the data on who is committing the offences – offender identified by the police as known to victim – and where the offence is occurring provides additional insight. Public place violence offences are disproportionately likely (Odds ratio = 2.132, $p < 0.01$) to be committed by offenders identified as unknown to the victim. For all types of offences occurring at the home address no significant relationship was found between known offender and home address. Suggesting that the home address location is relatively equally vulnerable to victimisation by both known and unknown offenders for all types of victimisations. If offences are limited to violence alone then there is a significant relationship with violent offences occurring at the home address 2.43 times ($p<0.001$) more likely to be committed by an offender known to the victim. So, while the home address location is vulnerable to crimes of all types committed by unknown offenders, violent crimes committed at the home location tend to be committed by known offenders.

Domestic violence, child sexual exploitation and mental health

Domestic violence is noted for 24% of violent, 20% of criminal damage, 16% verbal and 10% of sexual victimisations. Several criminal damage events were linked by the police to domestic violence. Demonstrating that not just the person can be targeted by the offender, but also property. Any type of domestic violence victimisation was significantly more likely to occur in the home location (Odds ratio 1.90, $p<0.05$) but violent ones were significantly more likely to be associated with the home address (Odds ratio 4.53, $p<0.001$).

Child Sexual exploitation (CSE) was surprisingly noted to be quite prevalent in this study with 27% of child abuse non crimes, 7% of sexual offences, and 5% of vulnerable adult non crimes involving CSE, it is not noted if this is confirmed or suspected. Individuals identified as at risk of CSE are firstly predominantly female, going repeatedly missing, have issues with violent or disruptive behaviour and may have mental health issues or be using drugs or alcohol. They may be resident in children's homes or there may be issues – such as arguments with family if at home. The individuals in this sample showed similar features to those identified by other research (Jay, 2014; OCSB, 2015). Given how harmful CSE can be to victims (Chapple and Crawford, 2019; Jay, 2014) CSE something that police and others should be aware of when dealing with young low-level offenders.

Mental health issues are found in only vulnerable adult victimisation events or for sexual ones. While the mental health issues would be expected to be noted for vulnerable adult events, it is curious that they are also noted for some of the sexual ones. It may be useful to research whether the mental health issues increase the individual's risk of being targeted for sexual victimisation or if the sexual victimisation has resulted in an acute mental health crisis. Data from the CSEW suggests that females with mental health vulnerabilities are disproportionately likely to be targeted so the former theory may also apply to this sample (ONS, 2018). Unfortunately, these details are not available in this study, but it would be an avenue for future exploration.

These figures relied on police reports having the correct codes added, it seems likely that the above may underrepresent the circumstances involved. For example, only 69% of the cases of domestic violence non-crimes were recorded as having the offender known to the victim – yet the very nature of domestic violence means the victim and offender must know each other. Police are also entering these codes based on what they know about the circumstances of the offence it is likely that some details are not disclosed by victims or inaccurately given (Green, 2012). Despite the probable underestimation for some circumstances the data provided by the police coding does provide useful information for looking at the context where these events

are occurring, and addition of further codes could provide further information both for police and for researchers.

Circumstances of victimisations compared by gender

From the earlier results for victimisation in this sample it is evident that there are distinct differences in types and possibly vulnerability to victimisation by gender. These differences are also hold true when the location and circumstances of the victimisations are examined and support the earlier research findings that there are differences between female and male victimisation among this sample of victims.

Table 13: Number of victimisations with circumstances and locations associated with the victimisation by gender with odds ratios for different genders

	alcohol involved	*Drugs involved*	*Public place violence*	*Home address of victim*	*Domestic violence*	*Offender known to victim*	*CSE*	*Mental Health*
Females	39	7	32	55	55	162	33	7
Males	19	1	85	155	24	61	1	4
Odds ratios Females	1.9	6.2	0.3	2.3	5.6	3.2	31.5	1.5
Odds ratios males	0.5	0.2	3.7	0.4	0.2	0.3	0.0	0.6
P value	p<0.05	p-value = 0.07331	p<0.05	p<0.05	p<0.05	p<0.05	p<0.05	p-value = 0.5551

Where victimisations are occurring, and the circumstances noted differs based on gender. Any type of victimisation events involving a female victim are more likely to involve alcohol (1.9), drugs (6.9), domestic violence (5.6) and know their offender (3.2). Location wise events involving males show a disproportionate risk of involving public place violence (3.7), while incidents involving females are more likely to occur at or adjacent to the home address

of the victim (2.3). CSE is disproportionately noted to occur to females in this sample.

Looking at the most prevalent kind of victimisation occurring within the sample – violence. While there were no statistically significant differences for alcohol involvement. There were significant differences victimisations involving a female victim were more likely to occur at the home address of the victim, involve domestic violence, and for the offender to know the victim. Violent victimisations involving males are more likely to occur in public places.

Table 14: Violent victimisation and circumstances of the events by gender (only circumstances where a significant difference or that occurred for violent events are reported in this table).

	Alcohol involved	*Public place violence*	*Home address of victim*	*Domestic violence*	*Offender known to victim*
Males	14%	57%	24%	5%	20%
Females	17%	19%	48%	41%	60%
Odds ratio males	0.757	5.523	0.338	0.075	0.164
Odds ratio females	1.322	0.181	2.959	13.266	6.093
	p-value = 0.5751	p<0.01	p<0.01	p<0.01	p<0.01

These finding are consistent with findings from national police data which found differences between who violently victimised males and females (ONS, 2018). A higher percentage of females were victimised by either a partner or family member, while a higher percentage of males were victimised by those defined as other – a section which included both victimised by acquaintances and stranger (ONS, 2018). Males and females in this sample tend to be vulnerable to different types of violent victimisation and have different relationships with

their assailants. The mechanisms linking victimisation to offending and vice versa may differ between males and females.

Discussion

Consistent with previous research an overlap exists between victimisation and offending in the TPP sample. Here the overlap sample is extensive with a prevalence rate of 63% for police reported victimisations. Victimisation showed significant variance within the sample with a small number of individuals - identified as the "*power few*" - recording a disproportionate number of events. Contrary to the hypothesis that low-level offenders would not be experiencing significant amounts of victimisation, it was clear that some individuals in this sample were experiencing some very complex issues, and their lives appeared to be just as chaotic and problematic as more serious offenders. While much of the sample 74.9% (n=334) recorded two or fewer events. Using the CCHI it is clear there was a significant amount of seriously harmful victimisations occurring. Ranging from a handful of serious sexual victimisations to several serious physical assaults. With the highest harmed individual scoring over 5,000 CCHI points mostly from the three rapes she reported. Evidently the possibility of serious harm being committed to low-level offenders is something that both researchers and police should be aware of. The highest amount of harm came from violent and sexual offences suggesting that these prevention of these among low level offenders would a be a priority for harm reduction. Like previous studies (Dudfield et al, 2017) distribution of harm was not evenly distributed through the sample. Instead, a "*power few*" suffered a disproportionate amount of the harm. Like earlier studies (Dudfield et al, 2017, Weinborn et al, 2017) harm was found to be even more concentrated than number of victimisations.

Victimisation varies between individuals in this sample with some experiencing problematic levels of repeat victimisation while others are experience a singular or very few events. This is consistent with previous research (e.g Pease, 1998; Farrell and Pease, 1993). Individuals recording significant number of events may have features that make them more vulnerable targets for victimisation. Here the confounding influence of using police records must be considered,

some individuals are more inclined to call the police and, in some incidences, keep calling, while it is likely that others will show greater reluctance to make contact following victimisation (Berg, Slocum, and Loeber, 2013).

The most prevalent type of victimisation reported was violence, followed by acquisitive, then domestic violence non crimes. The least prevalently reported victimisation type was vulnerable adult non crimes. There was a significant number of other types of victimisation events occurring, suggesting that this sample is vulnerable to several different forms of victimisation. Noticeably not only is victimisation prevalent in this sample but significant proportions are involved in some of the most harmful forms of victimisation. Several incidences of rape, one attempted murder, multiple GBH with intent and as well as reporting repeated events of serious domestic violence were all reported.

Some types of victimisations seemed particularly likely to co-occur with the most likely being violent and sexual victimisations. Analysis of event ordering could demonstrate whether sexual assault is tends to be followed by violent victimisation or vice versa. The current statistical tests used in this study showed one type of victimisation linked to an increased risk of other victimisation types also occurring but could not time order between the events. Why certain types of victimisations are co-morbid is an interesting question. It could relate to violent partners, the environments individuals are living in, who they know, or an overall vulnerability to being victimised – or all the above. It is likely that the causes may vary depending on the types of victimisations under discussion. Researchers and police should be aware that victimisation can occur comorbidly, and it is possible to be vulnerable to a range of different types of victimisation.

As well as criminal forms of victimisation the police also recorded non crime events – domestic violence, child abuse and vulnerable adults. The decision to include these within the scope of this study - even though they are not criminal event per se - is justified by the close relationship between these non-criminal “markers” and actual criminal events. Arguably these type of “marker” events indicate an increased risk of some types of criminal victimisation occurring. For

example domestic violence non crimes were found to often co-occur with criminal incidences of physical violence. Or it may indicate a vulnerability to victimisation – such a serious mental health issue, or a child within a care home that is repeatedly going missing. Including these types of events can add greater context to other victimisation events occurring and could provide valuable information for police officers or others attempting to intervene. Additionally, they provide a method for police to record events that could possibly become criminal at a latter point.

There is also a clear gender differential, in this study victimisation was both more prevalent and tended to be greater in number among females - while males tended to commit more offences. Females were more likely to report certain types of victimisations – sexual, violence, criminal damage, verbal and all three types of non-crime marker events. Their victimisations tended to occur in different circumstances with females being more likely to be victimised within the home address and know their offender. Victimisations involving domestic violence or child sexual exploitation are more likely to be recorded for females. Females made up the majority (67%) of the highly victimised subset while males predominated the higher offending at (76%).

Evidently reducing harm is a goal that would be beneficial not only to the victims in question but to society. This approach also fits with numerous CJS policies. Targeting resources by harm does have some advantages – especially in a time of ever decreasing resources due to harm tending to be more concentrated in a smaller number of individuals. Since a harm-focused approach would target resources based on a measurable variable that can be consistently monitored over time, it could also demonstrate a more towards a more evidence-based policy. Critically however numbers of victimisations unmistakably matter, and pursuit of a purely harm reduction policy may miss important aspects. Low level high frequency repeat victimisation cannot be ignored and may also require different approaches to higher harm types of victimisations.

Arguably the best strategy is to divide the sample into different groups based on levels of harm and number (Weinborn et al, 2017). While here five groups

were used for a larger sample additional groups may become apparent. Strategies appropriate to each grouping can be employed, or there can be monitoring to see if there are changes in harm or number over time. From this research there were three primary groupings which should be considered significant when allocating resources. The highest priority area for the police would be those experiencing both high harm and high frequency victimisation. The second two groupings to consider would then be high frequency victims and high harm victims. While Weinborn et al (2017) proposed that high harm but low frequency areas could be discounted if it is demonstrated that they are due to one off events, arguably this cannot be applied to victims suffering one off harm events, and some form of intervention to alleviate harm and possibly prevent future revictimization should be considered for this type of victim. Finally, there are two categories which would far lower priority for action – low harm low frequency victims and those not involved in victimisation.

Knowing how harm is distributed through the sample could be especially relevant for victim-offenders to identify those victim-offenders who are most highly harmed. While the results here are reported for victimisation only since, it would be possible to also harm score offending and classify victim-offenders by harm and number for both offending and victimisation. This approach would move from considering the victimisation and offending of victim-offenders by number alone to an approach that would account not only for how much, but how bad. The current approach used by most studies counting victimisation and offending by number alone misses identifying those who are suffering or conversely committing the most harm. Addition of harm scores may allow more accurate grouping of victim-offenders and more nuanced investigation into victim-offender trajectories. Potentially assisting the full understanding of the victim-offender overlap phenomenon.

Policy implications

With the levels of victimisation reported here in this study despite being low level offender's victimisation is occurring in significant amounts and should be a concern when designing policy. The first part of this study suggest that it would be critical to identify firstly who, where, who is the offender, types,

amount, harm, and non-crime incidents (see table 15). This could inform potential policy and intervention strategies for victim-offenders.

Table 15: Possible policy approach to victimisation of offenders

Identification	***Reasoning***
Who	Identification of victim-offenders is the critical first step that allows exploration of other aspects. Identification may be firstly done through police records, although it may be necessary to add self-report measures to investigate the significant amount of crime that goes unreported to the police.
Where	Victim-offenders appear to be vulnerable at different locations and in different circumstances, understanding if the vulnerability increases at the home address versus outside of the home may inform specific interventions, e.g here much of the female violent victimisation was located to the home address, while males were more likely to be violently victimised outside of the home. Prevention of violence located within the home may need to focus on domestic violence while that outside may require a different approach.
Who is the offender	Who the individuals know and associate with does appear to be responsible for a significant proportion of the victimisation seen in the study – particularly for violent victimisation which was found to be causing the most harm. This could be relevant to identify appropriate interventions e.g domestic violence from a current partner may require a different approach to peer victimisation.

What types	Some types of victimisation e.g violent and sexual appear to be likely to co-occur. This would have to be investigated further but potentially some types of victimisations may be predictive of worse outcomes later, identifying which are associated with worse outcomes could be essential to making comprehensive decisions on appropriate interventions.
How many	Identifying how many victimisations are reported would allow a triage approach where resources can be placed into those suffering the greatest number of victimisations.
How harmful	This would allow the triage of individuals by identifying the power few who have suffered the most harm. This could be combined with the total number of victimisations to identify "priority victims" those who suffer both significant harm and numerous victimisations.
Non crime incidents	These relate to certain forms of criminal victimisations and may be identifying specific vulnerabilities. Focus should be given to identifying individuals with these since they may be a priority group to target.

Prevention of violence

Critically in low level victim-offenders the type of crime responsible for causing the most harm was violent victimisation. Therefore, approaches which aim to reduce violent crime may be beneficial for low level victim-offenders. Reducing violent crime may be most effective when multiple approaches are employed. There are three main aspects to consider:

1). Reduce risk of violent victimisation in communities

2). Reduce the development of violence

3). Responses when victimisation does occur

Potential different strategies to approach these three aspects are outlined in figure 19.

Figure 19: Outlining some different approaches to violence at different intervention levels.

Community/environment	Early prevention	Response
• Hot spot/harm spot policing • Probelm orientated policing • Reduction access to weapons • Changing community and social norms • Healthcare screening for DA	• Home visits from nurse practitioners • Developing lifeskills • Parent training	• Mental health treatment • Mentoring • Alcohol and drug treatment • Restorative justice • CBT • Therapeutic foster care

Violence prevention could be aimed at the whole community e.g through hot spot or harm spot policing (Braga, Papachristos and Hurearu, 2012). In hotspot policing areas where crime clusters in small places are identified and assigned to targeted patrol. This patrol is generally suggested to be most effective in 15 minute doses (the Koper curve effect) and deterrence may last up to four days following the patrol (Williams and Coupe, 2017; Barnes, Williams, Sherman, Parmar, House and Brown, 2020). The literature is consistent about the benefits of a such a strategy (Braga, Papachristos and Hurearu, 2012), finding that rather than a displacement of crime (i.e crime moves around the corner in response to police activity), instead a diffusion of benefits is more usual (i.e where the effects of the patrol also reduce crime in surrounding areas) (Braga, Papachristos and Hurearu, 2012). This community violence prevention approach may benefit low level victim offenders by reducing overall levels of crime and victimisation risk in communities.

Problem orientated policing (POP) may also be a beneficial strategy to apply to alter environmental risk of victimisation (Hinkle, Weisburd, Telep, and Petersen, 2021). Healthcare screening for domestic abuse may be another applicable strategy, especially given the level of domestic abuse identified among low level offenders (O'Doherty, Hegarty, Ramsay, Davidson, Feder and Taft, 2015). Other community level prevention strategies could include reducing access to weapons e.g changing firearm laws (Makarios and Pratt, 2012) though this may be less applicable to the UK setting, and changing community and social norms that support violence (World Health Organisation, 2010).

Another approach would be aimed at early prevention and could be implemented from birth – even before birth (Olds, 2006). The home visitation model for at risk young mothers outlined by Olds (2006 and 2007) had numerous benefits beyond the prevention of delinquency. Children randomised to the program as well as reduced child abuse and neglect, showed better emotional, behavioural and language development. Therefore, the benefits of such early intervention may be wide reaching and long lasting. Early prevention could also take place in school with programs aiming to improve social skills (Losel and Beelmann, 2003) and provide education about relationships two potential approaches.

The focus of this study however is towards individuals, and once they have had contact with the CJS. At this point community prevention and early intervention is of less concern, and the focus is towards identifying evidence-based approaches that would work to prevent revictimization in individuals. Briefly potential strategies to reduce victimisation of individuals may include mental health treatment, mentoring, alcohol and drug treatment, and restorative justice. These will be discussed in more depth in the next chapter.

Limitations

Despite these noted issues with the source of data, the findings of this study do demonstrate just how extensive and harmful victimisation using police records alone, and how much data on victimisation is readily available within police systems. Police data systems can provide a rich resource for beginning to

investigate the victimisation histories. Ideally this should be supplemented with self-reports but operating in a world of evermore limited resources and squeezed budgets consideration of what can be readily accessed – both for the police and for researchers – is necessary.

Lack of compliance with self-report surveys, particularly from those already in acquaintance with police in less than favourable circumstances, may make collection of such data difficult (Jacobs and Wright, 2006). Not only may there be difficulties persuading offenders to disclose victimisations upon questioning, but offenders also often lead chaotic lives, with frequent address changes, making them difficult to contact to carry out such research (Bottoms and Costello, 2010).

It should also be noted that these findings apply to a specific sample of low-level offenders within Birmingham (UK). While the current research base is very conclusive that the overlap is a consistent fact across place, time, and samples (Jennings et al, 2012). The specific features discussed within this study may not be transferable to different populations. Therefore, further research into different types of offenders – particularly those more heavily involved in crime, and into other areas would demonstrate how the conclusions of this study could externally validated.

The harm scores here used all victimisations regardless of what date they occurred – some of them were greater than ten years prior to this study. Cumulative harm over time does matter and may provide a context for current victimisation, events occurring more recently are likely more relevant to consideration of interventions. Adding a time limitation on what victimisations are relevant to identifying targets for intervention may be applicable to ensure that those who are suffering current harm are prioritised. Or potentially adding a factor to increase the harm of more recently suffered victimisations may also aid identification of those currently most in need of assistance, while including a measure of historic harm.

The harm scoring method used the Cambridge Crime Harm Index, while it is arguably currently the principal and more accurate harm scoring method for England and Wales is not a perfect index. Comparative to the Crime Severity Scores produced by the ONS the CCHI can be suggested to be an overall better proxy measure for harm. The CCHI does not provide a seamless measure of the extent of how harmful these victimisations were to these individuals. Numerous factors may affect the damage that being a victim of crime causes, and one type of victimisation event may be exceeding distressing to one victim yet cause little effect to another. It is important to remember that what the CCHI aims to do is provide a proxy measure scoring different types of crime against one another rather than a definitive measure of harm suffered by individual victims (Sherman, Neyroud and Neyroud, 2016).

Conclusion

The findings here are both interesting and significant with important implications for both future research and policymakers. Critically a high prevalence of victimisation, even among the low-level offenders involved in Turning Point is recognised. Clear differences in victimisation can be seen between individuals. Victimisation can be a problematic feature in the lives of these offenders. Researchers should, if possible, endeavour to include a measure of victimisation within their study of offenders (or vice-versa). Critically addition of harm score allows researchers and police to "*think differently*" about how victimisation is distributed amongst the sample. Individuals, who if their victimisations were only considered by number, could end up low down on a priority list, despite suffering significant harm. In this sample a substantial amount of harm came from either violent or sexual offences, suggesting that prevention of these types of offences could be key to reducing harm amongst low level offenders. For police targeting by harm rather than number may provide a smaller number of individuals to target – since harm tends to concentrate more. However arguably an approach that utilises both number and harm may provide better results. Individuals who have suffered repeated frequent low harm events cannot be ignored. Plus, interventions can be tailored to suit different types of victims based on how harmful and how frequently their victimisation is occurring. Overall using harm scoring can allow researchers,

police, and policy makers to think differently about what matters in CJS and may draw attention to individuals that if number alone was considered would have been overlooked.

Chapter 8

Linking offending to victimisation

This chapter will provide a brief overview of the offences committed by the TPP sample and analysis of critical types of offending and victimisation to examine further within the models used to predict victimisation and offending outcomes in the final part of the thesis. Finally, this information will be used to propose policy and practice changes for approaching the victim-offender overlap within individuals.

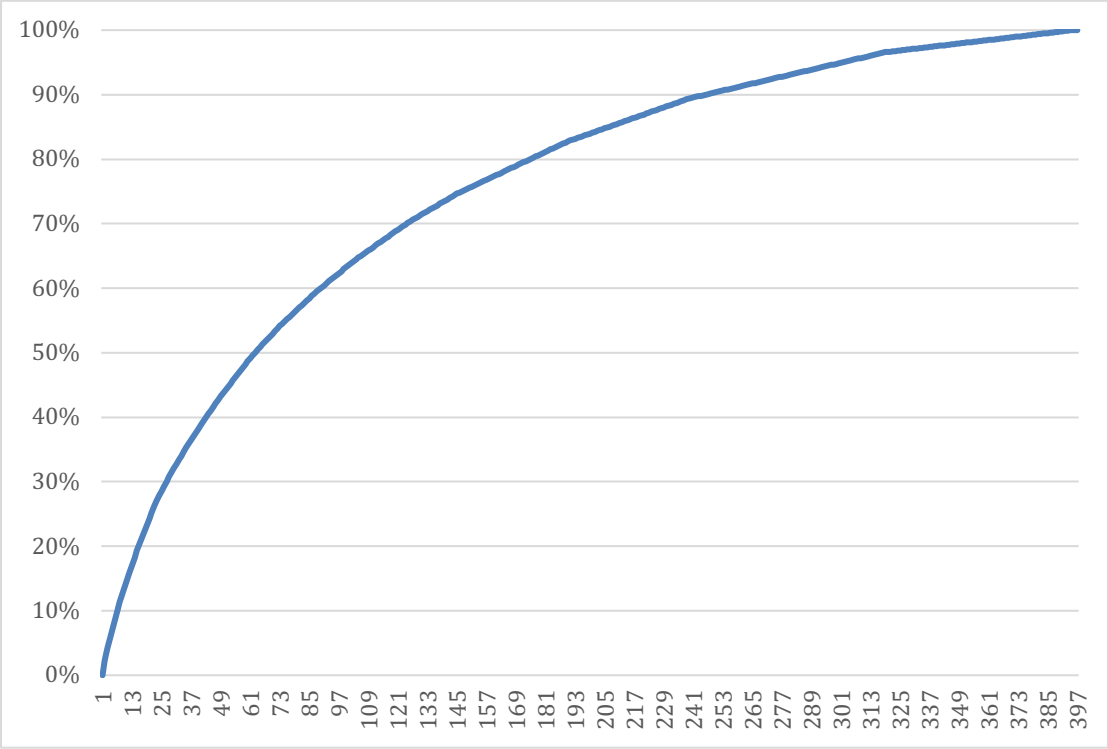
1. *What is the prevalence and types of offending the TPP are committing?*
2. *How do victimisation and offending relate to each in this sample?*
3. *What influences violent victimisation and offending in the TPP sample?*

Brief overview of offending

The total number of offences charged was 2,221, with a range of 1-53 and a mean of 5.6 offences. This figure is over twice the number of victimisations reported by the sample, suggesting that these individuals tend to be more heavily skewed towards committing offences rather than reporting victimisation. Although there are other possible contributors to this difference; total number of offences could be higher than the number of victimisations reported because it was common for multiple offences to be charged per arrest. For example, an individual could be arrested once but charged with ten incidences of shop lifting. The same was true of driving offences, it was common for individuals to be charged with multiple offences in the same incident e.g. no MOT, no insurance, no vehicle tax, driving in an unsafe or dangerous manner, driving under the influence of alcohol or drugs, fail to stop for police, taking without consent (TWOC) theft of a motor vehicle or aggravated vehicle taking. Individuals could also be arrested for one offence and then incur additional charges when with drugs or weapons are found in custody. The different police systems used to collect the data may also contribute to this difference on CRIMES only the main offence was listed for victimisation, while on PNC multiple offences were often listed.

The majority did fit the category of low-level offenders as defined in the TPP criteria before randomisation (Neyroud and Slothower, 2013), with a few escalating offending behaviour post. Offences were predominantly minor events of theft, assault, public order, criminal damage, however there were several serious assaults with one charge of attempted murder post randomisation and three rapes charged. Three individuals were charged with GBH prior to randomisation, five post, and two were charged with GBH for the TPP offence. More serious assaults were supposed to be excluded through the inclusion criteria for TPP. It is possible that the custody sergeant felt there was not enough evidence for the charge of GBH to be upheld and it was likely the case would result in a lesser assault charge that would fit the TPP criteria.

Figure 20: Cumulative count of offences across the TPP sample

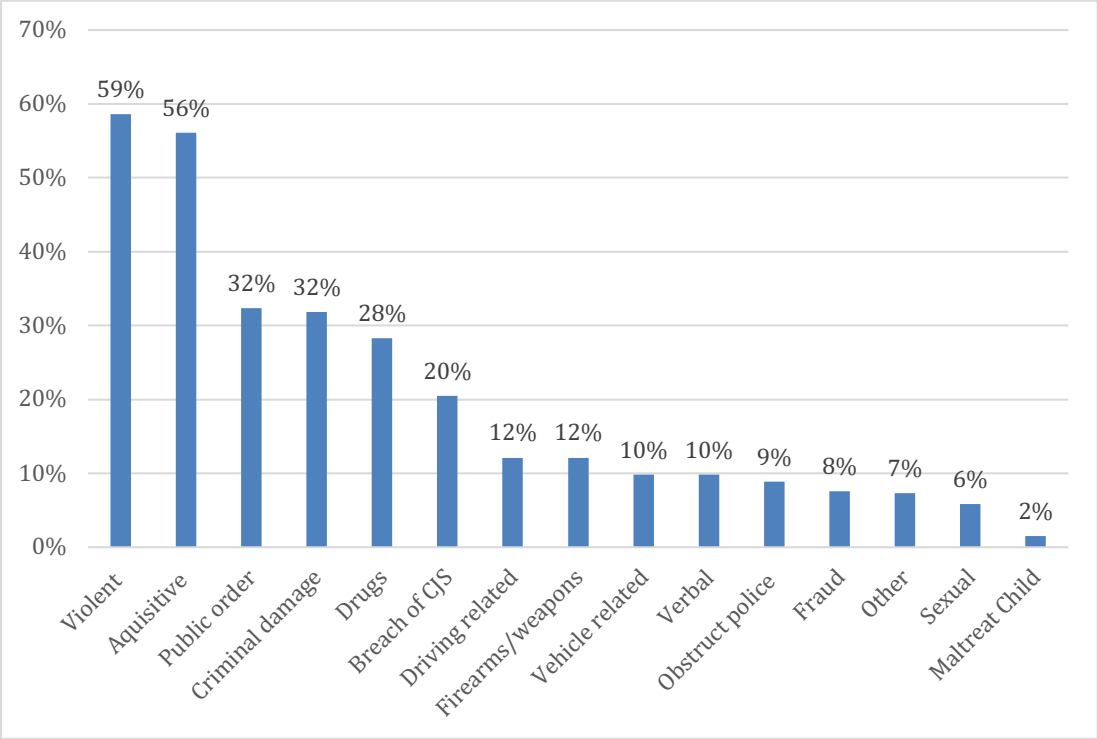


As with victimisation offending by this sample showed significant variance in the number of offences charged with. Again a "*power few*" or "*felonious few*" could be identified – 30 of the offenders (8%) accounted for 727 (33%) of the total. Indicating that there was significant difference within the sample for the propensity to commit offences (Sherman, 2007). Many of the sample were only charged with either one or two offences (39%). The most prevalent type of offence committed by the TPP sample were violent offences (59%) and

acquisitive (56%), the least common offence types were sexual (6%) and child maltreatment (2%). Violence and acquisitive were the most common types of victimisations suffered by the sample as well. However, compared to victimisation there were no gender differences for violent offending with males and females equally likely to have committed violent offences. This is contrary to much of the literature that shows that males are more likely to be violent offenders (Heidenson and Gelsthorpe, 2007; Davies, 2010). This may be due to the selection processes of TPP and the types of offenders selected to participate.

The 12% charged for weapons offences were all male, showing a significant gender divide, and that among low level offenders' weapon are more likely carried by males. Those carrying knives may be carrying them out of fear of becoming a victim of crime – young males are disproportionately likely to become victims of some forms of violence (ONS, 2018) - which may be why knife carrying is only occurring in the males in this sample. Additionally, knife carrying may relate to ideas about masculinity (Palinski and Riggs, 2012), and attributing blame to the authorities around lack of protection against victimisation. The likelihood of weapon carrying is found to increase when aggression interacts with victimisation, and weapon using offenders may tend to be more violent than non-weapon one (Brennan, 2019). Potentially since there are significant proportion of male low-level offenders arrested in possession of weapons this could be highlighting problematic issue for the young males in this sample. The presence of weapons can increase the likelihood of serious injury for victim – or offender.

Figure 21: Percentage of the sample charged with different types of criminal offences



The small number of sexual offences were predominately committed by males (9 out 10), contrary to the finding that the females were more likely to report sexual victimisation. This is consistent with offending samples from the larger population (ONS, 2018b) Due to the small number of sexual offences no significant differences were found. Statistical differences were found for driving offences with males being 6.4 times more likely ($p<0.01$) to have been charged for a driving offence – this is consistent with the wider literature that finds males are disproportionately likely to commit driving offences (Corbett, 2010). Males were also 3.3 times more likely to have been charged for a drugs offence. These were the only statistically significant differences, all other offence types (acquisitive, public order, criminal damage, breaching a CJS sanction, vehicle related, obstruct police, verbal, fraud, other, and maltreat a child) were equally likely to be committed by males or females.

Victimisation and offending

With the TPP sample contrary to some studies that suggest as victimisation increases as does offending, only a very weak positive correlation between

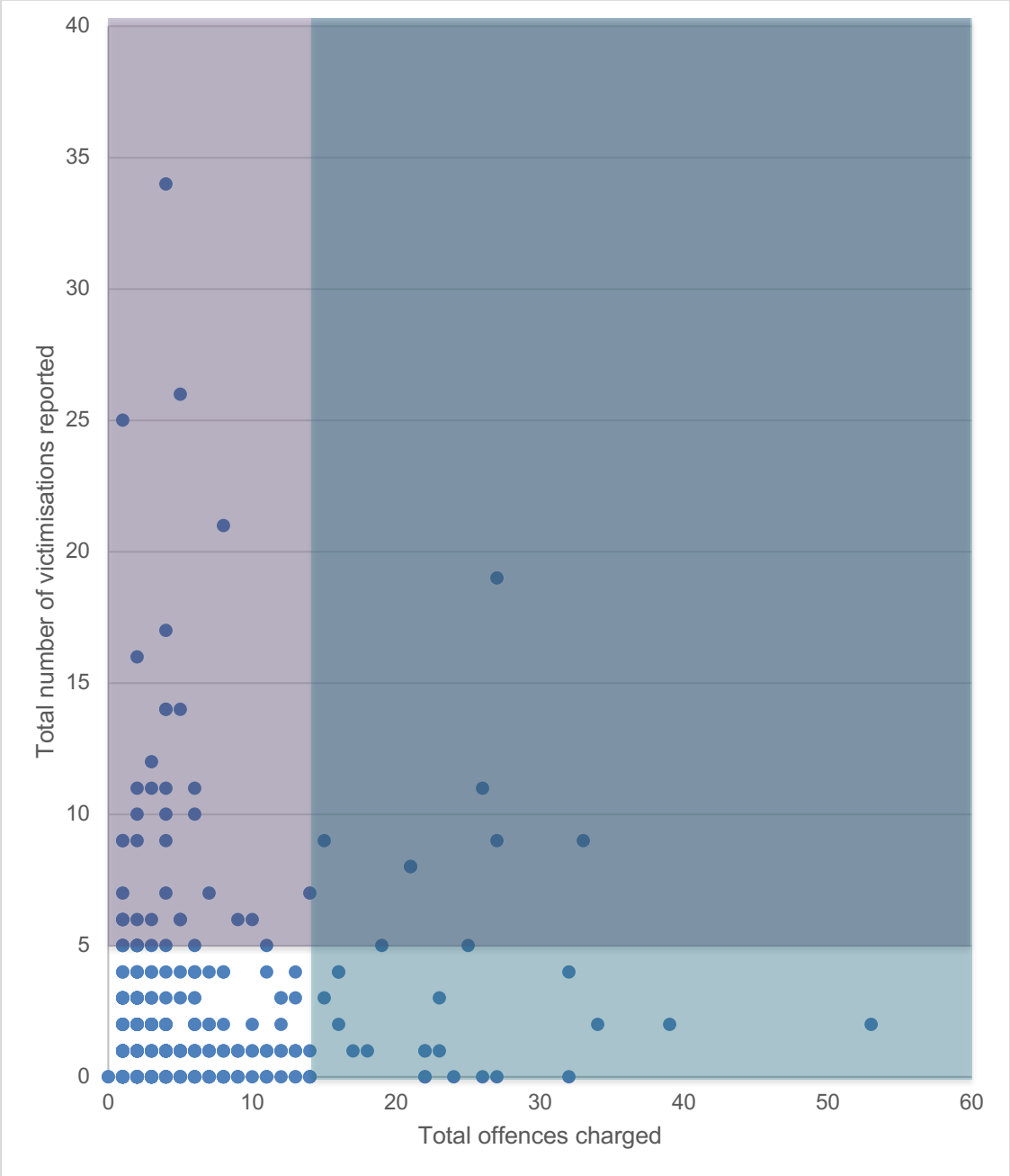
charges and reported victimisation (rho = 0.0754, $p<0.05$) was found. This means that high levels of offending have little association with high levels of victimisation. This is contrary to other studies such as Cuevas et al. (2007) who showed a strong positive correlation between victimisation and delinquency of $r = 0.52$ ($p<0.001$) in a representative sample of approximately 1,000 youth, and Vynickier and Pauwels (2010) who showed a correlation of $r = 0.44$ ($p<0.01$) for a cross-sectional survey of 1,554 adolescents. Maldonado-Molina et al. (2010) found a correlation of 0.438 ($p<0.001$) between victimisation and offending in a sample of Puerto Rican youth from the Bronx in New York, while Beckley et al. (2018) found $r = 0.42$ ($p<0.05$) in adolescents from the E-risk study a representative UK birth cohort study.

This may be due to the types of offenders selected – low level offenders may tend towards higher victimisation accompanied by lower amounts of offending (Cuevas et al, 2007). A wider range of different levels of offenders may show a stronger relationship between victimisation and offending. As well as selection effects there is also the effect of using reported victimisations rather than self-reports – the Cuevas et al. study used self-reports, as did Vynicker and Pauwels (2010), Maldonaldo-Molina et al. (2010) and Beckley et al. (2018). A further consideration the examples above used an adolescent or youth sample while the TPP project was on average older with a significant proportion of them adults, and evidence in the literature suggests that while the overlap persists as the individual ages the link between offending and victimisation may weaken (Erdman and Reinecke, 2018).

Potentially some of the more highly offending individuals in the sample may be less inclined to contact the police when they experience victimisation (Berg, Slocum and Loeber, 2013). Furthermore, they may not even perceive what is occurring to them as victimisation (Jacobs and Wright, 2006). Violence, retaliation, and victimisation may have become part of the social norms within which they live and are such banal everyday events that they don't require reporting to the police (Berg, Slocum, and Loeber, 2006). Or they may have features that mean they resilient being victimised (Lauritsen and Laub, 2007).

Comparing the power few from victimisations (those reporting 10 or more events) to the power few from offending (those charged with 15 more offences) shows a very small overlap between the two groups. Only two individuals belong to both the power few offenders and victims. The majority of the sample had little or no involvement in victimisation and were charged with a single or few offences.

Figure 22: Scatter plot of reported victimisation against charged offences. The blue indicates the power few offenders, and the purple the power few victims, where the two overlap the individuals belong to both the power few offenders and victims.



In this sample of low-level offenders some are predominately victimised, and some predominantly offend, with a small number both highly victimised and highly involved in offending. A large proportion of the sample little involvement in either offending or victimisation. Consistent with earlier research that

suggests there are multiple different trajectories that individuals can follow with regards to their victimisation and offending (Mulford et al, 2018; Higgins, 2009; Jennings et al, 2010) and other research proposing different groups of victim-offenders with variable involvement in offending and victimisation (Cuevas et al, 2007). Of the "*power few*" (the top 33) for victimisation 67% are female whereas for offending males predominate at 76%. There is a gender differential here between those most involved in offending and victimisation, with females tending towards the group with high victimisation and lower levels of offending and males towards the higher offending group.

Overlap between different types of offending and victimisation

There was considerable variability in this sample about the percentage of victims involved in committing specific offence types. Only a few of these differences were significant, and tests of correlation between victimisation and offending also showed few significant results. Potentially as with the correlation results for the overall offending and victimisation individuals belong to different groups within the types of offending and victimisation (Mulford et al, 2018; Higgins, 2009; Jennings et al, 2010).

From the earlier research looking at the relationship between different types of victimisations there were far more statistically stronger and closer relationship between some different types of victimisations (e.g those reporting a violent victimisation were 4.48 times ($p<0.05$) more likely to also report a violent victimisation), than were found for the relationships between offending and victimisation. Suggesting that victimisation types are much closely linked in this sample than victimisation and offending. Possibly this relates to the use of police records – as previously discussed not all victimisation events are reported and some individuals are more likely to report to the police than others. The effect of the unknown figure of victimisation could be weakening links between offending and victimisation types. Significant overlap between violent victimisation and offending with 57% of victims of violence also involved in violent offending can be identified. The odds of violently offending if the individual is also a victim of violence are 1.5 times higher ($p=0.067$) than if the individual had not been a victim of violence.

Table 16: Percentage of victims who are charged with specific types of offences. (* indicates a significant relationship at the 0.1 level, and ** at the 0.05 using Fisher's test)

Victimisation Types

Offending Types	Violent n=127	Acquisitive n=101	motor vehicle n=50	criminal damage n=36	sexual n=23	Verbal n=33	Domestic violence no crimes n=55	Child abuse no crimes n=34	Vulnerable adult no crimes n=18
Violent	57%*	51%	42%	61%	61%	55%	53%	62%	78%**
Acquisitive	50%	51%	40%	31%**	65%	42%	56%	71%	33%
public order	29%	29%	30%	44%**	26%	33%	27%	26%	33%
Drugs	25%	29%	28%	28%	26%	18%	24%	26%	6%

Vehicle related	11%	10%	10%	8%	4%	3%	13%	6%	0%
Driving related	11%	11%	16%	11%	9%	6%	9%	6%	11%
Sexual	1%	3%	2%	3%	0%	0%	0%	3%	0%
Criminal damage	41%**	33%	26%	33%	48%**	33%	33%	47%**	44%
Verbal	12%**	12%*	14%	17%	13%	15%**	9%	15%	17%
Fraud	3%	10%**	8%	8%	0%	3%	5%	3%	6%
Firearms/ weapons	11%	8%	12%	11%	4%	0%	13%	15%	6%
Breach of CJS	20%	16%	16%	19%	26%	15%	25%	35%**	33%
Obstruct police officer	7%	8%	10%	8%	4%	9%	11%	15%	6%

There is a weak positive correlation between violent offending and violent victimisation in this sample (rho = 0.113, p=0.052). There are no significant correlations for either male or female violent victimisation and offending if the sample is broken down by gender. Due to the close relationship in other research between violent offending and victimisation it would be expected that this correlation should be larger. Erdman and Reinecke (2018) found varying correlations between 0.314 ($p<0.05$) between violent victimisation and offending at age 14, and 0.136 ($p<0.05$) at age 16, and 0.188 ($p<0.05$) at age 20, in a study using self-reports. While Berg and Loeber (2011) from data from young males in the Pittsburgh Youth Study found co-efficients between violent victimisation and offending of between 0.198-0.389 ($p<0.05$) for their Poisson regression models testing, and Posick and Zimmerman (2014) using ADD Health data found co-efficients of 0.21-0.20 ($p<0.05$) for theirs.

The examples from the literature are calculated from self-report data, police reports may be attenuating the strength of the relationship. The example from the literature with the largest co-efficients (The Pittsburgh Youth Study) occurred in an American city with high rates of crime and social disadvantage at the time the study was taking place. This may have strengthened the overlap between violent victimisation and offending in this setting (Posick and Zimmerman, 2014; Berg and Loeber, 2011). The low-level offenders in Birmingham may not have been exposed to so many criminogenic and victimogenic features or environments as those in the Pittsburgh Youth Study. As well as geographic location differences, all the above studies from the literature focussed on adolescents alone, while the TPP sample was older. Research suggests that as individuals age the relationship between victimisation can be attenuated (Erdman and Reinecke, 2018). In both the current and the prior studies, much of the variation in the overlap between violent victimisation and offending – as with offending and victimisation in general – is not due to differences in victimisation or offending and is likely effected by other variables. The other possibility is there are different groupings of violent victim-offenders – with some tending towards victimisation and others

to offending, this may explain why the positive correlations between is not stronger.

Individuals identified as vulnerable adults on police records were 3.6 times (p=0.027) more likely to be involved in violent offending than those without. There was also a small positive correlation of 0.122 between the two. These vulnerable adults no crimes could identify features that make these individuals more likely to commit violence offences. Vulnerable adult no crimes are often related to mental health issues, and some research suggests (e.g Silver et al, 2011) that likelihood of committing violence is greater for someone with a mental health issue than without, which would fit with the results found here in this study.

Table 17: Correlations using Spearman's rank correlation between types of victimisations and offending (* indicates a significant relationship at the 0.1 level, and ** at the 0.05)

		Victimisation Types								
		Violent n=127	**Acquisitive n=101**	**Motor vehicle n=50**	**Criminal damage n=36**	**Sexual n=23**	**Verbal n=33**	**Domestic violence no crimes n=55**	**Child abuse no crimes n=34**	**Vulnerable adult no crimes n=18**
Offending Types	**Violent**	0.113**	-0.017	-0.017	0.0628	0.0713	0.0323	0.0202	0.114**	0.122**
	Acquisitive	0.0027	0.0084	-0.082	-0.106**	0.0538	0.0332	0.0571	0.126**	-0.0691
	Public order	0.0381	0.00118	0.0948	0.09473*	0.0151	0.0061	0.00609	-0.0104	0.03124
	Drugs	0.0721	0.0401	0.0064	-0.00034	-0.012	-0.0708	-0.029	-0.0088	-0.105**
	Motor related	0.0721	0.0611	0.0288	0.00421	-0.032	-0.0521	0.0702	-0.0213	-0.0624
	Driving related	0.0117	0.0069	0.0709	0.00356	-0.012	-0.037	-0.01482	-0.0429	0.00839
	Sexual	-0.0765	0.0216	-0.0134	0.00402	-0.040	-0.0485	-0.0644	-0.0051	-0.0351

Criminal damage	0.2005**	0.0668	-0.0125	0.0408	0.1331**	0.0475	0.0435	0.1711**	0.0912
Verbal	0.0988**	0.1088**	0.098*	0.1168**	0.0551	0.0927*	0.0274	0.0901*	0.07943
Fraud	-0.062	0.0873*	0.0397	0.0393	-0.060	-0.035	-0.0032	-0.0346	-0.00145
Firearms/ weapons	-0.0060	-0.0395	0.01303	0.00514	-0.043	-0.102**	0.0224	0.0442	-0.0353
Breach of CJS	0.033	-0.0542	-0.04018	-0.0034	0.0396	-0.0357	0.0593	0.121**	0.0739
Obstruct police officer	0.0101	0.00149	0.0302	0.0126	-0.031	0.0130	0.0808	0.0808	-0.0194

The odds of the individual having committed a criminal damage offence increased if they were a victim of a sexual offence (odds ratio 2.531, $p<0.05$) or of violence (odds ratio 2.516, $p<0.001$). The strongest correlation for any offending and victimisation relationship was for criminal damage offending and being a victim of violence at 0.2005 ($p<0.001$). This was in fact stronger than the correlation between violent offending and victimisation. There was a smaller correlation of 0.1331 for criminal damage offending and sexual victimisation. These could be due to the eligibility criteria used in TPP, potentially higher-level offenders would be more inclined towards violent and other more serious forms of offending alongside violent or sexual victimisation.

Violent victimisation related to an increased risk of a verbal offence being charged (odds ratio 2.263, $p<0.05$). Possible due to the eligibility criteria the study ended up with individuals who were more likely to have committed verbal offences rather than more serious violent ones. Low level offenders may be more likely to be involved in verbal offences but less likely to escalate to actual physical violence during a conflict. The likelihood of verbal offences being charged also increased for acquisitive victims (2.071, $p=0.079$) although this was only significant at the 0.1 level. The mechanism of this relationship is rather unclear. Again, this could be a skewing effect from the sample selection.

Those with child abuse non crimes identified were 2.396 times ($p<0.05$) more likely to breach a criminal sanction, and 2.527 times ($p<0.05$) to have a criminal damage charge. These also showed a weak positive correlation at 0.121 and 0.171 respectively. This may be influenced by the high number of these individuals who appear to be in care or are repeatedly reported missing – which again could indicate a lack of supervision or other significant problems with the stability of their lives and family relationships (Erdman and Reinecke, 2018). The lack of supervision and instability could mean they are less likely to comply with CJS sanction than those who have better supervision.

Some of these overlaps are for small for example there are only 18 individuals with vulnerable adult victimisations. Possibly in a larger sample more results

would reach statistical significance, and clearly the relationship between types of victimisations and offending are something that should be examined further. Additionally, being able to time order the events so it can be identified if victimisation tends to proceed specific types of offending or vice versa would provide further detail and build on the basic analysis used here. However, despite being a basic analysis in this sample of low-level offenders some offence and victimisation types do show some correlation.

Violent victimisation and offending

Previous research (Jennings et al, 2012) suggest that the relationship between violent victimisation and offending is stronger than that between other offence types. In this study violent victimisation and offending demonstrated the largest overlap, was the most prevalent form of both victimisation and offending, and from the CCHI scores caused the most harm. Over half (59%) of the victims of violence were also involved in violent offending. Despite the large overlap low level offenders seem more likely to skew towards either more violent victimisation or more violent offending, since the correlation between the two was only a weak positive of 0.113 ($p<0.1$). So low-level offenders' involvement in violent offending tended not to increase concurrently when victimisation reporting increased and vice-versa.

Firstly, comparing those individuals who are categorised into overlap between violent victimisation and offending, to those who are only victims of violence, shows that on most circumstantial variables the overlap and the victimisation only are comparative. No difference was found between gender, being violently victimised only at the home address, only being violently victimised in public spaces, or if the offender was known to the victim. A significant difference however was found for the overlap group who were 4.37 times ($p<0.05$) more likely to experience victimisation both at the home address and in public places. The individuals that are victims of violence but not offenders tend to experience victimisation at one location only.

Table 18: Differences between those involved in the violent victim-offender overlap and those who are only victimised

	Males	*Females*	*Victim at Home address only*	*Victim public places only*	*Victim both public place and home address*	*Offender known to victim*
Violent victim/ offender overlap (n=59)	63%	37%	22%	37%	25%**	44%
Violent victims only (n=42)	57%	43%	29%	43%	7%**	38%

This is suggestive of a difference between some of those involved in the violent victim/offender overlap and those who are only violent victims. Possibly the overlap individuals are more likely become involved in conflicts and sometimes end up the victim of that violence instead. It may relate to routine differences between the violent victims only and victim offender overlap, potentially the victim only group are not present in so many high-risk environments as the victim-offenders (Mustaine and Tewksbury, 2000). For prevention of violence practitioners need to be aware that low level violent victim offenders are more likely to be present in both public and home environments that are conducive to either violent offending or victimisation. Suggesting that violent victim/offender overlap in low level offenders could be a critical group to focus on for violence prevention. Unfortunately, the circumstance and location data were not collected for offending, which is clearly another avenue to pursue in future. There may be differences in violent offending for location and

circumstance between those who are that are part of the overlap and those who are only offenders.

Looking at the three types of offending that showed correlations -albeit weak ones - to violent victimisation shows that some of the relationships are consistent across gender. For both males and females there is significant positive correlation between criminal damage offending and violent victimisation. That verbal offending and violent victimisation do not reach significance for females is likely due to the small sample size. However, for males the relationship was positive and showed that being a victim of violence was associated with verbal offending. Possibly individuals who are involved in verbal offences also have a propensity to be involved in offences that escalate to actual violence. Potentially if they have been a victim of violence aggression in communication could be a defensive strategy to try to prevent future revictimization (Averdijk, 2016). Or they may be ending up victims of violence due to a propensity to communicate aggressively which ends up inciting a violent response (Averdijk, 2016).

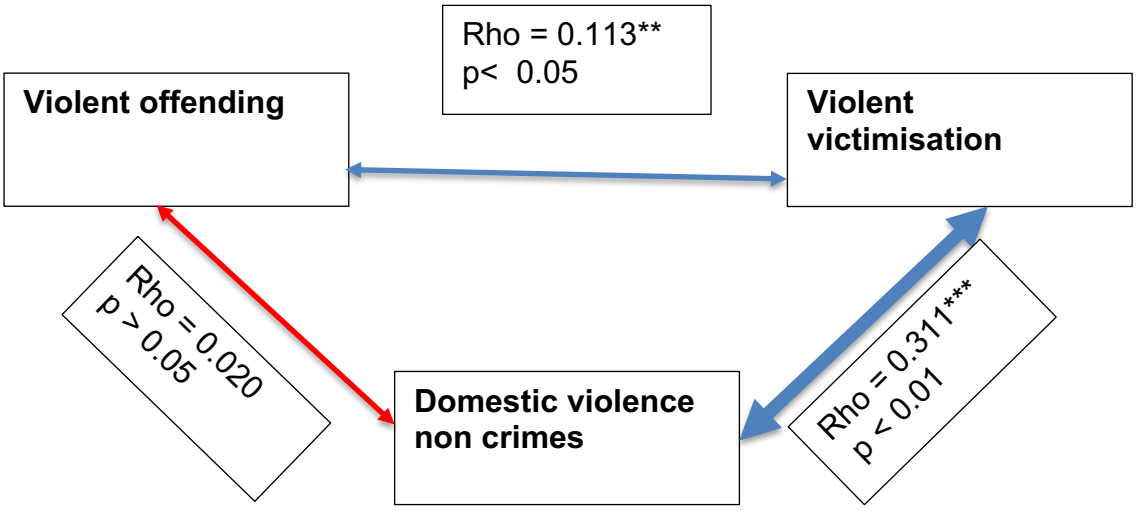
Table 19: Comparison between male and female victims of violence and types of offending (* indicates a significant relationship at the 0.1 level, and ** at the 0.05)

		Violent offending	***Criminal damage offending***	***Verbal offending***
Females victims of violence	**Extent of overlap**	n= 25	n=5	n=4
	Odds ratio	1.830	2.993 **	2.279
	Correlation	0.152	0.260**	0.0702
Male victims of violence	**Extent of overlap**	n=48	n=37	n=11
	Odds ratio	1.46	2.67**	2.44**
	Correlation	0.0936	0.205***	0.114**

Domestic violence non crimes, violent victimisation, and the relationship to violent offending

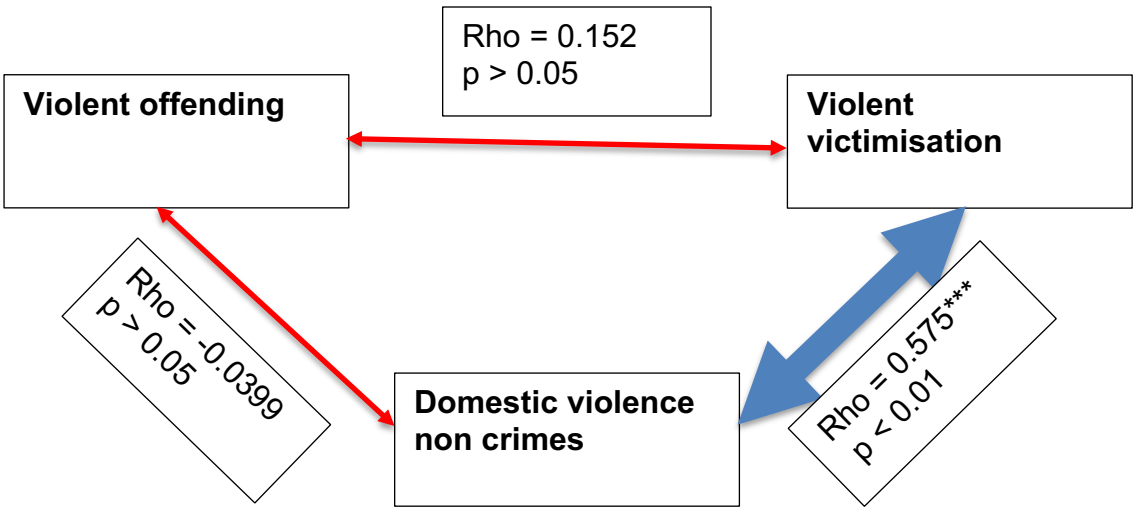
One of the more noteworthy relationships in from this sample is that between violent offending, violent victimisation, and domestic violence non crimes. From the earlier results it is evident that reporting a domestic violence non crime increases the likelihood of criminal violent victimisation occurring. The correlation between the two would classify as moderate positive relationship (rho= 0.311, $p < 0.001$). However domestic violence non crimes show no correlation or relationship to committing violent offences. Potentially the factors that relate domestic violence non crimes to an increased risk of violent victimisation, differ to those that relate to violent offending. Violent victimisation and domestic violence non crimes could be linked due to a relationship with a violent partner.

Figure 22: illustrating the relationships between violent victimisation, violent offending, and domestic violence non crimes for the whole sample



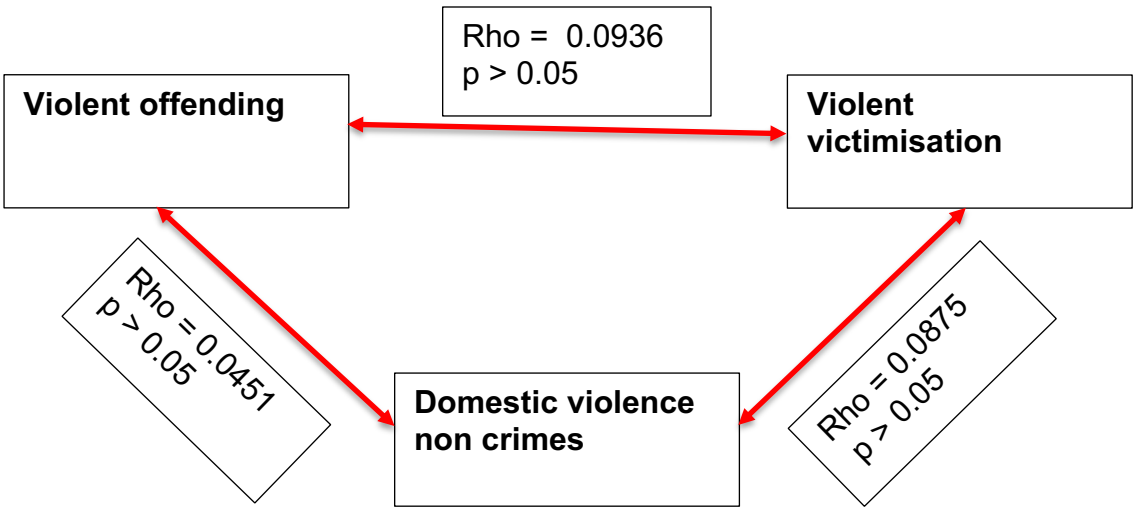
Since the earlier results have shown significant differences between the likelihood of males and females to be reporting violent victimisation and domestic violence non crimes the sample was spilt by gender. The correlation for females showed as moderately strong between the two variables (rho = 0.575), however no significant relationship was found for the males between any of the variables. Females appear to be more likely to be involved in domestic disputes that do not reach the threshold of a crime under English law and the number they report relates to an increase in the amount of criminal violent victimisation reported. The male's victimisation and offending however does not demonstrate such close linkage.

Figure 23: illustrating the relationships between violent victimisation, violent offending and domestic violence non crimes for only the female group in the sample



The mechanisms causing the violent victimisation for females may be related to different factors than males (Flexon et al, 2016). If domestic violence non crimes generally relate to being in a violent relationship, the violent relationship may be directly responsible for the increase in violent victimisation or the reasons they are selecting into those types of relationship make them ideal targets for violent victimisation even outside of the relationship. Since the domestic violence non crimes are occasionally used for family incidents where say a father has had an argument with a daughter or a son with their mother, it may also reflect the home environment these individuals are developing in and exposed to.

Figure 24: illustrating the relationships between violent victimisation, violent offending and domestic violence non crimes for only the male group in the sample



Clearly this doesn't appear to be true to explain the violent victimisation of males in this sample. Returning to the previous information on victimisation circumstances suggests that where males and females are being victimised varies significantly – with females more likely to be victims within the home and males during violence occurring in public places. Their relationship with the individual committing the offence also varies – with females more likely to know the offender. In contrast male violent victimisation of low-level offenders, is more likely to occur in public places involving people they don't have a close relationship with. The causes of this type of violent victimisation are clearly different to domestic violence. Possibly male victimisation relates more to the public places and peers that they are associating with in those spaces, rather than partner selection. Although this may be influenced by reticence of males to report domestic violence victimisation (Barber, 2008). It is possible that the levels of domestic violence victimisation are higher among males than is reported to the police.

Summary

The total number of offences charged was greater than the number of victimisations reported – this may be due to how offences are reported and recorded, and data sources used. Like victimisation a small percentage of the sample committed a disproportionate number of the offences. The most prevalent form of offending was violence, followed by acquisitive and the least common were sexual and child maltreatment. Offending was only briefly analysed in this project since the main analysis for offending will be reported on in the full TPP report.

Victimisation weakly correlated to offending, and there was little overlap between those most involved in offending and those most victimised. Suggesting that within this sample there are different groups with some tending towards greater involvement in offending and others towards victimisation. Much of the sample however had very little involvement in either offending or victimisation. Some types of offending and victimisation showed stronger correlations, with criminal damage offending and violent victimisation the strongest. The relationships between victimisation and offending may reflect a selection effect, and if a more varied sample of offenders was used the correlations may be stronger. Selecting low-level offenders potentially skewed the sample towards specific types of offenders and victim-offenders, that followed different patterns. While violent victimisation and offending did not show the strongest correlation, it present the largest overlap between types of victimisations and offending. Comparative to those who are only victims of violence, violent victim-offenders are more likely to be violently victimised at both home and public locations suggesting that the victim-offenders have greater exposure to violent environments.

Gender and the victim-offender overlap

Rates of most types of offending were comparative between males and females, however driving offences were significantly more likely to be committed by males. Only males were arrested for or found in possession of offensive weapon. With 12% of the sample charged for this type of offence a notable proportion of male low-level offenders are carrying weapon. Individuals

carrying knives are likely at increased risk of causing injury either to others or themselves and are possibly carrying the weapons due to experiencing or anticipating victimisation (Brenner, 2019).

Whether these differences are due to under reporting of victimisation of males, selection effects or genuinely down to differences between victimisation and offending for males and females cannot be entirely proved in this study – due to the reliance on police data alone. While likely both may play a role, previous research (Heidensohn and Silvestri, 2012) does tend to consistently confirm that there are differences between male and female involvement in crime, and for involvement in the victim-offender overlap (Flexon, Meldrum and Piquero, 2016). Police and practitioners should be both aware of these differences when considering victim-offenders, but also bear in mind that there may unreported events occurring.

Potential causes and mechanisms

From this study definite conclusions about the mechanism causing the overlap cannot be proved – due to the both the reliance on police data and the limited number of variables available. The relationship between offending and victimisation was not a simple positive correlation between the two, suggesting that there may be multiple different groupings of victim-offenders. For low level offenders' risk of victimisation and involvement in offending is unevenly distributed through the sample. With a "*power few*" identified for both offending and victimisation. As previous studies have indicated the relationship between victimisation and offending is a complex phenomenon that is not a simple explain. This data cannot be used to prove whether offending is causing victimisation, victimisation is causing offending or if the two are linked through a third variable. For some individuals the offending role predominates, while for others the victimisation one – for a notable few offending, and victimisation appears to increase in tandem. Some types of victimisation and offending show stronger relationships suggesting that in low-level offenders these types are more likely to be co-occurring and are associated to some extent.

There are few mechanisms that show potential to explain some of the overlap between victimisation and offending in low-level offenders. Firstly, it was common for some types of victimisations to be committed by those they knew – this was particularly true for violent and verbal victimisation. Both types of victimisations that require a direct interaction between offender and victim (Turanovic and Young, 2016). Suggesting that some of the vulnerability to victimisation related to who they knew, and who they chose as friends and partners. This fits with Bottom's and Costello's (2010) explanation of the overlap, however clearly not all victimisation of offenders relates to who they know and even for violent and verbal victimisation not all offenders were identified as known to the victim.

Who they know may influence one aspect of the overlap more than the other. One particularly interesting relationship is that between domestic violence non crimes, violent victimisation, and violent offending. Violent victimisation increases violent offending to some extent but experiencing domestic violence non crimes does not – but domestic violence non crimes does relate to increased violent victimisation. Suggesting that the causal link (potentially a violent partner or family member) between domestic violence non- crimes and violent victimisation is separate to those influencing violent offending. So, the people they know may have a greater effect on offending or victimisation dependant on the individual, and the types of offending and victimisation considered (Turanovic and Young, 2016).

Secondly risky lifestyles may provide a framework for explaining who most at risk and where. The victimisation location and circumstances clearly indicate that some individuals are at greater risk of victimisation occurring in the home, others in public places and some at both locations. This difference is gendered – with females more vulnerable to victimisation within the home and males outside the home. There could also be critical differences in exposure, for example with regards to those involved in both violent victimisation and offending the victim-offenders were more likely to be victimised within both the home and public. Suggesting that for violence victim-offenders have greater exposure to risky environment that are conducive to violent victimisation. Since

the circumstance and location variables were only available for victimisation, the full influence of these on the victim-offender overlap cannot be studied. Critically the analysis here is predominantly descriptive and due the data limitations cannot explicitly test theories of the overlap. Further research using more in depth and additional data sources from both victimisation and offending sides could help to unravel the full influence of peers, known offenders and risky lifestyles on the victim-offender overlap in low level offenders.

From both this research and prior neither of these theories (Berg and Mulford, 2020) - known offenders and risky lifestyles - can provide a full explanation accounting for every aspect of the victim-offender overlap. The first is limited since it doesn't explain victimisation by unknown offenders. The second while it can explain the convergence of offenders and victims it is limited when understanding if there is a causal sequence between victimisation and offending. Currently the theories used to explain the victim-offender overlap do not provide adequate explanations for this complex phenomenon.

While some theoretical approaches could be useful to explore some aspects of the overlap – for example network analysis could be used to look at the links between offenders, victims, and victim-offenders. Assisting with understanding the extent that interpersonal relationships influence, and the directionality of relationships. Retaliatory violence between two parties could lead to back-and-forth victimisation between them or victims of one offender could be moving on to victimise others. Network analysis could also explore whether the networks vary between types of offending, potentially violence offences may be more likely to be committed against those the individuals know, while acquisitive may be more likely to be targeted by unknown.

Theories of the victim-offender overlap need to take a developmental perspective beginning in childhood and progressing though to adulthood. Arguably both state dependence and risk heterogeneity are involved in the mechanisms causing the victim-offender overlap (Lauritsen and Laub, 2007). Any theory needs to be able to account for both stability and change in both offending and victimisation (Lauritsen and Laub, 2007). Theories need to put

the person into the setting – victimisation and offending are undisputedly outcomes that relate to both the individual's vulnerability to victimisation and propensity to offend within certain settings and mediated by exposure to criminogenic or victimogenic environments. A theory based on Situational Action Theory (SAT) could assist in providing future clarity to theories about the victim-offender overlap. While this study may not be able to make expansive conclusions about the mechanisms underlying the Victim-offender overlap researchers need not just better theories - but ones that can be tested and proved. This would lead to research with a clearer focus, better methods and provide more insight into the mechanisms underlying the complex phenomenon of the victim-offender overlap.

Informing policy and practice for the victim-offender overlap

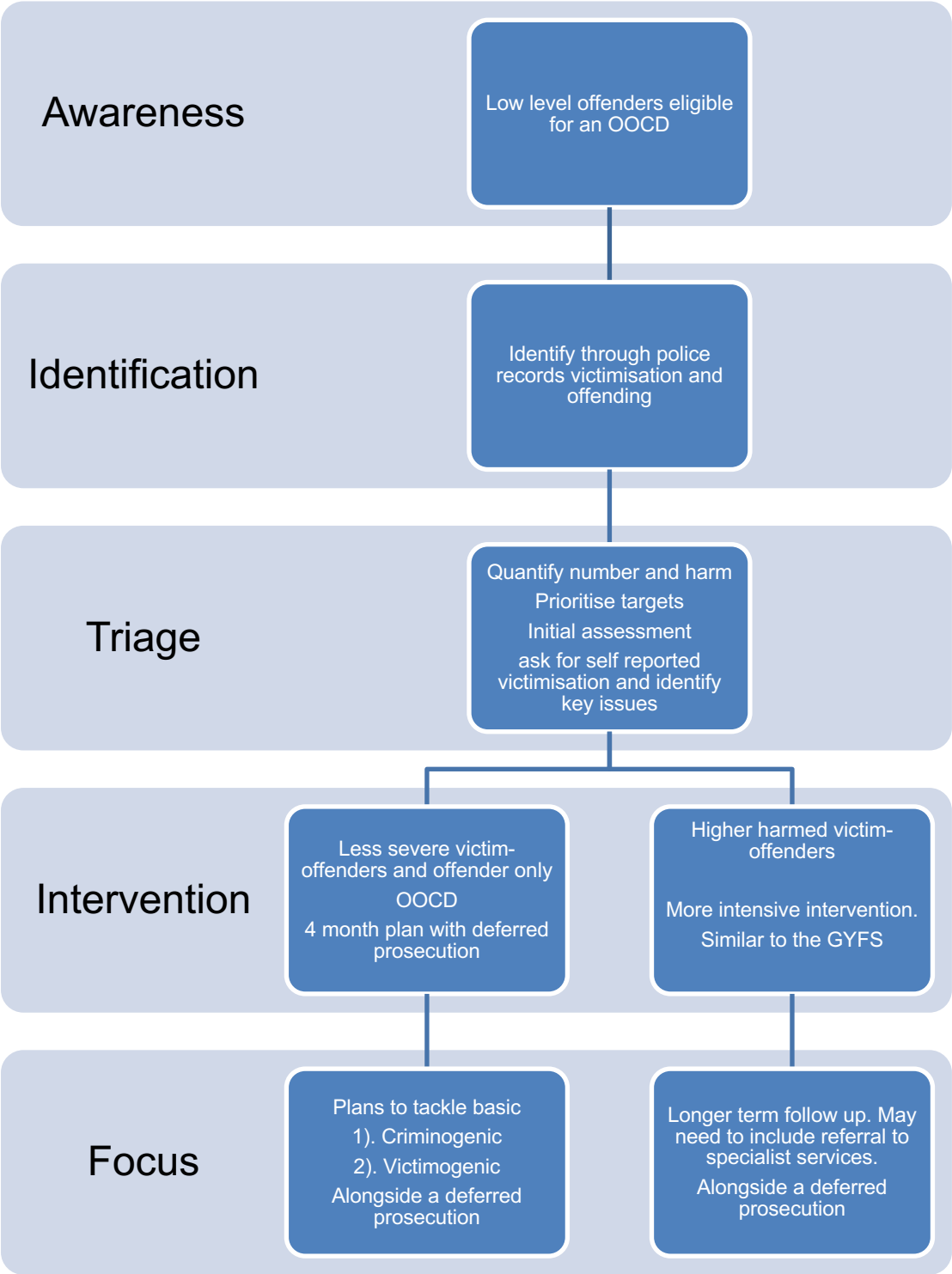
The critical question is and one that has probably been asked many times before, is the way the criminal justice runs currently the most effective solution to crime? Returning to the basic ideas of punishment; in an ideal world punishment would emphasise celerity and certainty. Currently punishment from the CJS is firstly unlikely and secondly slow in coming, with court cases in TPP lasting six month or longer in some instances. As well as increasing the certainty and celerity of punishment, how to modify criminal propensity is another possible avenue to explore – if individuals can be persuaded to stop viewing crime as an option, then theoretically, they will not be committing further offences (Wikstrom, Tseloni, and Karlis, 2011).

As well as considering how to increase efficacy and effectiveness the CJS needs to address the issue of victimisation. Many of the individuals encountering the CJS will also likely have a history of victimisation – that in some cases can be quite extensive. Currently the criminal justice system is rather black and white – with offenders proceeding through one "door" and victims through the other (Heber, 2014, Drake and Henley, 2014). Individuals tend to be labelled as either one or the other - while clearly the reality as demonstrated by the high rates of victimisation within this study and many others is markedly different. Offenders and victims are not discrete populations with one (offenders) preying on the other (victims). Individuals can exchange

roles rapidly, with both offending, and victimisation tending to concentrate together (Farrall and Maltby, 2003). Any future CJS policy or interventions needs to be written with this explicitly outlined and make policies that aim to address the overlap. Formal processing may not be the correct method to deal with these issues and given that for some offenders appears to increase offending (Petrosino et al, 2007). Perhaps more sympathetic approach aimed at alleviating the complex issues related to both offending and victimisation could be a more effective solution. One potential approach to dealing with low levels offenders when they entered the CJS gateway is the OOCD outlined in TPP and Checkpoint that combined an ODP approach with conditions aimed to tackle the criminogenic causes of their offending. However as previously noted some of the criminogenic causes of offending may also relate to their victimisation, with some adaption and a slight shift in focus it may be possible to expand the OOCD approach to also consider victimisation explicitly.

Figure 25 demonstrates one possible approach to low-level victim-offenders within the CJS. This approach would first focus on increasing awareness among practitioners and police officers of the co-occurrence of offending and victimisation. Police records would then be utilised as a starting point to begin identifying victim-offenders. This may need to be supplemented through additional questions to identify if unreported victimisation and offending is occurring, however it may provide an adequate first measure. Asking additional questions about victimisation may not be best conducted in custody but instead may be best positioned as part of the initial assessment. This assessment would identify the extent of both victimisation and offending, also well as criminogenic and victimogenic causes. This would form part of a triage process that would aim to focus resources to those most in need, most harmed and most harming.

Figure 25: A proposed method of approaching victim-offenders



For those less problematic victim-offenders they can be triage to a "*light touch*" approach as that used by TPP and Checkpoint and a basic OOCD with an expanded focus on victimisation could be the appropriate option. However, within this sample there were some who suffered higher levels of victimisation

– some who suffered very frequent, some very harmful and some both frequent and harmful. This may require a more resource intensive approach, and therefore as well as considering an effective basic OOCD a more comprehensive approach such as that used by the GYFS with young sex offenders (Mckillop et al, 2016) may be necessary. While the GYFS was used as part of the post court treatment (Mckillop et al, 2016) this may be an approach with heavily victimised low-level offenders that could be applied at the pre court stage.

Possible changes from the "*light touch*" model could include a longer duration of follow up i.e shift from four months to at least six months to one-year, increased contact with the offender manager or navigator, and referral to more substantive, expensive services. The question would be how long to hold the threat of proceeding to court over the offender – potentially this should be capped at four months, with the longer duration follow up focussed on continued support and assistance. However, it may increase the deterrence effect and attendance at meetings if the threat is held for the duration of the program. This would be something to test experimentally alongside the shift from offender focussed diversion.

Returning to the critical pathways identified by Checkpoint (Weir et al, 2021) some of these can be related to findings within this data set (table 20). Three areas; attitudes and behaviour, employment education and training, and finance have no data available in this study so cannot be considered further with regards to this data, however it may be an avenue to pursue in future.

Table 20: The nine critical pathways used in Checkpoint and their relationship to the victim-offender overlap in this study.

Critical pathway	*Identified in this data*	*Key findings*
Accommodation	Yes	Home address is associated with specific forms of victimisation.

		Accommodation should also be considered regarding the stability, several of the young people in this sample were noted as residing in care homes.
Alcohol	To an extent	
Relationships (children and families)	Yes	Low level offenders – need to explicitly consider domestic violence.
Attitudes and behaviour	No	No measurement available in this data
Drugs	To an extent	From the offending data 28% had been charged with a drug offence, suggesting there is potentially significant proportion within this sample with substance abuse issues. Data on how problematic these issues are is not available in this study therefore it cannot be determined how closely drug use is related to their victimisation or offending. Drugs are also noted in some of the victimisation events; however, it is small proportion, and it is not known if it was the victim, offender or both using drugs.

Employment, training, and education	No	No measurement available in this data
Finance (budgets and debts)	No	No measurement available in this data
Mental and physical health	Yes	Vulnerable adult and child abuse no crimes incidents noted issues such as schizophrenia, dementia, self-harm, suicide attempts, and issues with depression.
Exploitation (including CSE, and modern-day slavery)	Yes	Exploitation in the form of CSE was noted as potentially occurring for eight individuals in this sample. One potential case of "cuckooing" was also noted.

Certainly, six of the nine critical pathways can be related to data on victimisation and offending in this study, with four of the six showing clear relationships and the remaining two some. However, this author would propose adding a tenth pathway to the nine used by Checkpoint and add victimisation. The addition of victimisation as a tenth pathway would add victimisation visibly as a consideration when designing the OOCD. The current nine can be related to victimisation but by not explicitly stating victimisation, it may be overlooked in the current model used by Checkpoint. The alternative would be to produce a table as that on page 77 that relates the nine pathways to victimisation as well as offending, however as victimisation can be causally related to offending (Lauritsen and Laub, 2007) it may be better to state explicitly. Victimisation could be broken down into violent, sexual, acquisitive, and other to allow the better identification of specific issues and tailoring of programs.

While it could be argued that the police are not ideally situated to deal with victimisation of offenders in some ways – prior contact with the police could mean that they are viewed in a less than friendly light by some offenders (Bottoms and Costello, 2010). As in Checkpoint it may be more effective to use specially trained "*navigators*" rather than police officers or probation to conduct the assessments and manage the OOCD. Since using non police officers may theoretically encourage the disclosure of difficult and sensitive issues. The complex issues causing or contributing to victimisation may be out of the scope of their operating areas – such as specialised mental health, or addiction treatment. Perhaps the most successful strategy would be to identify offenders with a history of victimisation or who may be at risk of victimisation and then refer them to appropriate services for treatment. Contact with offenders may also be an opportunity to identify those who are at risk of exploitation – such as teenagers being used by older persons to run drugs for them, children at risk of sexual exploitation, or other vulnerable persons that are at risk to mistreatment.

Referring individuals to appropriate services is key – from this research there is no blanket type of "*victim-offender*" and that a one-size-fits all treatment would clearly be inappropriate. The OOCD approach utilise by TPP and checkpoint provides opportunities for tailoring the approach to the individual, and development of a more intensive version for problematic victim-offenders. There are clear differences in numbers of victimisations and offences, types of victimisations and offending and significant proportion of the sample - albeit from police records - who appear not to be involved in victimisation. Where the victimisations are occurring, and the related circumstances varies as well by type of victimisation is another consideration when looking at interventions. Only detail on the location and circumstances of victimisation was available for this study, so exploration of these factors for the offending side could provide additional information.

Potential Interventions and Approaches

As previously discussed in the earlier chapter intervention could be aimed at the community level, started early, or occur once victimisation has happened. The proposed mechanism for the overlap by the author is based on SAT. With

victimisation and offending positioned as outcomes that relate to the vulnerability to victimisation and propensity to offend within certain settings and mediated by exposure to criminogenic or victimogenic environments. Therefore, interventions need to consider either modification of the environment to make it less conducive to victimisation and offending e.g hotspot or problem orientated policing, or how to reduce offending propensity and victimisation vulnerability in the individual. Individuals could be developmentally focussed or focussed on the point where the individual contacts the CJS. Policy and police should consider all three when approaching victim-offender and potentially the best strategy may be a multilevel approach. The two former approaches were discussed environmental and early intervention while this section will focus on approaches that could be utilised once the individual has contacted the CJS.

Possible approaches in individual prevention for low level victim offenders could include strategies such as therapeutic foster care, mentoring, multisystemic therapy, social skills training, restorative justice, addiction treatment, mental health treatment, relationship violence education and restorative justice. Generally, however these programs have been evaluated on their basis to prevent offending, rather than prevention of victimisation, so further research is necessary to conclude effectiveness for victim-offenders. However, as the GYFS proposes many of the causes of offending and victimisation are linked therefore it may be worth considering for use in victim-offenders (Mckillop et al, 2016).

The first therapeutic foster care (TFC) involves a multidimensional treatment designed for young people who cannot live at home, usually due to behavioural issues which may include chronic delinquency (Macdonald and Turner, 2007). Foster parents are trained to support the young person and provide an environment that promotes the learning of prosocial and emotional skills (Osei, Gorey and Hernandes Jozefowicz, 2016). Macdonald and Turner (2007) also noted for girls in particular foster care needs to address emotional and psychiatric conditions that commonly co-occur alongside delinquency. This is a finding like that in this study – low level offender females appear to present with more problematic victimisation than the males.

Critically the effectiveness of TFC means that the young people need close supervision in the home and school, alongside prohibiting contact with delinquent peers (Macdonald and Turner, 2007). Again, this can relate to some of the causes of victimisation in this study, since known offenders caused a significant amount of victimisation. This approach however would be limited to the younger members of the sample (up to the age of 18), and alternative approaches would be necessary for the adults. However, the research is for those 12-18 years this can be a successful approach with one level three study showing a median impact on juveniles with a history of chronic delinquency was a reduction of 71.9% in violent crime (Hahn, Bulukha, Lowy, Crosby, Fullilove, Liberman, Moscicki, Snyder, Tuma, Corso and Schofield, 2005). Overall reviews report a significant cost benefit, with one review estimating net benefits for participants ranging from $20,351 to $81,664.

The second mentoring comprises of building a consistent relationship overtime between two individuals and a sharing of experience or knowledge between the mentor and mentee (Tolan, Henry, Schoeny, Bass, Lovegrove, and Nichols, 2013). The mentee should be able to imitate and benefit from learning from the mentor (Tolen et al, 2013). This could be between a youth and adult or between peers. The mentor may also provide direct assistance (i.e helping with filling in job applications) while acting as positive role model (Jolliffe and Farrington, 2008). Time spent with the mentor may help disrupt established delinquent networks and present opportunities for education, training, and employment (Tolan et al, 2013). Critically programs with longer duration of contact between mentor and mentee were associated with greater reductions in offending (Edwards, Jarrett, Perkins, Beecher, Stienbach and Roberts, 2015). As with the TFC many of the aspects targeted by mentoring could relate to victimisation risk, and it is possible although unproven that successful mentoring could reduce victimisation alongside offending. The review of the evidence on mentoring concludes that mentoring generally reduces crimes however there is some evidence that it has increased crime (Tolan et al, 2013; Edwards et al,

2015). Despite this mentoring could be a valuable diversion tool if used carefully as part of a long-term intervention strategy.

Multisystemic therapy (MST) is an intensive home-based intervention for families with young people who have social, emotional, or behavioural problems (Littell, Campbell, Green and Toews, 2005). Engagement with qualified therapists aim to identify and change individual, family, and environmental factors, that may be contributing to the problem behaviour (Littell, Campbell, Green and Toews, 2005). Evidence for the effectiveness of MST is limited with the one systematic review in the topic concluding MST had no statistically significant effect on crime, however compared to usual services offered for juvenile offenders' outcomes favoured the MST (Littell, Campbell, Green and Toews, 2005). MST is therefore an approach that may be beneficial but requires further research to confirm effectiveness (Littell, Campbell, Green and Toews, 2005). Applied to victim-offenders it could be beneficial for families with complex issues, both for the younger people in the family and for the parents or guardians who may also be involved in offending and victimisation. Crime can be intergenerational therefore a family-based approach could target both the children and parents/guardians, within the TPP study there were a father/son pairing who committed a violent offence and a mother/son who committed separate offences. While the original test for MST was based on outcomes for the young people possibly including measures for the whole family may increase effects.

Social skills training for children is defined as a structured program with a limited number of sessions focussed on teaching nonaggressive modes of social perception, self-control, anger management, victim empathy, interpersonal problem solving, interpersonal interaction and related skills (Losel and Beelmann, 2003). Antisocial behaviour (ASB) rather than offending is generally the outcome measured, with the one systematic review finding social skills training decreased ASB (Losel and Beelmann, 2003). Programs that targeted high risk young people rather than those less targeted showed greatest effect (Losel and Beelmann, 2003). Applied to the victim-offender overlap low self-control can increase victimisation (Schreck, 1999) and lack of social skills may

result in some being targets for victimisation due their inability to navigate social situations (Van Gelder et al, 2014).

Drug or alcohol use may relate to the victimisation of offenders in two ways, first it may develop as a coping mechanism in response to victimisation (Turonovic and Pratt, 2013), or predispose to harm since drug use can be part of a risky lifestyle (Lauritsen and Laub, 1990). Key components of successful addiction treatment for offenders are; programs that focus on high risk offenders, those that provide strong inducement to receive treatment, include several different types of interventions simultaneously, provide intensive treatment and include an aftercare component (Bahr, Masters and Taylor, 2012). A range of different methods of addiction treatments have been tried in CJ including pharmacological, cognitive behaviour therapy (CBT), therapeutic communities, and drug courts (Bahr, Masters and Taylor, 2012). All these methods show some success with possible the most appropriate tactic being CBT for low level offenders since CBT could be conducted as a part of an OOCD.

As with addiction treatment mental health may require a range of different approaches – there are many different psychological disorders that may be present among offenders (e.g conduct disorder, depression, anxiety, post-traumatic stress disorder (PTSD), personality disorder or self-harm). There may also be comorbid disorders, e.g depression and anxiety. Therefore, a range of different approaches are necessary, and need to be tailored to the specific diagnosis. Pharmacological interventions may form one aspect through use of drugs such as SSRIs (selective serotonin uptake inhibitors) as well counselling, CBT, or other psychiatric assistance (Fazel, Hayes, Bartelles, Clerici and Trestman, 2016). Referral to comprehensive services or even in patient treatment for particularly problematic cases may be necessary. Mental health treatment may be critical for preventing future victimisation and offending since as identified by Silver et al (2008) those with mental health issues are at increased risk of violent victimisation.

Given the high rate of domestic violence in low level offenders tackling domestic violence is of critical concern. Educational interventions in adolescents and

young adults to promote awareness of acceptable dating behaviour and rights within a relationship may be one strategy. Methods include the use of videos, discussion, challenging myths, raising awareness and role playing (Fellmeth, Heffernan, Nurse, Habibula and Sethi, 2013). These can be used for the general population, potential offenders, and potential victims. The results of these studies are based on self-reported measures of either dating violence perpetration or measures of physical, sexual, or psychological victimisation and violence (De La Rue, Polanin, Espelage, Pigott, 2014). The evidence base relationship violence interventions is currently quite weak and statistically the findings are not significant yet it is an approach that may be worth further exploration (De Koker Petra, Mathews, Zuch, Sheri, Mason-Jones, 2014).

Restorative justice (RJ) the final type of intervention proposed for approaching victim-offenders could be two pronged and used both when low-level offenders offend as part of their plans and secondly as when they become victims of crime. RJ is proven to have effects on both offending with reductions in recidivism both for prevalence and frequency in systematic reviews (e.g Sherman, Strang, Barnes, Wood, Bennett, Inkpen, Newbury-Birch, Rossner, Angel, Mearns, and Slothower, 2015), and is known to be a cost-effective intervention with the overall cost benefit ratio calculated to be £8 for everyone £1 spent on RJ (Sherman et al, 2015). For victims RJ reduces the fear that the offender would revictimize them, reduced desire for violent revenge, and enhanced victim satisfaction. Angel, Sherman, Strang, Ariel, Bennett, Inkpen, Keane and Richmond (2014) produced strong evidence that RJ reduces post-traumatic stress symptoms (PTSS), with 49% fewer victims suffering clinical levels of PTSS. RJ is an intervention with a strong evidence base advocating for clear positive effects both when applied to offending and for victimisation.

Table 21: Summary table of potential interventions

Intervention	*Relation to victim-offending overlap*	*Targeted to*
Therapeutic foster care	Interruption of delinquent networks Emotional support	Under 18s

	Coping skills Increased supervision Provision of a stable home	
Mentoring	Interruption of delinquent networks Education Emotional support	Could be utilised for any age, however most research is for juvenile offenders.
Multisystemic therapy	Interruption of delinquent networks Education Emotional support Coping skills	Families
Social skills training	Coping skills inc: Improve self-control Anger management Communication	Under 18s
Addiction treatment	Reduce drug or alcohol use	Any age
Mental health treatment	Alleviate mental health issues	Any age
Relationship violence education	Prevention of domestic violence Improve relationships	Adolescents and young adults (11-26)
Restorative justice	PTSS/mental health issues Negative emotional consequences of victimisation Fear of crime Prevention of offending	Any age

Table 21 provides a summary of some potential interventions, the above is not an exhaustion list of potential avenues to explore with victim-offenders but does

provide a starting point for future investigation. Of the above interventions the focus has primarily been towards measuring effects on offending or antisocial behaviour, and therefore investigation of if as reported by Mckillop et al (2016) for the GYFS reductions in offending cooccur with victimisation reduction would need to be investigated. Additionally, the evidence based for some of the suggested interventions is currently limited with the evidence for MST, social skills training and relationship violence education promising but not conclusive. Further rigorous and methodologically sound RCT in these areas may be necessary to prove effectiveness. Many of the interventions suggested above are focussed on young or juvenile offenders, so increasing knowledge to those that would work for young and older adult victim-offenders could be valuable.

Approaches may need to differ between males and females. For example, with males appearing to be at higher risk of violent victimisation in public places and females within the home environment, there would be different reasons why these individuals are becoming subject to victimisation. Questions would need to be asked about potentially violent partners or family within the home for one and then examination of the circumstances leading up to the events associated during public violence for the other. Although it is important to consider that the converse may be true, and the aim should be to try to provide a holistic view of all types of victimisations occurring to individual – and all forms of offending they are involved in.

Conclusion

Secondly the CJS system may need revision both to increase effectiveness and to move from approach that separates individuals into either victims or offenders to a more nuanced one. Data on victimisation and offending could be used as a triage tool to identify the most harmed and harming individuals. Although this study cannot provide any conclusive answers for the mechanisms underlying the overlap. The data does suggest that the victim-offender overlap does relate to both who the individuals know and associate with. The location also appears relate to risk of certain victimisations occurring for different genders. Theories of the overlap need to integrate personal and environmental levels of explanation. While there are limitations with the data used in this study

that does not extensively undermine the most critical finding from this study – that the overlap is extensively present among low level offenders. Future research should look to add a self-report measure in addition to police records and should utilise larger and more varied samples. Construction of a more analytical - and therefore testable - theory would also be beneficial to improve study design and to better investigate the overlap, perhaps eventually unravelling the complete mechanism underlying this complex phenomenon.

For researchers the extensiveness of the overlap found in this study suggests that due to the any research into either offending or victimisation, should include a measure of the other (Lauritsen and Laub, 2007). The addition of the other may reveal features that were not previously considered. In reforming the gateway to the CJS there is a need to think outside the box and potentially utilise more out of court disposals for minor offences and victim-offenders, freeing up the courts to process serious cases more efficiently (Neyroud and Slothower, 2013). Alongside a shift to utilising more OOCD there needs to be consideration of a more comprehensive and targeted approach for more higher priority low-level victim-offenders. Further testing of effective interventions to ensure decisions about appropriate disposals are being made with an adequate evidence base is critical, as the current evidence base is limited in rigorous evidence suggesting effective strategies.

Chapter 9

The effect of an out of court disposal on victimisation

Introduction

This chapter will present and discuss the results of a survival analysis comparing the effects on victimisation of treatment through the OOCD versus that of normal court processing. The first section will present the results of an analysis of key variables prior to and post randomisation. Any significant differences between treatment and control groups, and the key subgroups (males' treatment, females' treatment, males' control, and females' control). The next section will demonstrate the results of survival analysis to compare treatment and control across different groups. This analysis will be run on the primary cases only, this is because offending records were only collected for the primary cases alone and the decision was made to restrict this analysis to these cases only to match those analysed in the offending results for this experiment. Victimisation will include both non-criminal and criminal victimisation. This decision is based on the earlier findings from this research that the non-criminal victimisations tend to be associated with criminal type victimisations, and that those with non-criminal victimisations tend to have more severe and higher number of victimisations, and that the highest total harm may be found among those with non-criminal victimisations.

As well as considering a survival analysis and the prevalence of victimisation, this analysis will also consider two further aspects of victimisation. Firstly, how frequent victimisation is, and secondly how harmful the victimisation is. Harm will be measured for this utilising the crime harm index as with the earlier analysis. By analysing four aspects of victimisation this research will attempt to thoroughly examine the effects of OOCD upon victimisation.

The key questions this section will attempt to answer are:

1). What differences are evident for subsequent police reported victimisation when low-level offenders are assigned to an out of court disposal compared to treatment as usual (court processing)?

2). What effect do OOCDs have on reported victimisation frequency?

3). What effect do OOCDs have on reported victimisation harm?

These results will be used to discuss critical policy implications and potential avenues for further research focussing on the victim-offender overlap, within the intervention sphere.

Overview of the sample prior to randomisation

Prior to randomisation 47.3% (n=190) reported any form of victimisation and reported criminal victimisation, to the police at prior to randomisation date. Overall chi square testing showed no significant differences in the prevalence of victimisation or offending pre randomisation. The number of under 25s was also compared and found to be equivalent between the two groups.

Table 22: comparing treatment and control groups pre randomisation

Group	*Total*	*Number under 25 (up to date of last data collection)*	*Victimised pre randomisation (any type including non-crimes)*	*Offending pre randomisation*
		N.S difference	*N.S difference*	N.S difference
Treatment	202	n = 84 41.58%	n = 109 53.96%	n = 131 64.85%
Control	200	n = 100 50%	n = 81 40.5%	n = 123 61.5%

When the sample is separated further by gender, there are no significant differences for the number of under 25s or for the number involved in offending pre randomisation. However, there are significant differences for the

prevalence of victimisation pre randomisation (X-squared = 16.79, df = 3, p-value <0.001). Females in the treatment group show a higher prevalence of victimisation (76.59%) pre randomisation comparative to the other three groups which range from 47.09% to 54.17%. Why the females in the treatment present with disproportionate higher victimisation pre randomisation is unknown, and the effect of this will be explored and discussed further in this chapter, the question of whether the females in the treatment group exposure to particularly harmful forms of victimisation prior to randomisation had will be discussed in more detail in the latter part of this chapter.

Table 23: Age, victimisation and re-offending variables for the sample separated by gender and assignment

Group	*Total*	*Number under 25 (up to date of last data collection)* N.S difference	*Victimised pre randomisation (any type including non-crimes)* X-squared = 16.79, df = 3, p-value = 0.0007823	*Offending pre randomisation* N.S difference
Males treatment	155	n = 68 43.87%	n = 73 47.09%	n = 102 65.81%
Females treatment	47	n = 16 34%	n = 36 76.59%	n = 29 61.7%
Males control	152	n = 79 51.97%	n = 65 42.28%	n = 92 60.52
Females control	48	n = 21 43.75%	n = 26 54.17%	n = 31 64.58

Overview of the sample post randomisation

Post randomisation a total of 32.8% (n=132) of the sample reported any type of victimisation and 25.4% (n=102) reported a criminal victimisation. Almost half of the sample (45.77%, n=184) were charged in the follow up period post intervention. While there is a significant difference in prevalence between the treatment and control groups for the percentage reporting criminal

victimisations (X-squared = 9.22, df = 1, p-value = 0.0024), with a greater percentage of the treatment group reporting, the other two variables considered – any type of victimisation post and re-offending within two years post randomisation found no significant differences.

Table 24: comparing treatment and control groups post randomisation

Group	*Total*	*% victimisation post randomisation (any type of victimisation)* N.S difference	*% victimised post randomisation (criminal victimisation only) X-squared = 9.22, df = 1, p-value = 0.0024*	*% re- offending within 2 years post randomisation* N.S difference
Treatment	202	n = 74 38.61%	n = 65 32.18%	n = 91 45.05%
Control	200	n = 58 29%	n = 37 18.5%	n = 93 46.5%

When the sample is separated into four groups based on gender and assignment (table 25), there are no significant differences for re-offending rates, however both criminal (X -squared = 27.25, df = 3, p-value = 5.207e-06) and non-criminal victimisations (X-squared = 23.343, df = 3, p-value = 3.426e-05) are significantly different in their distribution. With females in the treatment group showing the highest prevalence of both post randomisation.

Table 25: Victimisation and offending post randomisation for the sample separated by gender and assignment

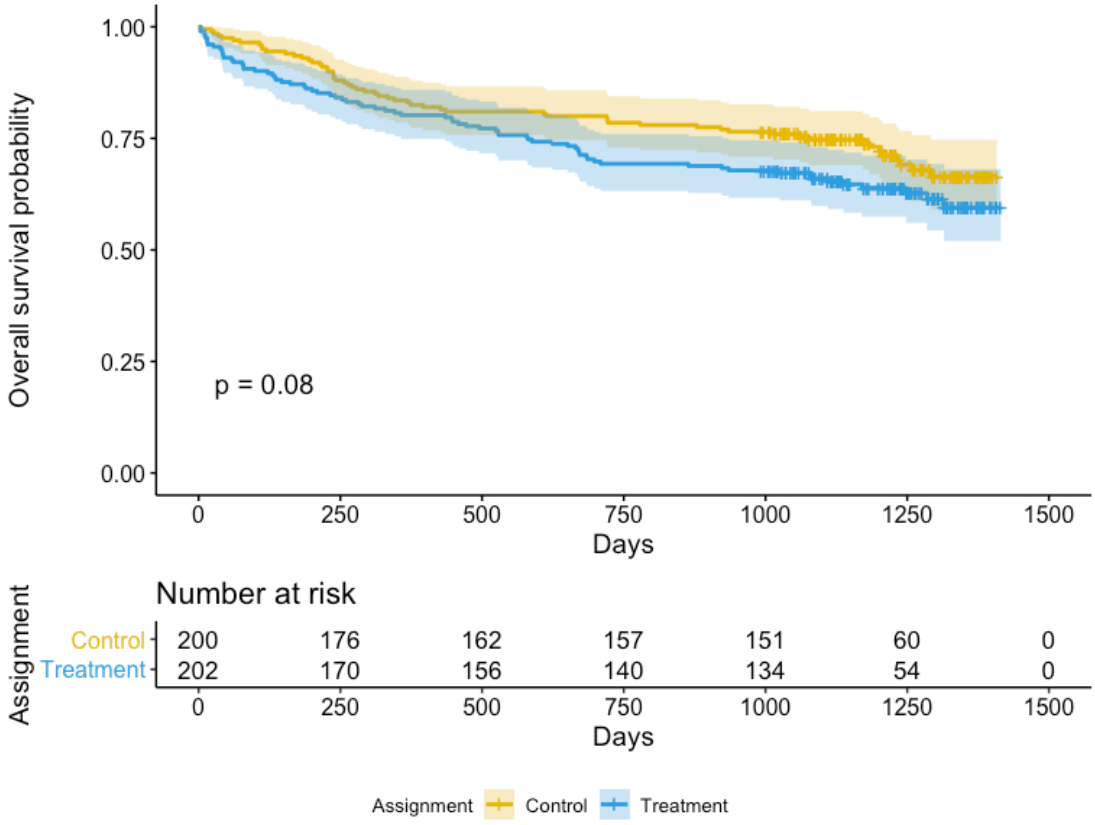
Group	*Total*	*% victimisation post randomisation (any type of victimisation) X-squared = 23.34, df = 3, p-value = 3.426e-05*	*% victimised post randomisation (criminal victimisation only) X -squared = 27.254, df = 3, p-value = 5.207e-06*	*% re- offending within 2 years post randomisation (Offending here defined as an offence charged)* N.S difference
Males treatment	155	n = 44 28.4%	n = 39 25.2%	n = 76 49.03%
Females treatment	47	n = 30 63.8%	n = 26 55.3%	n = 15 31.91%
Males control	152	n = 43 28.3%	n = 28 18.4%	n = 72 47.37%
Females control	48	n = 15 31.3%	n = 9 18.8%	n= 21 43.75%

The results on prevalence show that post randomisation the treatment group had a higher prevalence of criminal victimisations (32.18% in the treatment with only 18.5% in the control) however the non-criminal events showed no significant difference between the treatment and control groups. Over half 55.3% of the treatment group females reporting criminal victimisation post randomisation, while the other groups are comparative. The initial results on prevalence indicate that comparative to the potential hypothesis that treatment with an OOCD would reduce victimisation in fact there appears to be an increase in the treatment group compared to the control group. It is however notable that the treatment group females had significantly higher victimisation prior to random assignment, and it is possible that this could be influencing the results to some degree. The impact of this will be explored further throughout this chapter.

Survival analysis

Survival analysis were conducted on the 402 primary cases from the TPP sample, with survival functions for any type of victimisation including non-crimes or marker events estimated separately for treatment and control groups. There was no significant difference between the two groups X^2 (1, n = 402)=3, p = .08 (figure 26). The results indicate that overall, the treatment and control groups were victimised at broadly similar rates post intervention. This is like the results obtained for offending which found no significant difference between treatment and control groups for two years of post-intervention data.

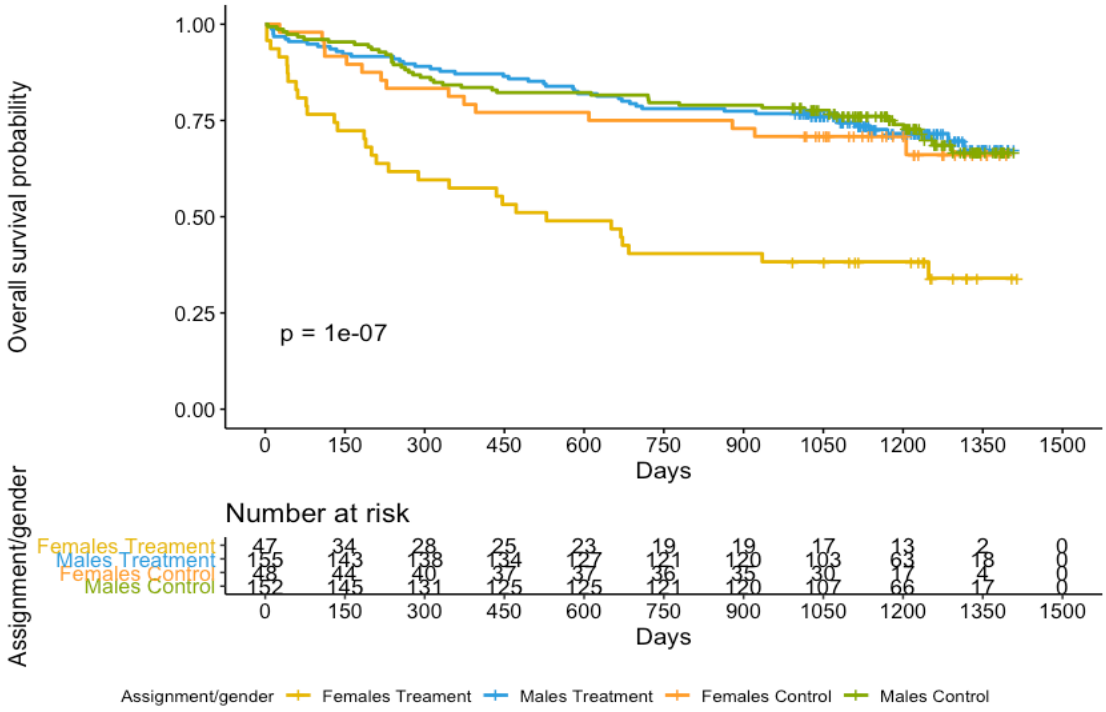
Figure 26: Kaplan-Meier survival functions for reported victimisation comparing treatment and control groups post intervention



However, while the overall treatment and control groups appear broadly similar in their police reported victimisation, when the sample is separated by gender with the treatment and control groups (figure 27) the females within the treatment group report victimisation at a faster rate than the three other groups (male controls, male treatments, and female treatments). This difference is

significant X^2 (3, n = 402) = 34.5, p <.01 with the results indicating that the female treatment group is significantly worse off from a victimisation perspective post intervention than any other group. This contrasts to the two-year results on offending post intervention which found no significant differential between treatment and control group for gender. Theoretically given the strong link between victimisation and offending it would be expected that the two would be more comparative.

Figure 27: Kaplan-Meier survival functions for reported victimisation post intervention separated by both treatment and gender

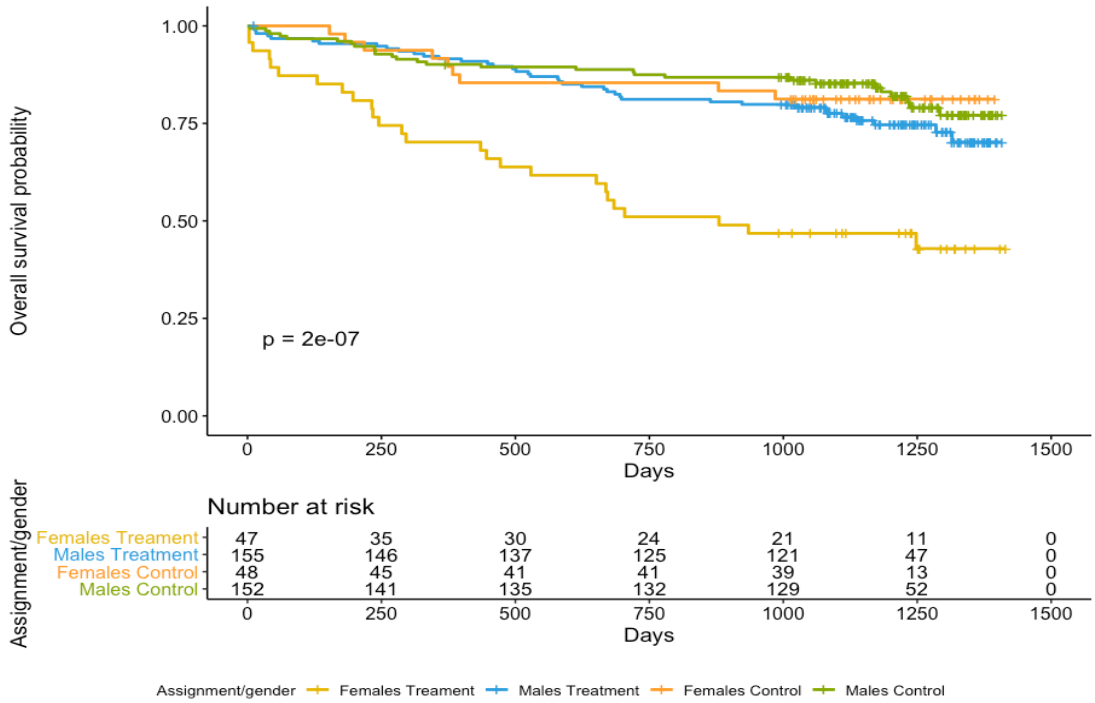


There may be several possible explanations for the significant difference between females in the treatment and control groups. Firstly, there may be increased reporting of non-crime events due to increased contact with the police during the intervention period. Secondly the OOCD may make female offenders more likely to disclose victimisation to the police – use of the OOCD rather than sending them to court processing may increase their willingness to collaborate with and disclose victimisation to the police, however this effect appears not to apply to the males. Finally, there could in fact be a backfire effect on victimisation among low-level female offenders when an OOCD is given – if

this is the cause of the effect then OOCDs such as TPP may have to be used with care among female low-level offenders to prevent increasing the harm to this population and may need to be adapted to produce equivalent results to that for male low-level offenders.

To test the hypothesis that increased contact with the police was leading to an increased number of non-crime reports, the victimisation events were restricted to criminal victimisations only. These were primarily recorded as the result of direct calls for service from the individuals themselves rather than potentially being made by the police. Figure 28 shows the results of the Kaplan-Meier survival functions for criminal victimisations only, demonstrating the same pattern as found earlier. The treatment females are reporting criminal victimisation at a faster rate than the three other groups, who all report at broadly similar rates in comparison. This difference is again significant X^2 (3, n = 402)= 34.1 , p <.01, suggesting that the hypothesis that increased police contact for the females in the treatment group is not the cause of the significant difference in victimisation.

Figure 28 : Kaplan-Meier survival functions for reported victimisation post intervention separated by both treatment and gender for criminal victimisations only

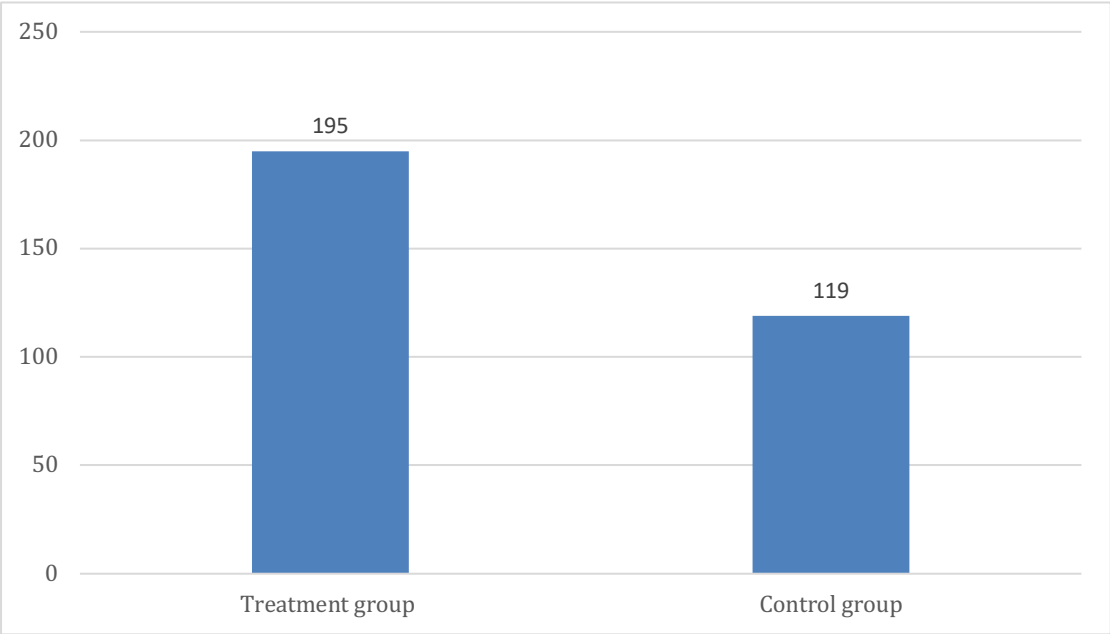


The results of the Kaplan-Meier survival analysis here do not support the hypothesis that through OOCD victimisation outcomes can be improved. For males the OOCD produces equivalent effects to the court processing, suggesting that as with offending overall the effects of the OOCD are "*as good as*" court processing on reported victimisation. The results here indicate for males the use of OOCD don't demonstrate any significant improved outcomes for victimisation yet with no apparent backfire effects. The effect of the OOCD on victimisation appears to be dependent on gender and for females there was significant effect with the OOCD increasing victimisation reporting. Whether these differences also effect other measures of victimisation post randomisation such as frequency and harm will be explored later in this chapter.

Frequency of victimisation post randomisation

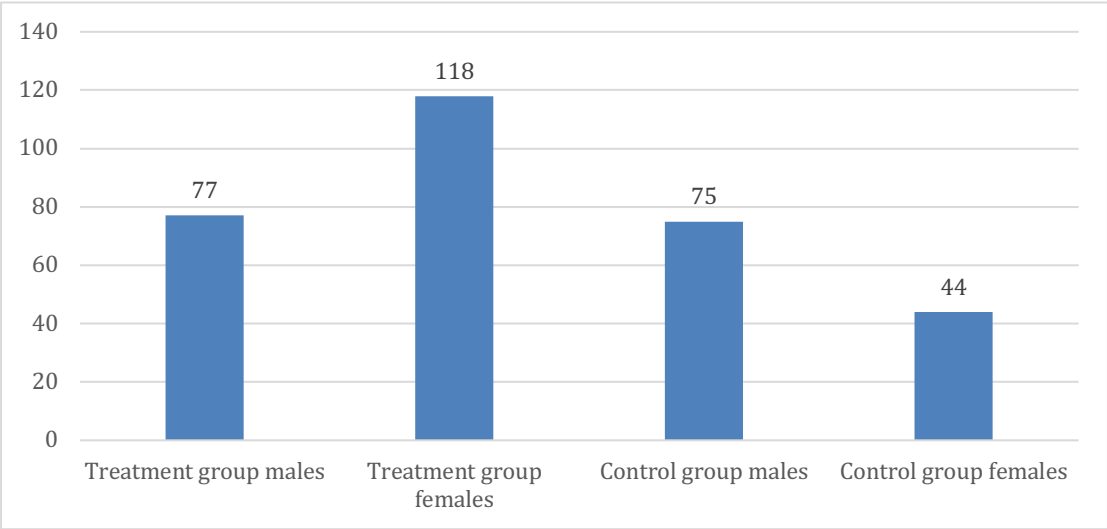
As well as a measure and analysis that focuses on the prevalence of victimisation this next section of results will report on the frequency of victimisation post the TPP disposal. Examining the total number of victimisations reported in the three years post randomisation for both groups finds (figure 29) that the control group reported 119 incidences while the treatment reported a total of 195. The difference in number of reported victimisations is significantly different (W = 72387, p-value = 0.00335), and the effect size is 0.099. This would be considered a very small effect size, so there is a small but significant increase in the number of victimisations occurring in the treatment group post randomisation comparative to the control.

Figure 29: Total count of victimisation reported for the three years post randomisation



There are a few possible hypotheses for this result, firstly that treatment with an OOCD cause a small increase in victimisation, secondly that the OOCD causes increased legitimacy and trust in the police and thereby increases victimisation reporting, and thirdly that there was statistically significant difference in victimisation prior to randomisation that have increased the risk of the treatment group reporting latter victimisation. From the earlier survival analysis, it was clear that there were a small but significant proportion of females in the treatment that were mainly responsible for the survival effect seen. Therefore, the data will be separated by gender and retested to see if there is a gender effect.

Figure 30: Total count of victimisation reported for the three years post randomisation



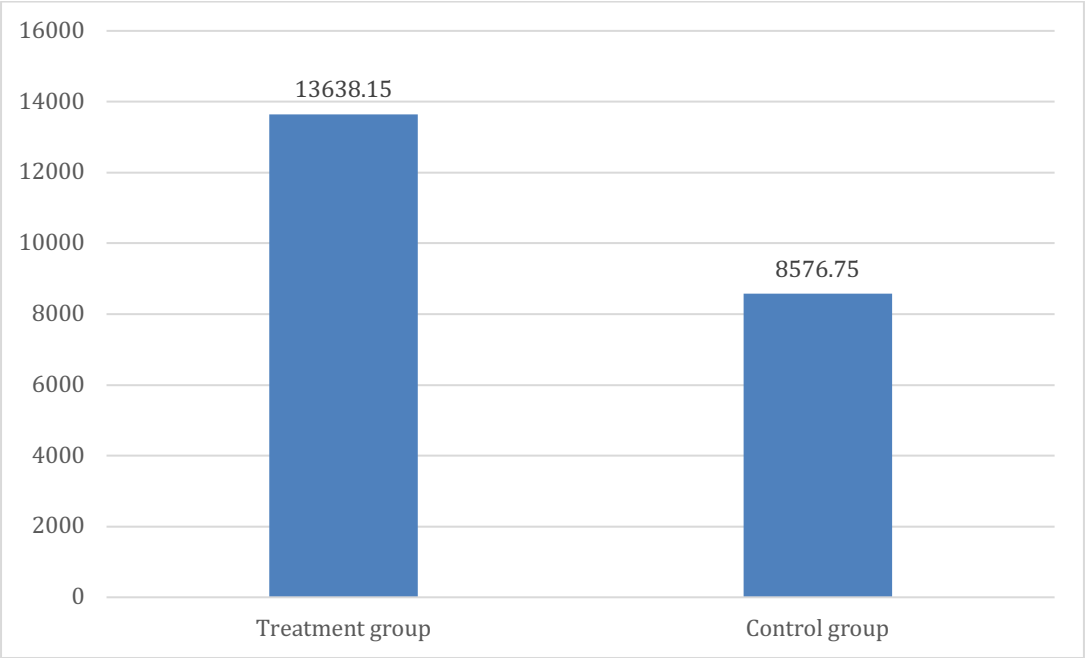
Firstly, from the graph below despite only comprising 12% (n=47) of the sample the treatment group females reported 37.6% of the total victimisation post. Comparing the treatment group females to the control females gives a statistically significant difference (w= 1923, $p<0.05$) with a small effect size of 0.254. Comparatively the two male groups show no significant differences (w=23212.5, p=0.398) and a negligible effect size of 0.048. As with prevalence earlier the clear conclusion is for males OOCD has no effect on victimisation reporting when compared to court processing as usual and does not show any significant backfire effects. Therefore, we can consider OOCD effects on male victimisation frequency "*as good as*" court processing.

Harm of victimisation post randomisation

The final measure of success of an intervention as proposed by Sherman is that of the harm caused, therefore not only the prevalence, survival, and frequency of victimisation but also how bad the victimisation is can be quantified. Overall, 22,214.9 CCHI points were reported post randomisation – equivalent to the harm from approximately 4.1 homicides. The treatment group reported victimisation totalling a harm of 13,638 CCHI points post randomisation – approximately equivalent to the harm from 2.5 homicides. While the control group reported 8,576 CCHI points – equivalent to 1.6 homicides. The two show a statistically significantly different distribution (W=38022.5, $p<0.05$) with an effect size of 0.115. Therefore, it can be

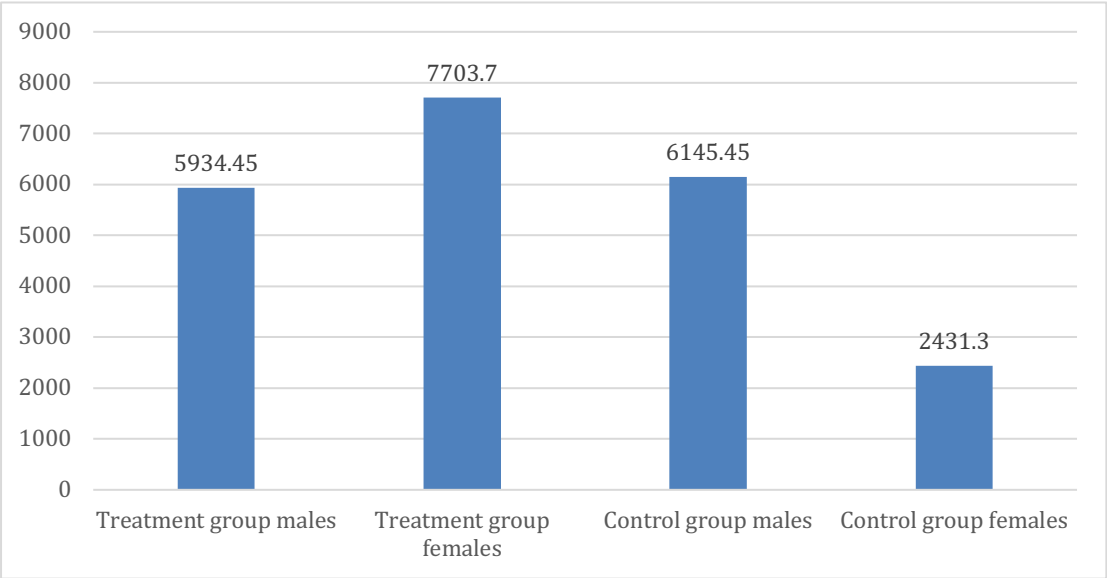
considered that there is a small but significant increase in victimisation harm in the treatment group. As with frequency and prevalence of victimisation there are a few possible hypotheses for this difference; treatment effect, increased reporting, or police contact, and finally that there were significant prior differences.

Figure 31: Total harm from victimisation for the two-year post randomisation



Again, the treatment group females account for 7703.7 or 34.7% of the total harm despite only accounting for 12% of the total sample. So, within the treatment group females not only is victimisation more prevalent post randomisation but also more frequent and more harmful. The control females were significantly different to the treatment ones – W = 1877.5, p <0.001, effect size = 0.326. Again, as with frequency and in the survival analysis earlier the males did not show any significant differences between the treatment and control groups (w = 23031.5, p=0.281) with the effect size given as 0.062.

Figure 32: Total harm from victimisation for the two-year post randomisation



Consistent with prevalence and frequency the clear conclusion is for males OOCD has no effect on victimisation harm when compared to court processing and does not show any significant backfire effects. Therefore, we can consider OOCD effects on males' victimisation harm "*as good as*" court processing.

The mysterious case of the treatment group females

Consistently throughout this analysis one group has not followed the pattern shown by the other groups. That the treatment group females show such significant differences to the OOCD compared to both male groups and the female control group is surprising. In the main results from TPP there were no significant differences in offending between treatment and control groups and no notable differences across gender. However here it is clear that victimisation show a significant effect post administration of the OOCD.

Not only are their survival outcomes significantly less favourable than that of the four other groups but they report a higher prevalence, frequency, and harm of victimisation post. It appears there is a significant gender effect present here and that potentially OOCD could be harmful when used for female low-level offenders. While a backfire effect could be seen as "*bad news*" it is possible that the OOCD is increasing the willingness to report victimisation to the police among females. Potentially the offer of an OOCD rather than court processing

may lead to the females viewing the police as more sympathetic. If possibly there were measures of self-reported victimisation the groups would be more equivalent, and it may be the OOCD does not increase the risk of victimisation but rather the likelihood of reporting.

The data here cannot look inside the "*black box*" and reveal if there is a precise mechanism that means OOCD are increasing victimisation reporting among females, and in fact this may be the wrong conclusion to draw from this data. There are at least three possible hypothesis that can be posited to explain this significant difference. First that there may be increased reporting of non-crime events due to increased contact with the police during the intervention period (*increased contact*), second use of the OOCD may make females more willing to disclose victimisation to the police (*increased legitimacy*), and that the OOCD may be having a backfire effect on victimisation (*backfire effect*).

Earlier the "*increased contact*" hypothesis was considered by examining survival for criminal victimisation only – i.e that which would be reported directly to the police. With the findings indicating that the treatment females were still worse off in terms of survival than the other three groups. Suggesting that the increased contact hypothesis would be unlikely. The CRIMES reports generally specified whether the report came about through a call for service or other reporting method and while this was not measured in full anecdotally no reports were identified as being made as the direct result of an offender's contact with an offender manager through TPP. One other hypothesis "*increased legitimacy*" cannot be tested through this data so remains a theoretical possibility, while whether a potential "*backfire effect*" is accountable for differences will be explored further.

There is a fourth hypothesis to posit. There are only a small number of female offenders taking part on both the intervention and the control (n = 95). The standard ideal sample size to identify small effects in criminology studies is suggested by (Weisburd and Britt, 2014) to be at least 525 overall. Which it is clear here the female subgroup in TPP is far from. This causes issues with the

reliability of the above results due to the small size of the groups and the conclusions about the effect of OOCD that can be drawn from this data.

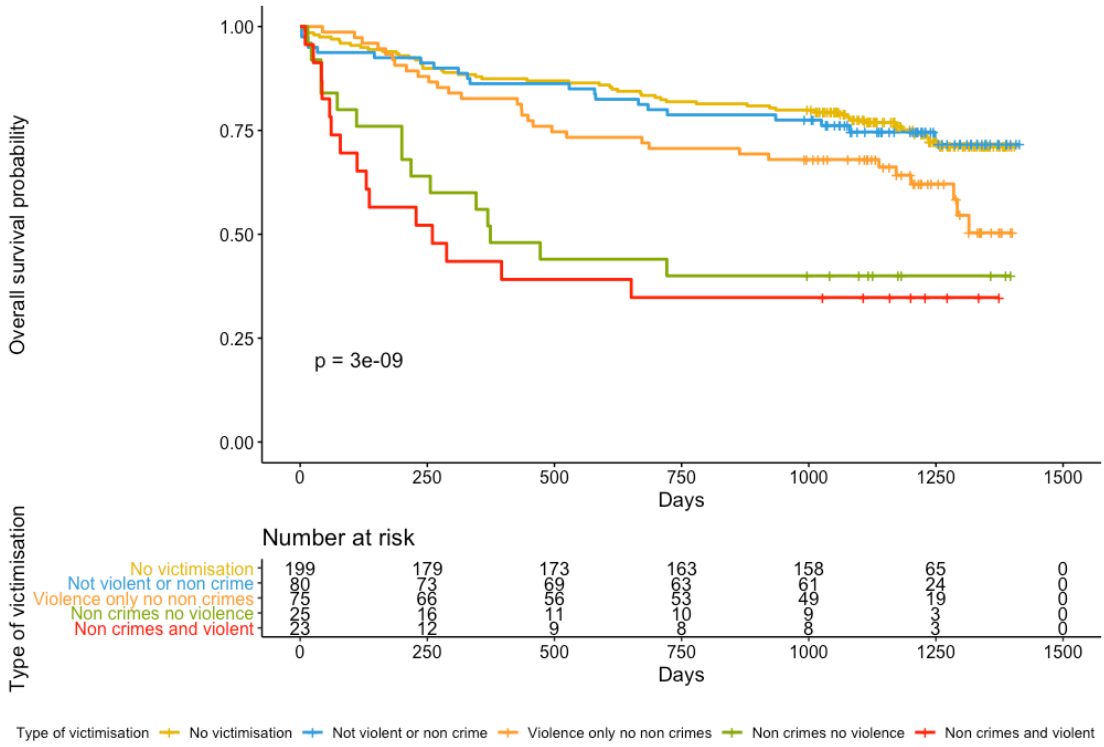
Due to the small number, it is possible that despite the randomisation process – which aims through random assignment to produce comparative groups where the only difference should in theory be the treatment received – significant differences existed prior to randomisation, and this could affect the overall results. For example, the female treatment may have experienced higher levels of victimisation prior to randomisation. From earlier research prior victimisation increases the likelihood of latter victimisation (Farrell and Pease, 1998). The earlier results examining (table 25, p210) the prevalence of prior victimisation in the TPP samples showed that victimisation among the female treatments was significantly higher than that of the others in the sample. Therefore, these results may relate primarily to the significant differences in the treatment females prior to TPP rather than any effect of the OOCD.

The other consideration is that specific forms of victimisations prior to TPP may increase the risk of latter victimisation reporting. Not all victimisations are created equal, and some may be more harmful, predictive of worse outcomes and more likely to re-occur than other types of victimisations. The female treatment group may have experienced significantly higher levels of these types of victimisations prior. The sample was split, and victimisation was classified into five groups – no victimisation, non-violent and non-criminal, violence only, non-crimes only, and both non crimes and violence.

The sample was subdivided into these groups due to the earlier research which identified the high prevalence of violence among the sample, and due to the critically important non crimes – which were identified as being highly associated with increased vulnerability to victimisation. While prior research has shown that sexual victimisation can be a very significant event here the number of sexual victimisations was so small that a significant sized group would not be found. Hence the grouping was limited to the five above.

As figure 33 shows the group with the worst survival was that of those suffering both non-criminal and violent victimisation, followed by those with non-crimes but no violence. This indicates that those with these non-crimes or "*marker events*" are at greater risk of continued victimisation and that those who also suffer violent victimisation concurrently with that of non-crime are at greatest risk.

Figure 33: Kaplan-Meier survival functions for reported victimisation (any type) post intervention separated by victimisation type



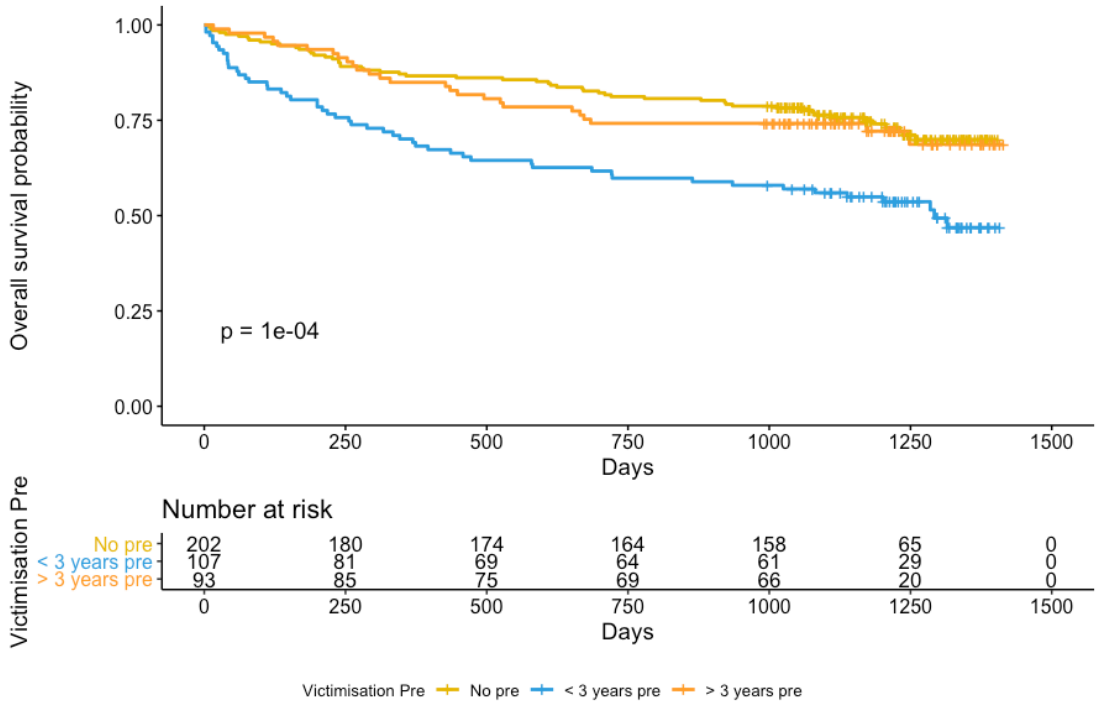
When the sample is broke down by gender and treatment group (table 26) it is clear that a high proportion (45.95%, n = 17) of the females in the treatment group had types of victimisation prior to randomisation that predicted a worse outcome. Treatment group females were significantly more likely to report a non-crime event prior to randomisation (X-squared = 39.056, df = 3, p-value = 1.689e-08) than the other three groups. Therefore, not only were they more likely to have reported victimisation but they were also significantly more likely to have reported victimisation types that predicted worse survival outcomes.

Table 26: numbers experiencing different types of victimisations prior to randomisation by gender and treatment group

Group	*Total*	*No victimisation (n=199)*	*Not violent or non-crime victimisation (n=80)*	*Violence only no non-criminal (n=75)*	*Non-crimes no violence (n=25)*	*Both non-crimes and violent (n=23)*
Males treatment	155	82	35	31	5	2
Females treatment	47	10	11	9	6	11
Males control	152	86	26	26	10	4
Females control	48	21	8	9	4	6

Another consideration is timing, since more recent events to the randomisation date may be more salient to the outcomes post than events farther removed in time. Those who reported victimisation within three years prior to randomisation (figure 34) have worst outcomes than those who do not. Victimisation reported greater than 3 years from the date of randomisation was found to have no significant effect on later victimisation (Chisq= 0.9 on 1 degrees of freedom, p= 0.3– for any type of victimisation and Chisq= 0.6 on 1 degrees of freedom, p= 0.4).

Figure 34: Kaplan-Meier survival functions for reported victimisation post intervention separated by victimisation timing



Chi square tests show that the distribution of victimisation within three years of randomisation date is significantly different between the groups (X-squared = 11.09, df = 3, p-value = 0.011); almost 50% of the treatment group females reported victimisation in the three years prior to randomisation. Overall, the treatment group females are shown to be significantly different prior to randomisation on several variables related to worse survival outcomes.

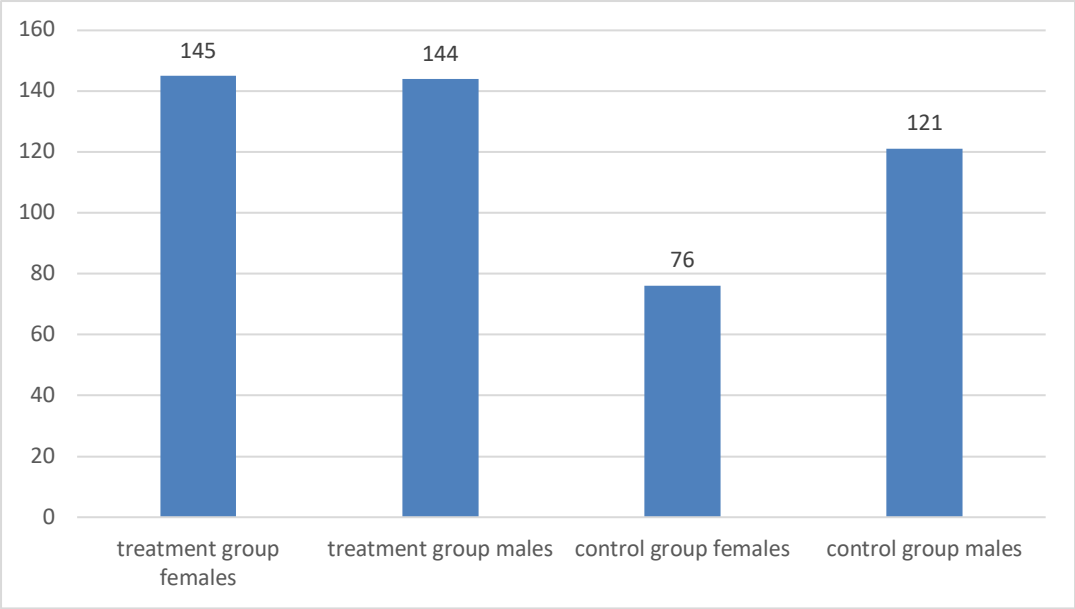
Table 27: Number of individuals in different groups reporting victimisation within 3 years of randomisation

Group	*Total*	*Victimisation within 3 years pre randomisation date (Yes)* *X-squared = 11.091, df = 3, p-value = 0.01124*
Males treatment	155	n = 38 24.52%
Females treatment	47	n = 22 46.80%
Males control	152	n = 35 23.02%

Females control	48	n = 17 35.42%

Furthermore, the total number of victimisations reported prior to randomisation is also greater amongst the treatment group females (Kruskal-Wallis chi-squared = 24.397, df = 3, p-value = 2.064e-05) for the overall comparison between groups. With pairwise Wilcoxon test showing significant between the treatment group females and all three other groups, however the other three groups show no statistically significant differences between each other. Indicating that prior to randomisation the treatment group females were different, while the other three groups were quite comparative. The treatment group females recorded over 145 victimisations - 29.8% of the total number despite only comprising 12% of the total sample.

Figure 35: total number of victimisations reported prior to randomisation



Arguably the most likely explanation for the significantly worse outcomes of the treatment group females is not any of the three initially posited hypothesis of increased contact, increased legitimacy, or a backfire. Instead, it seems the most likely hypothesis is that the significant differences are associated more with the significant differences in the treatment group females prior to randomisation, rather than any effect from the use of an OOCD. While the data here cannot completely rule out the three earlier suggested hypothesis since

there are no measures of self-reported victimisation or a survey of the sample's opinions prior to and after the randomisation date.

The treatment group females are shown to be significantly different prior to randomisation on several variables that related to worse survival outcomes for victimisation post randomisation. Arguably the most likely explanation for the significantly worse outcomes of the treatment group females is not any of the three above posited former hypothesis. First that there may be increased reporting of non-crime events due to increased contact with the police during the intervention period, second use of the OOCD may make females more willing to disclose victimisation to the police, and finally that the OOCD may be having a backfire effect on victimisation. Instead, it seems likely that the significant differences in survival are associated more with the significant differences in the treatment group females prior to randomisation.

Discussion

As McCord (2003) noted, "*Unless social programs are evaluated for potential harm as well as benefit, safety as well as efficacy, the choice of which social programs to use will remain a dangerous guess*" (p. 16). Generally, only offending or in some cases victimisation is considered when evaluating criminal justice interventions, rather than the complete impact of an intervention on both aspects. Given the victim-offender overlap it is critical that evaluation of programs or interventions include not only multiple measures of offending – prevalence, frequency and critically harm – but also those same measures for victimisation. Otherwise, programs could be selected that inadvertently cause harm rather prevent harm, and opportunities to prevent could be missed.

Historically the victim-offender overlap has not be a consideration when designing criminal justice interventions. Only one study (Mckillop et al, 2016) was found that explicitly considered the impact of a targeted offending intervention on participants victimisation. This study used a male only sample of young sex offenders – presenting a completely different demographic to the current sample, and used a single comparison group rather than a RCT. Their key finding that despite higher rates of victimisation prior to the intervention

after the intervention the treatment group reported lower levels victimisation is promising.

In contrast to Mckillop et al's (2016) reduction in victimisation here no reduction in police reported victimisation was found for the males in TPP. Critically this study used a different sample – low level offenders rather than young sex offenders and secondly the intervention that Mckillop et al (2016) used was far more targeted and intensive than the TPP one. The Mckillop study analysed the effects of the "*Griffith Youth Forensic Services*" (GYFS) program. This is described as "*a university-based program providing a state-wide specialised clinical forensic assessment and treatment service to youth adjudicated for sexual offences in Queensland, Australia"* Mckillop et al (2016) p10. The GYFS provides a field-based service which allows remote clients to access the service, as well as improving the potential for engagement with the program, and allows the clinicians to view the environment which could be associated with the offending behaviour. The focus is on using individualised multisystemic assessment and treatment approaches and the treatments are tailored individually to the offenders. The clinicians have relationships and work with other key related stakeholders to deliver the services. No time limit is specified within the article or on the programs' website for how long the treatment is delivered for. Mckillop et al (2016) suggested that the success of the treatment was due to it effecting lifestyle risk factors (e.g delinquent peer networks, school disengagements, family dysfunction etc) which can be common factors to both victimisation and offending.

Compare this approach to that of TPP which was delivered within police stations, by offender managers, with limited input from other agencies, and was comparatively very limited in duration at four months. The GYFS program is clearly more intensive, better focussed and more specialised than the disposal provided through TPP. While TPP does demonstrate that an OOCD with very minimal resourcing can be as good as court processing it is clearly falling short when compared with the more extensive GYFS program. Mckillop et al's (2016) results indicate that programs that reduce re-offending do have the possibility

to also reduce re-victimisation, however the program needs to be properly targeted and resourced to have effective impacts.

Comparing Mckillop et al (2016) findings on prevalence to the findings shows the prevalence of victimisation among their sample was higher - 41% in the treatment as usual and 24% in the control group, with 34% overall. Compared to TPP for which the males had a victimisation prevalence of 25.2% for the treatment and 18.4% for the control groups. However, there are two issues with trying to compare the two studies the Mckillop et al study had a longer follow up period with a mean follow up of 4.2 years compared to TPP's 3 year follow up, and secondly Mckillop et al only considered violent or sexual victimisations while the TPP figures record any type of victimisation. Due to the longer follow up period in Mckillop's study it would be expected that due to increased exposure to victimisation opportunities that there would be a higher prevalence amongst their sample. Additionally, Mckillop's sample of young sex offenders are likely more problematic and higher harm offenders than that of those selected for TPP, therefore higher rates of victimisation would likely be expected amongst them, since their exposure to victimisation opportunities is likely to be higher than that of the TPP sample.

Mckillop et al (2016) also only reported on a survival analysis and the prevalence of victimisation, here not only were these aspects investigated but also how much and how harmful the victimisation experienced was. From the author's knowledge this is the first time all these variables have been investigated in an intervention study for both victimisation and offending. Future studies should aim to analyse all aspects of offending and victimisation to fully quantify the effects of an intervention. While here the findings on harm and frequency mirrored that for prevalence and survival future studies may have gains in terms of reductions of frequency or harm which would be missed if only prevalence and survival are investigated.

Moving on from the comparison to Mckillop et al (2016) to look at the measures of victimisation that were not considered in their study. First examining frequency suggests that for treatment group there is a very small but significant

increase in victimisation. This effect is gender based with the males' control and treatment groups showing no significant differences, yet the female control and treatment are. Frequency of victimisation showed high concentration in the female treatment group with 37.5% of the victimisations post occurring in this group. Further testing indicating as with prevalence that the female treatment group reported significantly more victimisation prior to being randomised to TPP, and it is likely that this increased level of victimisation may be influencing the results.

The results on offending showed a significant decrease in harm, here for victimisation for the males did not show any significant reductions in the treatment group and instead overall a backfire effect was seen from the treatment group females. Overall, here the results on all aspects suggest for male's exposure to the OOCD does not have any measurable backfire effects on victimisation for harm, frequency, survival, or prevalence. Like the results for offending the results for victimisation suggest for males the results are "*as good as*" court processing.

From the further analysis related to understanding why the female treatment demonstrated such a significant backfire across multiple measures of victimisation, prior to randomisation they differed on a least four different measurements. Three of these were seen in the survival analysis to relate to worse outcomes. These were firstly the females were more likely to have reported a form of victimisation prior to randomisation; they were more likely to have reported specific types of victimisations that related to worse survival outcomes (non-criminal marker and violent victimisation) and finally more of the treatment group females reported victimisation within three years prior to random assignment. Additionally, prior to randomisation treatment females also reported victimisation in significantly greater number. Therefore, arguably the conclusion is that the differential effects seen in this study suggesting that females given a OOCD have worse victimisation survival outcomes are likely related to the significant differences prior to randomisation rather than the OOCD itself.

The conclusion overall should tentatively be that treatment with OOCD doesn't have any negative effects in terms of victimisation survival post randomisation. However, this is an aspect that should be further investigated in further studies firstly through the inclusion of self-reported victimisation measures – since this study is reliant on police reported data, and secondly by aiming to collect a sample of low-level offender females given an OOCD that reaches the suggested sample sized of 525. This would allow the hypothesis that the differences are primarily due to the differing victimisation prior to randomisation to be tested. A larger sample could possibly eliminate the effect of having a treatment and control group that are not equivalent prior to the randomisation, and instead allow the full investigation of the effect of OOCD on female low-level offenders' victimisation – provided the sample showed equivalent measures on victimisation prior.

What does this mean for future research and for policy and practice?

There are some clear policy and practice implications from this study both for future research and to put in practice for policy makers. Future research into intervention studies need to consider victimisation alongside offending since it is a key measure of success or failure as well as identifying the extent and opportunities for interventions. Studies also need to consider results by critical groups such as gender – since there may be significant gender differences seen. A future avenue to explore could also be ethnicity since effects may vary dependant on the ethnicity of the offender. Here ethnicity was not considered since only police recorded ethnicity was available to the researcher and this tended to vary significantly throughout the records examined (i.e offenders would be recorded on the custody system as IC1 (white northern European) and on another system as IC3 (Black) and was therefore considered ultimately an unreliable measure.

Future policy needs to consider that offending and victimisation are likely to share common risk factors and interventions have the potential to simultaneously address both offending and victimisation vulnerability. By focussing on both aspects, a clearer and more effective interventions could be designed. Additionally, Lauritsen and Laub (2007) comment that if the overlap

is not addressed our assumptions about what is causing victimisation may be false and lead to ineffective programs or interventions being designed still holds true.

Specific to OOCD and from this study, arguably it can be concluded that overall OOCD do not have a backfire effects on victimisation for male offenders, and that OOCD based on TPP could be implemented on a wider level for male low-level offenders with little risk of inadvertently increasing victimisation. With the conclusion overall that OOCD are equally as good for victimisation as court processing – like the overall effects on offending. The results indicate that for males shifting to a policy of utilising OOCD should be advocated for due to reduced costs, reduced harm from offending, and increased victim satisfaction as well as no negative impact on male offending or victimisation. This could be considered good news with the increased interest in utilising OOCD disposals for low level offenders.

However, potentially there may be differing effects for female low-level offenders, and the female offenders are from the data in the study the ones experiencing potentially the most problematic issues from victimisation. While the overwhelming conclusion from the analysis in this study was that difference related to initial differences in victimisation between the groups it is critical to conduct further testing – likely using self-reports and a larger sample to confirm this speculative finding. Given that TPP showed that the effects on offending were as "*good as court*" processing further testing would be needed to confirm that OOCD are not an option that results in little gain in terms of reduced offending but a large increase in victimisation for the female offenders experiencing them. Costing more in increased victimisation than is gained through the offending or cost reductions. Therefore, there is some hesitation when advocating for a policy of OOCD for female offenders, and further investigation is advised.

It should also be reflected on though that there may be benefits from OOCD outside of reductions in offending or victimisation to be considered. Systematic reviews on juvenile offenders indicate that formal court processing is harmful

for juvenile offenders, other answers to offending should be considered (Petrosino et al, 2007). There are other benefits from not using formal processing, the lack of an official criminal conviction may improve job prospects long-term. Stable employment is known to be related to long term successful desistance from crime (Sampson and Laub, 1995), and a criminal conviction may pose an impediment to achieving this.

The victim preference may also be an important consideration. If satisfaction of victims can be improved through the OOCD as demonstrated by TPP (Slowthower, 2014) then that may be a deciding factor in opting for the OOCD. Practically as well court processing is costly, time consuming and lacks celerity, a notable percentage of the cases sent to the court side for TPP took several months and numerous court dates to finally achieve an outcome. These benefits of the OOCD may well outweigh the costs of a potential increase in victimisation among the female treatment group and should be considered when deciding whether to advocate for court processing or OOCD.

If OOCD were to be used more widely for female offenders, it would be critical to monitor victimisation levels and ask questions about victimisation while the OOCD is being delivered. While the males in the study indicated no effect from the OOCD on victimisation monitoring victimisation may also be valuable here to improve the relevance of conditions to the individual. Additionally, since the earlier analysis suggested the possibility of males under reporting victimisation it would allow additional information about the victim-offender overlap in male low-level offenders to be gathered.

The types of offences considered in Turning Point were quite minor offences, there is no reason with some careful consideration that the offender desistance policing approach couldn't be expanded to a wider variety of crimes, or even to more serious repeat offenders. Another type of offending to consider an OOCD with would be domestic violence which was excluded from TPP. While mandatory arrest policies for domestic violence in the UK mean that offenders are arrested, a study in Southampton found most (55%) are released shortly after arrest for lack of "*prosecutability*" (Rowland, 2013), with 33% charged and

only 22% eventually convicted. The Cautioning and Relationship Abuse (CARA) study demonstrated that a low-cost intervention was an effective method of reducing crime harm of future offences among low-risk intimate partner offenders by 27%, suggesting this could be a potential avenue for future study (Strang et al, 2017). Domestic violence can also be a factor running concurrently in the lives of many low-level offenders (Neyroud, 2015) so programs that can address this area – both for victims and for offenders could have positive benefits.

A further question is can a more effective OOCD be designed - one that doesn't just deliver results that are "*as good as*" court processing but one that could have substantive long-term effects for both offending and victimisation. Ideally an as well as the positive gains in terms of reduced cost creating an OOCD that delivered reduced offending and victimisation would be the end goal. Here the TPP study utilised already available police resources (offender managers) to examine the effect in a "*business as usual*" approach. To some extent this does mitigate one argument against RCT that the results present the effects of the intervention only in a highly regulated and well-resourced trial and does test the likely scenario if OOCD were rolled out to police forces on a large scale. There is likely room to improve the delivery of the OOCD by having eligible offenders were sent to specially trained officers or police staff primary role is geared towards delivering a more rigorous OOCD. This approach was also tested in Checkpoint, with offenders sent to specialised "*navigators*" rather than police offenders (Weir et al, 2021). Checkpoint achieved a lower reoffending rate based on prevalence (10.3% reduction) and risk of reoffending (30%) reduction. However again the focus of this towards the offending side and prevention of offending only, rather than considering both offending and victimisation within the same OOCD. Checkpoint also has yet to analyse if the results for offending hold true for victimisation which could go some way to confirming the results on victimisation for OOCD found here.

If as well as delivering a more rigorous OOCD the focus is towards not just solving offending but also the identifying and targeting co-occurring victimisation perhaps results can be even more enhanced. This may also

provide additional cost benefit if programs can be targeted to simultaneously reduce offending and victimisation. Contact with the CJS either as an offender or as a victim presents potentially significant costs to the CJS and given the current and continued demand on policing methods of increasing cost benefit from programs should be a key consideration.

Policy makers should consider how to design effective OOCD and how these could be implemented on a wider scale with considered of victimisation alongside offending central to these. Obviously, there may be trade-offs and balances to reach since these types of OOCD are not aimed for serious recidivist or high harm offenders. So, the amount of resource invested needs to be balanced against the issues posed by these types of offenders. However, within this sample it was clear that issues were not evenly distributed and power few for number and harm from victimisation could be identified. Possibly the design as proposed earlier of a "*light touch*" minimal effort and contact for those identified as posing the least risk of re-offending or being re-victimised and a more resource intensive "*heavy touch*" approach for those identified as more at risk, may be the one solution. The next chapter of this thesis will use the TPP data to identify some potential risk factors and discuss future avenues to explore with an algorithm based and data led approach.

A final comment that should also be highlighted when building interventions some of the issues highlighted within the victimisation data are not primarily within the realm of policing. There may be issues which relate to social welfare, education or mental health for example which are well outside the realm of policing. Crime is a problem that goes beyond just policing and in some instances the police may not be in the best position to work with the individual. As with the GYFS example other stakeholders may be key to assisting in creating meaningful and long-lasting changes. Planning how to engage these stakeholders in these interventions may be key to long term success.

Conclusion

Critically these results tentatively suggest for policy – with the caveat of the female treatment group- that victimisation is not negatively affected using

OOCD. While the results show as with offending that there are no benefits from use of the OOCD against court processing. The OOCD overall appeared to "*do no harm*" and potentially with a better design and a more rigorous tested approach could product better results for both offending and victimisation. One caveat is that of the female low-level offenders here significant backfire effects were seen in the treatment group. While the results here are indicative of these being due to significant differences prior to treatment, it is a result that bears further investigation with a larger sample of female low-level offenders to confirm this proposition.

Chapter 10

Prediction of victimisation and prediction of group membership post randomisation

This section of the thesis will consider who is at most risk of victimisation post randomisation and whether from variables known about the sample prior to randomisation victimisation survival post can be quantified. Survival analysis will also be used to identify other key variables associated with lower survival during the follow up period. To identify key variables to use in the final part of this chapter which will look at two cox's regression models to identify key variables associated with higher risk of victimisation post randomisation.

While the primary focus of this chapter will be to examine variables that relate to victimisation the second part of this chapter will look at whether group membership can be predicted – i.e if it is possible to predict whether the individual will become a victim only, offender only, victim-offender or be uninvolved during the follow up period. Due to the data limitations this follow up will be limited to two years for this piece of the analysis.

This chapter will aim to answer three questions:

1). What other variables that have so far not been considered in the earlier analysis are associated with reduced victimisation survival?

2). Using Cox's regression and binomial models what variables are the most significant in predicting poorer outcomes for victimisation post randomisation, and what percentage of variability in victimisation can the variables available in this study explain?

3). It is possible to identify from variables associated with the period prior to randomisation which group – victim only, offender only, victim offender or non-involved low-level offenders are likely to belong to? And do these variables differ between the four groups?

The aim of this part of the thesis is to identify if victimisation can be predicted, and what are the most relevant variables in this sample. The second part asks

the question of are victim-offenders noticeably different to the offender only, victim only and uninvolved. Prior research has indicated harm tends to concentrate in victim-offenders therefore if this can be predicted as well as if they are likely to re-offend or become victimised then this could be valuable information. This could be used to discuss potential triage tools and avenues for future research into the victim-offender overlap.

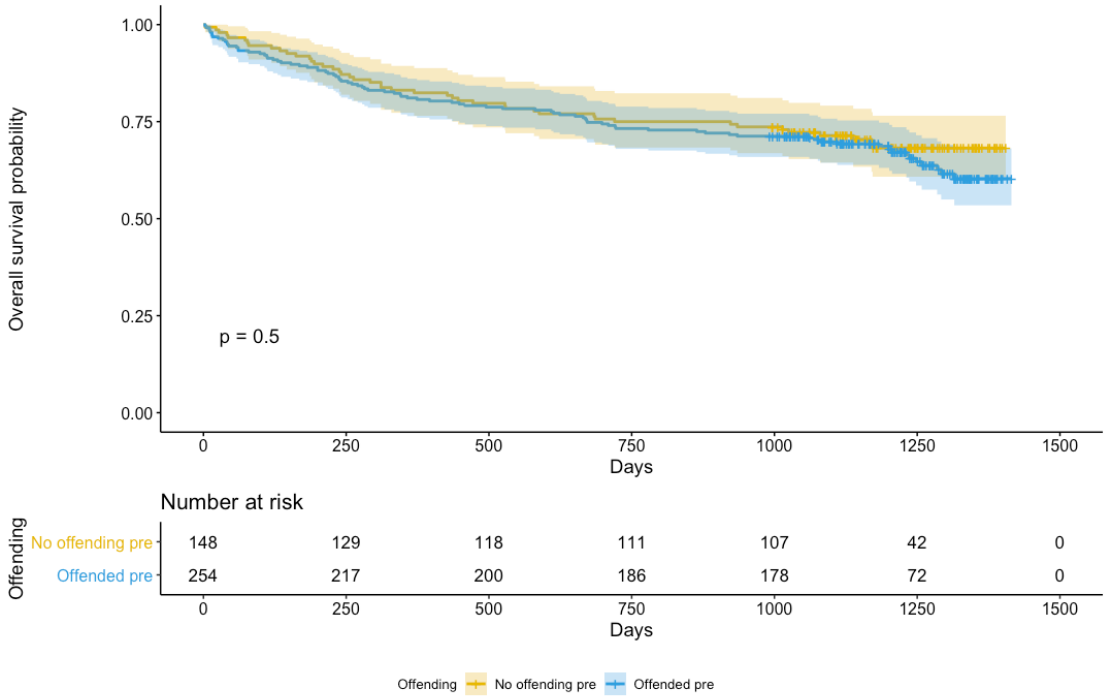
Other factors influencing victimisation survival

As well as assignment and victimisation prior to randomisation there are other factors that influence victimisation reporting post randomisation. Due to the strong and consistent link between victimisation and offending, the first investigated was offending – both for the period prior to randomisation and the period following randomisation. The second was the age of the offender, for this analysis the sample was separated into 25 and under and over 25. Due to the literature indicating significant changes in neurological development occur up to approximately age 25 and the consistent fact of the age crime curve indicating that this segment is most at risk of offending and at risk of victimisation (Sampson and Laub, 1993). This single variate analysis will identify possible factors for use in a cox's regression and binomial regression. This may help to identify at the point of randomisation (i.e when an OOCD is being offered if OOCD are used in practice) who is most at risk of continued victimisation. This may help reformulate the gateway to the CJS, improve triage and identify appropriate disposals for low-level offenders.

Offending behaviour

Due to the victim-offender overlap discussed earlier it is possible that offending relates to decreased survival in terms of post randomisation. Firstly, the effect of any form of offending being recorded prior to randomisation was examined, no significant effects were found indicating that involvement in offending alone did pre randomisation did not reduce survival. However further investigation was also conducted to identify if there were any effects depending on the type of offending prior.

Figure 36: Kaplan-Meier survival functions for reported victimisation post intervention separated by if the individual offended prior to randomisation



Violent offending showed no effect on survival (figure 36) however criminal damage offending showed a significant effect (figure 37). This may be due to a selection effect because of the strict eligibility criteria used in Turning Point (see appendix B) which may have inadvertently selected for individuals who were more predisposed to commit certain types of offences and may not be an effect that would hold in a wider sample of victim-offenders.

Figure 36: Kaplan-Meier survival functions for reported victimisation post intervention separated by if the individual violently offended prior to randomisation

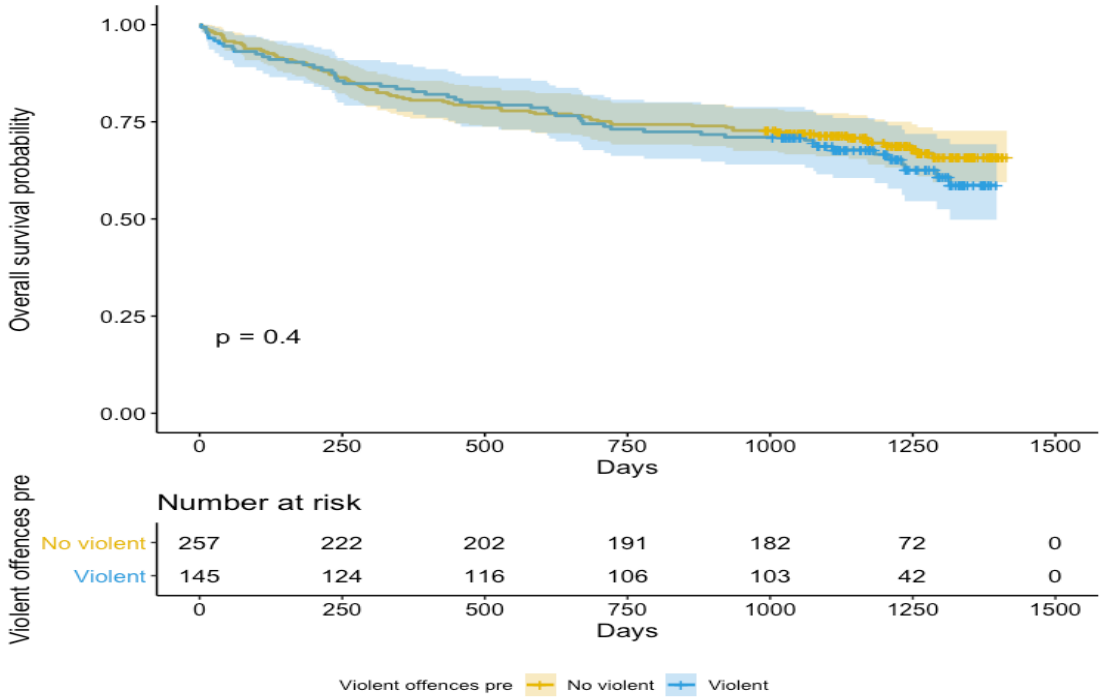
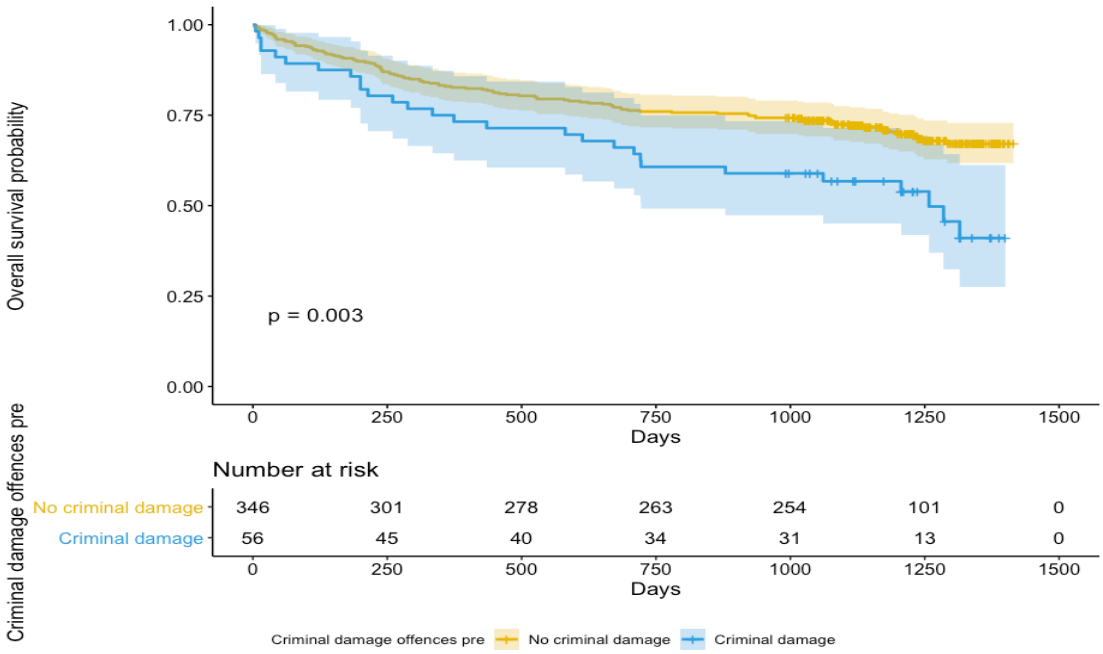
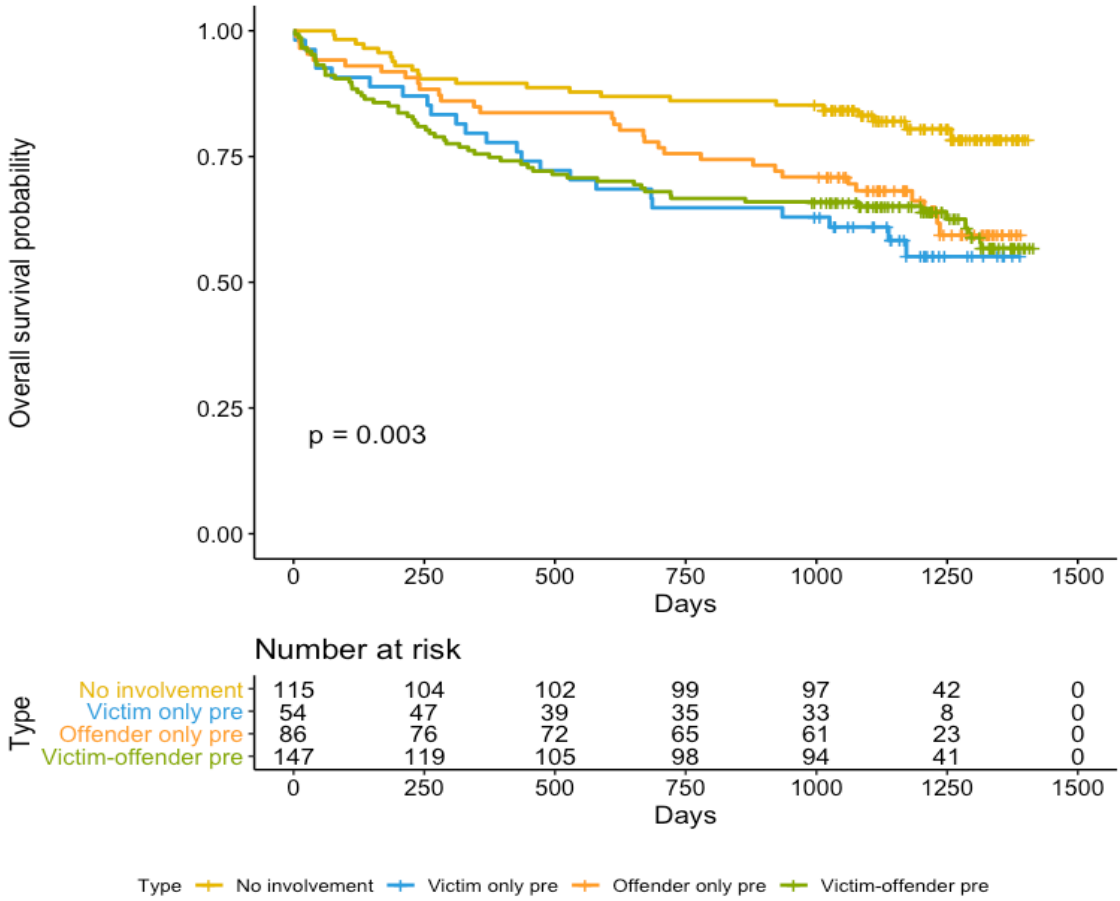


Figure 37: Kaplan-Meier survival functions for reported victimisation post intervention separated by if the individual committed criminal damage prior to randomisation



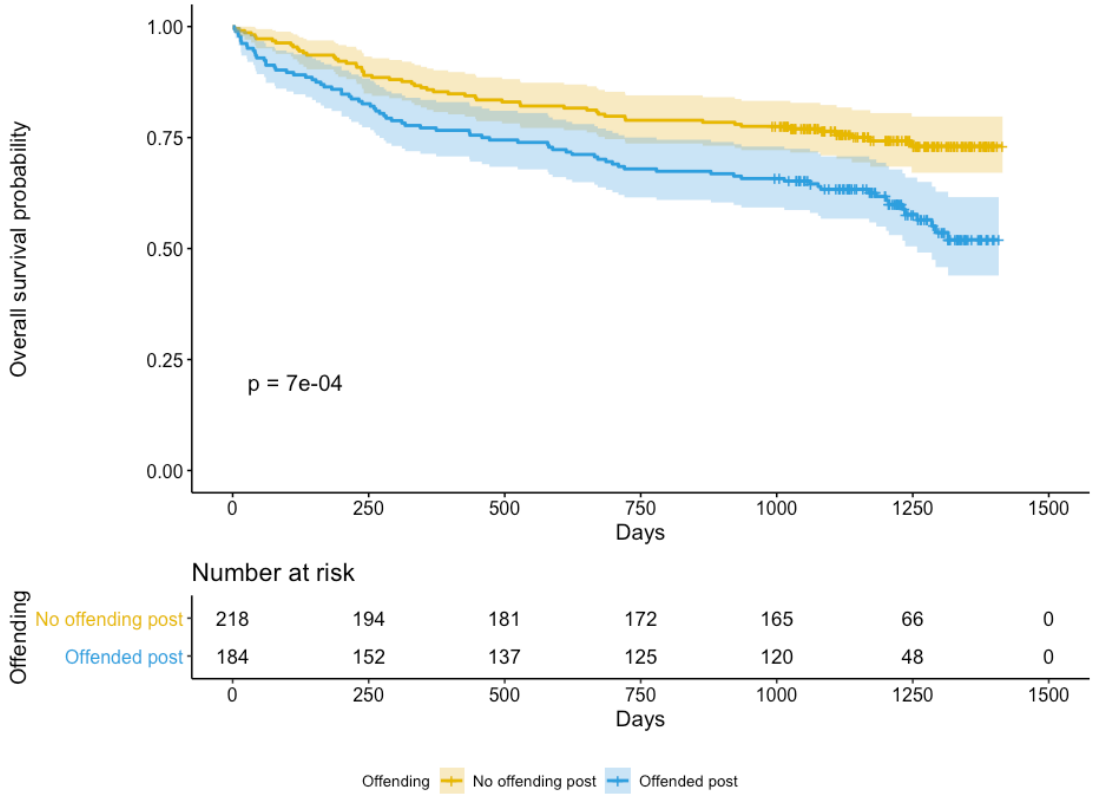
Thirdly due to previous studies the sample was coded to identify if the individual was a member of the victim – offender overlap, offended only, was victimised only or was uninvolved prior to randomisation, since research has indicated that victim-offenders tend to have worse outcomes than those involved in offending or victimisation alone. The results indicated that both the victim only and the victim offender groups had significantly worse outcomes for victimisation (X = 14.2 , 3, p= 0.003) compared to the offender only or non-involved group. Consistent with previous literature the non-involved has the best outcome post randomisation with just 19% (n=22) reporting victimisation post randomisation, comparatively 38.1% (n=56) of the victim offender group and 41.1% (n=23) of the victim only group.

Figure 38: Kaplan-Meier survival functions for reported victimisation post intervention separated by if the individual offended prior to randomisation



The fourth consideration with offending was if the risk of revictimization was higher post randomisation if offending continued. This was a finding by McKillop et al (2016) who in their analysis found that if offending continued victimisation was also more likely, and it was in fact the variable that showed the largest effect in their study. Here it was found consistent with the earlier study those involved in offending in the post period had worse victimisation survival outcomes comparative to those who ceased offending.

Graph 39: Kaplan-Meier survival functions for reported victimisation post intervention separated by if the individual offended within 2 years post randomisation



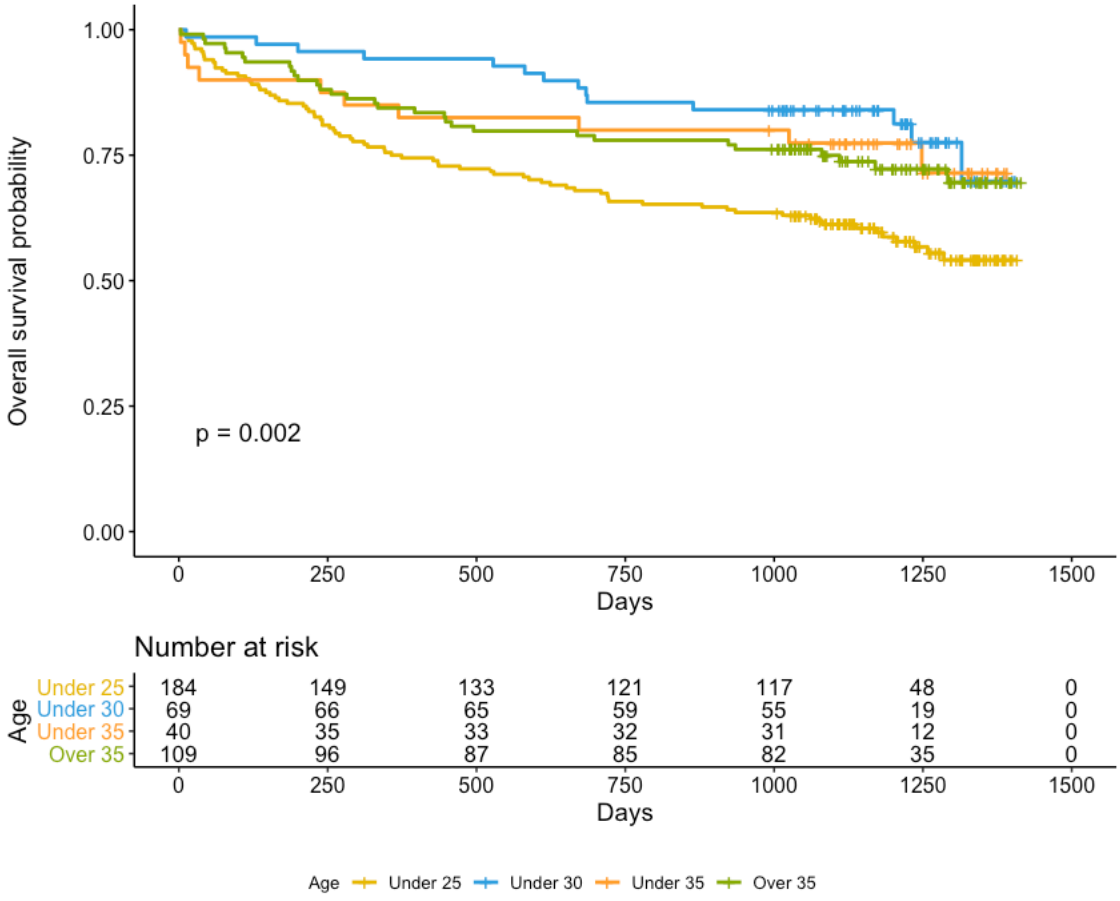
The findings overall for the association between offending behaviour and victimisation outcomes highlight four key areas; firstly that just offending pre randomisation has no significant effect; secondly that there are specific types of offending that associate with worse outcomes; thirdly that involvement in the victim-offender overlap prior is associated with worse outcome – however those in the victim only group appear to have comparatively bad outcomes; finally if

involvement in offending continues post randomisation there is an association with worse outcomes.

Age

Previous suggests that victimisation – akin to offending - tends to be more prevalent among younger age groups. To test if this applied to the Turning Point sample the sample was split into 4 age categories (under 25, under 30, under 35 and over 35). The initial comparison using any type of victimisation showed that the under 25s appeared to have worse survival than the over 25s.

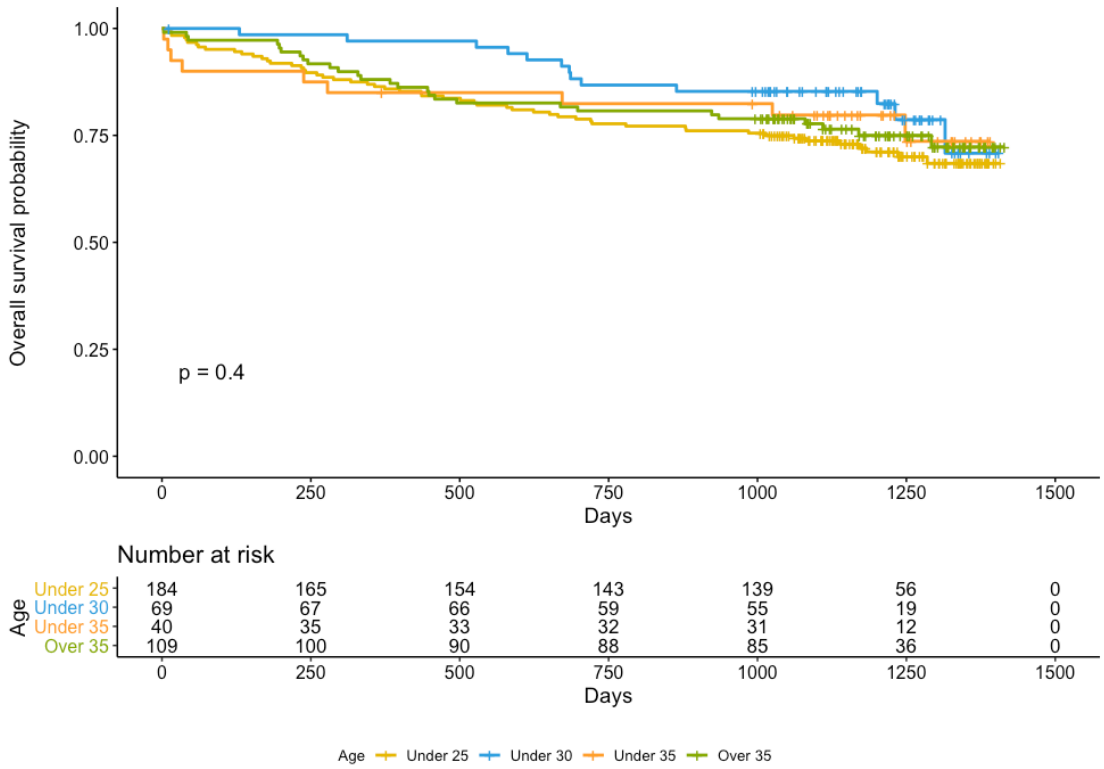
Figure 40: Kaplan-Meier survival functions for reported victimisation post intervention separated by age group for any type of victimisation



However, this difference was eliminated if only criminal victimisations were considered, suggesting that the worse outcome for victimisation relate to an

increase in non-crime or marker offences in the under 25 population compared to the older groups in the sample.

Figure 41: Kaplan-Meier survival functions for reported victimisation post intervention separated by age group for criminal victimisations only



Firstly, some of the non-crimes e.g child abuse non crime is limited to under 18s only hence it would be expected that there would be a higher prevalence of these among this group. Secondly it is possible that the younger individuals in this sample are more likely to be involved in problematic relationships than the older ones and may have more mental health issues (vulnerable adult) identified by the police. It is also possible that the police – who are applying two of these types of markers (child abuse and vulnerable adult) are more willing to perceive younger people are vulnerable which may increase the number of non-crime marker offences applied to this applied to this group.

Despite the relationship only holding true for all types of victimisations, it is still important to consider specific vulnerabilities that may be present in the under 25s, some of these in this sample will be below the age of 18 and may be

specifically vulnerable to types of exploitation such as sexual exploitation – indeed 8 individuals in this sample were identified through the child abuse markers as possible candidates of CSE (childhood sexual exploitation). If the examples of Rotherham, Oxford, and Birmingham (Jay, 2014) have shown anything it is that young persons who are being sexually exploited often end up in custody, and many times the link between the problematic behaviour and the offending fails to be made. This kind of exploitation of young people may not just be limited to sexual exploitation but may also involve exploitation to use them as drugs couriers or cuckooing (where a vulnerable individual house is taken over for use as a base for drug dealing or other kinds of criminal activity). There was one potential example of cuckooing in this data set, but none identified related to the drug courier example – this may be due to a failure to identify these young people while they are in custody, the data on this type of exploitation was not recorded within the systems used for this study, or possibly this exploitation wasn't present in this sample.

Cox's regression results

A single variate analysis was conducted first to identify variables that showed significant relationships to survival outcomes these were identified primarily from the earlier analysis. This additional analysis was conducted not just to show if the variable had a significant association but also to quantify the size of the effect. It was found for any type of victimisation the variables that showed significant effects were assignment, gender, age under 25, criminal damage offending pre, offending post, violent offending post, victimisation pre, victimisation within three years pre, non-crime victimisation pre, non-involvement in victimisation or offending pre and violent victimisation pre. For criminal victimisation the significant variables were assignment, gender, criminal damage offender pre, victim-offender pre, offending post, violent offending post, victimisation pre, non-crime victimisation pre, non-involvement in victimisation or offending pre, and violent victimisation pre.

Variables associated with a decreased survival for any type of victimisation were assignment to the treatment group, female gender, age under 25, criminal damage offending pre, violent offending post, offending post, any victimisation

pre, victimisation reporting within three years pre, violent victimisation pre, and non-crime markers pre. Variables associated with an increased likelihood of survival were assignment to the control group, male gender, age over 25 and no known involvement in offending or victimisation pre.

Table 28: Results of single variable effects on survival analysis for any type of victimisation and criminal victimisation only post randomisation

Variable	*Any type of victimisation*		*Criminal victimisation only*	
	Hazard ratio (Confidence interval)	Chi square Result	Hazard ratio	Chi square result
Assignment (treatment/control) (1 = treatment, 0 = control)	1.351 (0.9581 - 1.906)	p= 0.08	1.883 (1.258 - 2.82)	p= 0.002
Gender (male/female) (0 = female, 1 = male)	0.486 (0.3389 - 0.6969)	p= 6e-05	0.5171 (0.3435 - 0.7785)	p= 0.001
Under 25	1.912 (1.352 - 2.706)	p= 2e-04	1.32 (0.895 - 1.946)	*N.S*
Offending pre	1.253 (0.891 -1.763)	*N.S*	1.252 (0.8491 - 1.846)	*N.S*
Criminal damage offending pre	1.855 (1.222 - 2.816)	p= 0.003	1.74 (1.077 - 2.812)	p= 0.02

Violent offending pre	1.147 (0.8092 - 1.627)	*N.S*	1.261 (0.8502 - 1.871)	*N.S*
Victim offender pre (any point)	1.355 (0.9576 - 1.917)	p= 0.09	1.692 (1.146 - 2.498)	p= 0.007
Victim-offender within 3 years pre randomisation	1.534 (0.9781 - 2.407)	p= 0.06	1.643 (0.9974 - 2.706)	p= 0.05
Offending 1 year pre	1.321 (0.9065 - 1.926)	*N.S*	1.131 (0.7284 - 1.756)	*N.S*
Offending 3 years pre	1.266 (0.8978 - 1.786)	*N.S*	1.115 (0.7513 - 1.654)	*N.S*
Offending post	1.806 (1.278 - 2.553)	p= 7e-04	1.974 (1.326 - 2.937)	p= 6e-04
Violent offending post	2.11 (1.459 - 3.052)	p= 5e-05	1.948 (1.277 - 2.97)	p= 0.002
Victimisation pre (any time)	1.632 (1.153 - 2.309)	p= 0.005	1.887 (1.263 - 2.819)	p= 0.002
Victimisation within 3 years pre	2.158 (1.523 - 3.058)	p= 9e-06	2.466 (1.668 - 3.647)	p= 3e-06
Victimisation Non crime (marker) pre	3.473 (2.305 - 5.231)	p= 2e-10	2.778 (1.731 - 4.459)	p= 1e-05
Violent victimisation pre	1.821 (1.27 - 2.611)	p= 9e-04	1.949	p= 0.001

			(1.301 - 2.918)	
Violent victimisation pre (excluding those with non crime markers)	1.286 (0.856 - 1.933)	*N.S*	1.436 (0.9142 - 2.254)	*N.S*
Victimisation pre (excluding violent and non crime marker)	0.7174 (0.45 - 1.144)	*N.S*	0.9707 (0.5954 - 1.583)	*N.S*
Victimisation pre not within 3 years prior	0.8086 (0.5264 - 1.242)	*N.S*	0.8194 (0.5024 - 1.336)	*N.S*
No known involvement in victimisation or offending	0.4398 (2.274 - 0.2782)	*p=0.000439*	0.3837 (2.606 - 0.2218)	*p = 0.000613*

In the single variate analysis, the highest hazard ratio can be seen for if individual had a non-crime marker prior to randomisation (HR = 3.473, p = <0.001) for any type of victimisation and (HR = 2.778, p <0.001) for criminal victimisations. Victimisation within 3 years prior to randomisation, and violent offending in the 2 years post randomisation also showed large hazard ratios. Males also showed a significantly lower hazard ratio than the females in the sample. From this single variable analysis, several variables were identified, and some discarded for the cox's regression model.

Model 1 – Any type of victimisation event

In the first model using cox's regression predicting any type of victimisation the variables used were selected based on those that showed significant effects in

the single variate analysis conducted earlier. The variables selected for this model were: assignment, gender, age under 25, criminal damage offending pre, victim-offender pre, victimisation within 3 years pre, marker victimisation pre, not victim or offender pre and offender two-year post. While violent victimisation pre randomisation was significant in the single variate analysis earlier, adding it to the model showed no significant effects, hence it was left out of the model. It is possible that this variable is associated with other factors that have more significant influence on survival.

Table 27: Model 1 Predicting any type of victimisation post randomisation

Covariates	*Coefficient*	*Hazard ratio*	*P value*
Assignment (Treatment or control)	0.46571	1.5931 (1.1161 - 2.2741)	0.010317 *
Gender	-0.61177	0.5424 (0.3600 - 0.8171)	0.003433 **
Age under 25	0.44646	1.5628 (1.0701 - 2.2823)	0.020858 *
Offending 2 years post randomisation	0.54540	1.7253 (1.1871 - 2.5075)	0.004250 **
Criminal damage offending prior	0.42542	1.5302 (0.9805 - 2.3882)	0.061024 .

Number of victimisations prior	0.12196	1.1297 (1.0533 - 1.2117)	0.000645 ***
Victim within three years of randomisation	0.04918	1.0504 (0.8722- 1.2651)	0.604232
Marker victimisation prior	0.68590	1.9856 (1.1685 - 3.3741)	0.011230 *
Not involved pre	-0.54074	0.5824 (0.3504 – 0.9678)	0.036941 *
Victim-offender prior	-0.50987	0.6006 (0.3952 - 0.9127)	0.016965 *

Variables coded: *Group membership (0 = no official victimisation records post intervention, 1 = official victimisation record post intervention), Predictors: Intervention type (0 = control/treatment as usual, 1 = Treatment), Gender (0 = female, 1 = male), age under 25 (0 = no, 1 = yes), Offending two years post (0 = no, 1 = yes), Criminal damage offending pre (0 = no, 1 = yes), Victim-offender pre (0 = no, 1 = yes), number of victimisations prior (0-20), Victimisation within 3 years pre (0 = no, 1 = yes), Marker victimisation pre (0 = no, 1 = yes), Not victim or offender pre (0 = no, 1 = yes).*

Overall model fit

Overall model 1 was significant (Likelihood ratio test= 81.78 on 10 df, p=2e-13, Wald test = 98.07 on 10 df, p=<2e-16, Score (logrank) test =113.1 on 10 df, p=<2e-16), and had a concordance of 0.71 (se = 0.024). The model could successfully explain 70.5% of the victimisation survival post randomisation, meaning that 29.5% remains unexplained and is likely related to other variables

that are not available for this analysis. These variables could include for example relationship and employment status – both of which are known to relate to victimisation and offending risk.

Variables in the model with significant hazard ratios that increased risk of victimisation included assignment to treatment group, female gender, age under 25, criminal damage offending prior, more victimisations prior, being a victim-offender prior and having a non-criminal victimisation prior. Variables in the model with significant hazard ratios that related to a decreased risk of victimisation included assignment to control group, male gender, age over 25, and not being involved in victimisation or offending. That victimisation within 3 years prior to randomisation doesn't show a significant relationship to survival may be because victimisation timing is less impactful than other variables e.g total number of victimisations prior, or the specific type of victimisation.

Model 2: Modelling criminal victimisations

In the second model using cox's regression predicting criminal victimisation the variables used were selected based on those that showed significant effects in the single variate analysis conducted earlier.

Table 28: Model 2 Modelling criminal victimisations

Covariates	*Coefficient*	*Hazard ratios*	*P value*
Assignment (treatment or control)	0.72920	2.0734 (1.3729 - 3.1315)	0.000527 ***
Gender	-0.57530	0.5625 (0.3567 - 0.8872)	0.013321 *

Criminal damage offending pre	0.32922	1.3899	(0.8386 - 2.3035)	0.201535
Victim offender pre	-0.36333	0.6954	(0.4127 - 1.1716)	0.172239
Victimised within three years pre	0.03705	1.0377	(0.8457 - 1.2734)	0.722729
Marker victimisation pre	0.69259	1.9989	(1.1400 - 3.5049)	0.015639 *
Violent offending pre	0.40123	1.4937	(0.9203 - 2.4242)	0.104396
Not involved pre	-0.64968	0.5222	(0.2850 - 0.9569)	0.035494 *
Offending within 2 years post	0.64459	1.9052	(1.2598 - 2.8814)	0.002258 **

Variables coded: *Group membership (0 = no official victimisation records post intervention, 1 = official victimisation record post intervention), Predictors: Intervention type (0 = control/treatment as usual, 1 = Treatment, Gender (0 = female, 1 = male), age under 25 (0 = no, 1 = yes), Criminal damage offending pre (0 = no, 1 = yes), Victim-offender pre (0 = no, 1 = yes), Victimisation within 3 years pre (0 = no, 1 = yes), Marker victimisation pre (0 = no, 1 = yes), Not victim or offender pre (0 = no, 1 = yes), Offending two years post (0 = no, 1 = yes).*

Overall model fit

Overall model 2 was significant (Likelihood ratio test = 54.8 on 9 df, p=1e-08, Wald test = 57.46 on 9 df, p=4e-09, Score (logrank) test =61.59 on 9 df, p=7e-10), and had a concordance of 0.704 (se = 0.026). The model could successfully explain 70.4% of the victimisation survival post randomisation, meaning that 29.6% remains unexplained and is likely related to other variables that are not available for this analysis. Variables in the model with significant hazard ratios that increased risk of victimisation included assignment to treatment group, female gender, marker victimisations pre and continued offending post randomisation. Variables in the model with significant hazard ratios that related to a decreased risk of victimisation included assignment to control group, male gender, and not being involved in victimisation or offending.

Binomial modelling

As well as considering the survival analysis the results were also coded to victimised yes or no to allow the consideration of a binomial model. Model three shows the results of binomial model predicting any form of victimisation post randomisation. Stepwise AIC both direction selection was used to indicate significant variables to add to the model and to prevent overfitting. With the process indicating that nine variables of the twenty initially suggested provided the best model.

Model 3 - Any type of victimisation event

Model 3 was statistically significant (p<0.001), explaining 22.45% (Nagelkerke R2) of the variance in victimisation outcomes, correctly classifying 73.13% of cases. The model produced a sensitivity of 0.3485, with a specificity of 0.9185, positive prediction value was 0.6765, and negative prediction value was 0.7425. Prevalence was 0.3284 while the detection rate was 0.1144. Kappa was 0.3048. The false positive rate with 21.39% with 86 cases incorrectly classified.

Table 29 : Any type of victimisation event predicted with a binomial regression

Model and predictor	*Odds ratios*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept		-1.7854	0.3458	-5.16	0.0000**
Assignment (treatment or control)	1.675	0.5160	0.2393	2.1560	0.0311*
Gender (Male or female)	2.1121	-0.7478	0.2860	-2.6148	0.0089
Number of victimisations prior	1.2116	0.1920	0.3775	2.2655	0.02572*
Victim only prior	2.2345	0.8041	0.3498	2.2992	0.0215
Offender only prior	1.8906	0.6370	0.3056	2.0843	0.0371
Criminal damage offending prior	2.1582	0.7694	0.3330	2.3107	0.0208
Age under 25	1.9928	0.6901	0.2496	2.7651	0.0057
Offending two years post	1.9164	0.6505	0.2538	2.5627	0.0104
Marker prior	2.0003	0.6934	0.4040	1.7166	0.0861

Group membership (0 = no official victimisation records post intervention, 1 = official victimisation record post intervention), Predictors: Intervention type (0 =

control/treatment as usual, 1 = Treatment), Gender (0 = female, 1 = male), age under 25 (0 = no, 1 = yes), Offending two years post (0 = no, 1 = yes), Criminal damage offending pre (0 = no, 1 = yes), Victim-offender pre (0 = no, 1 = yes), number of victimisations prior (0-20), Victimisation within 3 years pre (0 = no, 1 = yes), Marker victimisation pre (0 = no, 1 = yes), Not victim or offender pre (0 = no, 1 = yes).

These odds ratios show firstly, that while assignment to the treatment group had a significant p value the overall odds ratio was only 1.09. However, females were 2.98 times more likely to be victimised during the follow up period. Those who were victims only (i.e had no known offending prior to randomisation) were 5.35 times more likely to be revictimized. If they were only known to be involved in offending prior to TPP then they were 2.95 times more likely to be victimised post. Criminal damage offending also had a high odds ratio of 3.651 indicating that there are particularly kinds of offending that are more associated with higher victimisation risk. Those under 25 for the duration of the study were also more likely (2.189 times) to be victimised in the follow up. Continued offending post randomisation was also associated with a higher risk of victimisation at 1.923 times. While having a non-crime marker prior to TPP is associated with an increased risk of 2.44 times.

Model 4 - criminal victimisation

For criminal victimisations alone stepwise AIC both direction selection indicated that only five of the potential twenty variables were relevant for prediction. Model 3 used 9 different variables that predicted any form of victimisation, so there are indications that some variables are particularly associated with the risk of non-crimes event occurring compared to any type of victimisations. Model 4 was statistically significant ($p<0.001$), explaining 18.97% (Nagelkerke R2) of the variance in victimisation outcomes, correctly classifying 77.86% of cases. The model produced a sensitivity of 0.1967, with a specificity of 0.9767, positive prediction value was 0.7407, and negative prediction value was 0.7813. Prevalence was 0.3284 while the detection rate was 0.1269. Kappa was 0.2281. The false positive rate was 20.4% with 82 cases incorrectly classified.

Table 30: Model 4 Criminal victimisations predicted with a binomial regression

Model and predictor	*Odds ratios*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept		-1.96243	0.33389	-5.878	4.16e-09 ***
Assignment (treatment or control)	2.1359	0.75898	0.25442	2.983	0.002853 **
Gender (male or female)	1.7677	-0.56972	0.29464	-1.934	0.053161
Criminal damage offender prior	1.6912	0.52549	0.34018	1.545	0.122410
Offending in the two years post	2.4771	0.90720	0.25540	3.552	0.000382 ***
Number of victimisations prior	1.2960	0.25931	0.07045	3.681	0.000232 ***

Group membership (0 = no official victimisation records post intervention, 1 = official victimisation record post intervention), Predictors: Intervention type (0 = control/treatment as usual, 1 = Treatment), Gender (0 = female, 1 = male), age under 25 (0 = no, 1 = yes), Offending two years post (0 = no, 1 = yes), Criminal damage offending pre (0 = no, 1 = yes), number of victimisations prior (0-20)

The odds ratios highlight that some variables are associated with higher probability of criminal victimisation than the earlier model which included both

criminal and non-criminal victimisations. Looking at only criminal victimisations also indicates that female's risk is more comparative to males when only criminal victimisation is considered. Ergo females are potentially more at risk of reporting a non-criminal type of victimisation post than males. Continued re-offending is a good predictor of victimisation risk, the Mckillop et al (2016) study found those who continued to re-offend were 3.9 times more likely to be victimised. Here the odds ratio was smaller but of the five predictors in this analysis showed the largest effect. Those who continue re-offending after the date randomisation 2.4771 times more likely to be victimised. Again, this highlights the influence of the victim-offender overlap and makes that central to the question of preventing both offending and victimisation.

Can we predict who is most likely to become victimised?

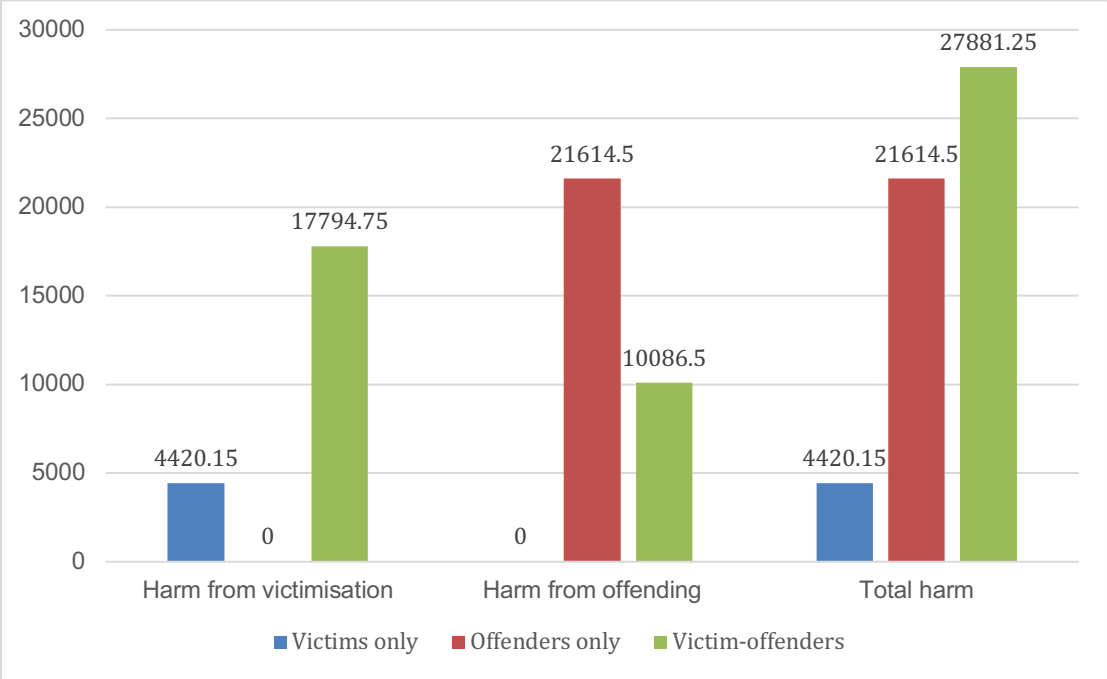
From the above regression models, it is possible albeit with some degree of inaccuracy to predict which of the TPP sample of low-level offenders are likely to become victims in the period post randomisation. There are clearly identified risk factors that relate to an increased risk of victimisation reporting however these do not equate to a certainty of being victimised. There are key differences between prediction of criminal victimisation versus predicting any kind of victimisation. With more variables showing significant relationships for predicted any form of victimisation. Arguably it should be known who is likely to report any form of victimisation – rather than just criminal. Since the non-crimes can be considered markers for vulnerability or other situations that may escalate at later points.

This sample is quite limited in size generally a larger number of cases would probably provide better predictions. Furthermore, the total number of variables used is very limited and is likely missing some critical variables e.g employment, education, timing in the lifespan of the individual and relationship status. It is possible with a larger sample with more variables there is the possibility to look at prediction in more depth. Possibly being able to build a more accurate model. What this data does illustrate is the possibility to look at this type of approach for application on a larger scale and indicates that there could be some benefits from this.

Do individuals become victims only, victim-offenders, offender only or are not involved after receiving an out of court disposal?

The concentration of harm amongst victim offenders is also seen in this study when harm from victimisation and offending is examined. Harm from the two years post intervention were calculated -both from that caused by the offenders from offending and caused to the offenders through victimisation. The sample was classified into three groups – victims only (i.e only recorded as victims after intervention), offenders only (only charged with an offence after intervention), victim-offenders (those who recorded both victimisation and offending on their records), and finally the non-involved. The sample was limited to two years of victimisation and offending data due to the records collected for offending limited to two-years.

Figure 42: Sum of total harm from offending and victimisation for victims only, offenders only and victim-offenders



The overall harm from victimisation and offending in the two years post intervention was 53,915.9 CCHI points – equivalent to the harm from 9.8 homicides. The victim-offenders accounted for 52% (27,881.25 CCHI points) yet were only 15% (n=60) of the total sample. The offender group were the

second most harmful at 40% (21614.5 CCHI points) but accounted for 31% of sample. The victim only group was the smallest proportion of the sample and accounted for only 8% of the total harm. The non-involved group was the largest at 43% of the sample.

Table 31: Showing the amount of harm and percentage of the total sample for each group

	total sample	*total harm*
Victims only	n = 46 (11%)	4420.15 (8%)
Offenders only	n = 124 (31%)	21614.5 (40%)
Victim-offenders	n = 60 (15%)	27881.25 (52%)
Non involved	n = 172 (43%)	0 (0%)

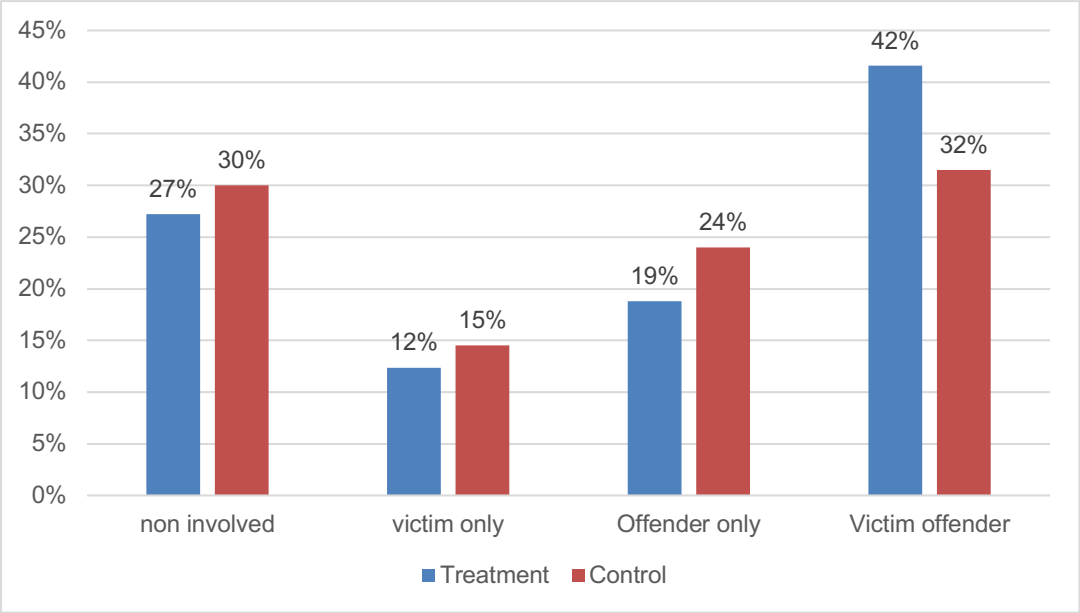
Therefore, a critical group to identify and target for the prevention of harm is not just those who are likely to be victimised or offend, but who will become a victim-offender (Hiltz, Bland and Barnes, 2020; Sandall, Angel and White, 2018). This is the group where the harm concentrates and is also a comparatively small group. It is possible that the variables predicting becoming a victim-offender differ to those associated with belonging in either the victim only or offender only groups. Other studies e.g. Cuevas et al (2007), have shown that victim-offenders can be different in some critical aspects to those involved in offending only, victimisation only or those who cease involvement in both. It is also possible that becoming a victim-offender may be more likely depending on assignment to the treatment or control group and could be an important fact to check regarding if there are any backfire effects from the intervention. Although as previously discussed this may relate to critical differences between the groups prior to intervention.

Group membership based on assignment

A brief check on whether if assigned to treatment or control influences whether the individual is likely to belong to which of the four groups was conducted. Prior to randomisation only 29% (n = 115) of the sample had no prior involvement with the police either as a victim or an offender. The smallest category was the victim only one 13% (n = 54), while offender only comprised 21% (n=86). The

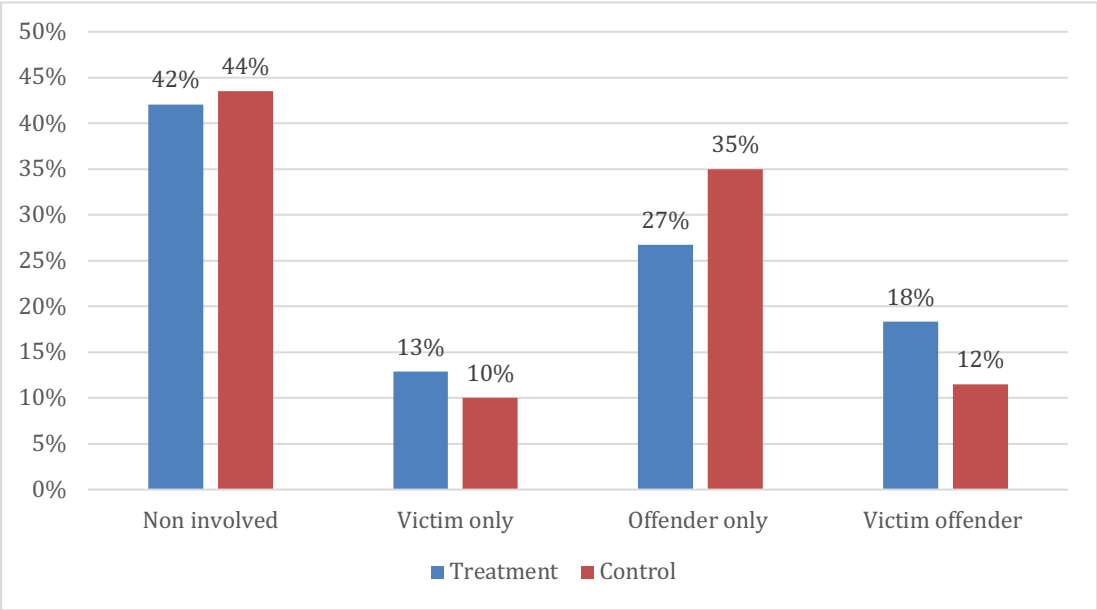
largest category was in fact the victim-offender one with 37% of the sample falling in the victim-offender category prior to randomisation.

Figure 43: Percentage of each group assigned to treatment or control prior to randomisation



Post randomisation the largest group was the non-involved with 43% (n= 172) falling in this group, the second largest group was the offender only at 31% (n=124). The victim only group was the smallest with on 11% (n=46) while the victim-offenders made up 15% (n=60). For post randomisation no significant differences (X-squared = 6.1272, df = 3, p-value = 0.1056) indicating that assignment does not affect the likelihood of belonging to a particular group post randomisation.

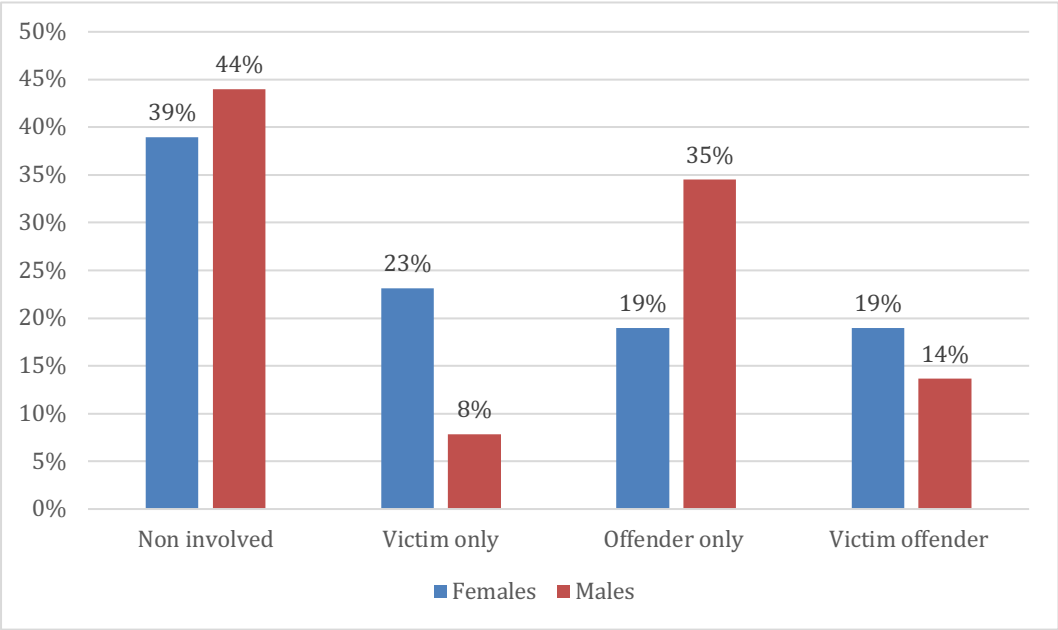
Figure 44: Percentage belonging each group in the two years post randomisation for both treatment and control



Effect of gender on group membership

Gender did influence which group the individual belonged to (X-squared = 22.406, df = 3, p-value = 5.369e-05). The non-involved group was broadly gender equivalent as was the victim-offender group, however the "*offender only*" was the second largest category for males, however females were more predominate in the "*victim only*" category.

Figure 45: Percentage of each gender for victim only, offender only and victim-offenders.



These findings again indicate an impact on police recorded victimisation and offending of gender and will be explored further in the latter models.

Prediction of those who will not be involved as a victim or offender – the non-involved group

The first model examined the effects of the variables on prediction of whether the individual will not be involved in offending or victimisation post. Overall, the model was statistically significant ($p<0.05$), explaining 20.5367% (Nagelkerke R2) of the variance in victimisation outcomes, correctly classifying 68.66% of cases. The model produced a sensitivity of 0.4826, with a specificity of 0.8391, positive prediction value was 0.6917, and negative prediction value was 0.6844. Prevalence was 0.4279 while the detection rate was 0.2065. Kappa was 0.3344. Critically the model produced a false negative rate of 22.14% with 89 cases predicted incorrectly.

Table 32: Model 5 Prediction of non-involved group membership post randomisation

Model and predictor	*Odds ratios*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept	n/a	-0.4626	0.1875	-2.4675	0.0136
Not involved prior	4.0067	1.3881	0.2585	5.3693	0.0000
Victim pre not violent or non-crime offence	2.4801	0.9084	0.3007	3.0213	0.0035
Victim only pre	1.5865	0.4616	0.3478	1.3271	0.1845
Age under 25	0.31813443	-1.1454	0.2270	-5.0466	0.0000

Variables: Not involved prior (0 = no, 1 = yes), Victim pre not violent or non crime offence (0 = no, 1 = yes), Victim only pre (1 = only victimisation recorded pre, 0 = other category membership pre), Age over 25 (0 = no, 1 = yes).

The key findings here show that four of the 20 possible variables presented the best fit for the model. These were not involved prior (i.e no victimisation or offending prior to randomisation date), being a victim of a non-violent offence, belonging to the victims only category prior, and age of the offenders. The interpretation of these results indicates that if they are not involved in victimisation and offending prior to randomisation they are more likely to remain uninvolved later. If they are victims of crimes prior but those crimes are not violent or non-crime markers, they are likely to be uninvolved post. The third variable - that of belonging to the victim only category prior to randomisation does not reach significance at the 0.05 level, however it does indicate that there are forms of victimisation associated with lower risk of continued victimisation. Finally, those who are not involved are more likely to belong to the older age category – which fits with the age old fact of the age crime curve which indicates as individuals age they are less likely to be involved in crime or victimisation.

From this it can be concluded that the non-involved group tend to not be involved in victimisation or offending prior, and older in age. If they are victims prior, then they will be more likely to be victims of non-violent crime (i.e theft or criminal damage) rather than of violent or having a non-crime marker.

Prediction of victims only

The second model examined the effects of the variables on prediction of whether the individual will be in only victim group post. Overall, the model was statistically significant (p<0.001), explaining 15.5994% (Nagelkerke R2) of the variance in victimisation outcomes, correctly classifying 88.56% of cases. The model produced a sensitivity of 0.0435, with a specificity of 0.9944, positive prediction value was 0.500, and negative prediction value was 0.8894. Prevalence was 0.1144 while the detection rate was 0.0050. Kappa was 0.0628. The model produced a false negative rate of 10.95% with 44 cases incorrectly predicted.

Table 33: Model 6 Prediction of victim only group membership post randomisation

Model and predictor	*Odds ratio*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept	n/a	-1.8909	0.3163	-5.978	2.26e-09 ***
Gender (male)	0.39317393	-0.9336	0.3490	-2.675	0.007473 **
Victim only pre	2.9098	1.0682	0.3876	2.742	0.006099
Marker prior	3.8778	1.3554	0.3866	3.506	0.000455

Variables: Gender (0 = female, 1 = male), Victim only pre (0 = no, 1 = yes), Marker prior (0 = no, 1 = yes)

The findings here indicated that only three of the 20 possible variables presented the best possible fit for the model. These were gender, belonging to

the victim only group pre, and having a marker (non-crime) victimisation prior to assignment. The coefficients indicate that being female increases the risk of belonging to the victim only group, additionally belonging to the victim only class prior to randomisation also increases risk of belonging to victim only group post. Finally possessing a non-crime marker prior to randomisation indicates increased likelihood of risk of belonging to the victim only group post.

Prediction of offenders only

The third model examined the effects of the variables on prediction of whether the individual will be in only offender group post. Overall, the model was statistically significant (p<0.001), explaining 15.76952% (Nagelkerke R2) of the variance in outcomes, correctly classifying 69.65% of cases. The model produced a sensitivity of 0.2016, with a specificity of 0.9173, positive prediction value was 0.5208, and negative prediction value was 0.7203. Prevalence was 0.1194 while the detection rate was 0.0622. Kappa was 0.1432. The model produced a false negative rate of 24.63% with 99 cases classed incorrectly.

Table 34: Model 7 Prediction of offender only group membership post randomisation

Model and predictor	*Odds ratios*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept	n/a	-1.9614	0.3611	-5.432	5.58e-08 ***
Assignment (Treatment or control group)	n/a	-16.5401	611.5288	-0.027	0.97842
Gender (male or female	2.4271	0.8868	0.3143	2.821	0.00478 **

Victim offender prior	1.3877	0.3277	0.2462	1.332	0.18309
Victim only prior	0.39301671	-0.9340	0.4528	-2.063	0.03916 *
Offender pre TPP	n/a	16.1972	611.5288	0.026	0.97887
Victim of violence no marker	1.93407969	0.6597	0.2959	2.229	0.02581 *
Offender only prior	2.03180892	0.7090	0.2804	2.529	0.01145
Age under 25	1.68715852	0.5231	0.2303	2.272	0.02311

Variables: Assignment (0 = control, 1 = treatment), gender (female = 0, male = 1), victim offender prior (0 = no, 1 = yes), victim only prior (0 = no, 1 = yes), offender prior (0 = no, 1 = yes), Victim of violence with no marker (0 = no, 1 = yes), Offender only prior (0 = no, 1 = yes), Age under 25 (0 = no, 1 = yes).

The findings here indicated that 9 of the 20 possible variables presented the best possible fit for the model. These variables were assignment, gender, victim offender prior, victim only prior, offender prior, victim of violence with no marker, offender only prior, age under 25. The coefficients of this model indicate several key facts. Firstly, that assignment to treatment or control group has no significant effects (p = 0.98), secondly that males only are more likely to belong to the offender only group. If they were only victimised prior to randomisation

then they were less likely to belong to the offender only group post, and more likely to be a member of the offender only group before. Those under 25 were more likely to belong to the offender only group. That the offender group were 1.93 times more likely to be a victim of violence but not have any no crime markers is suggestive that they tend not to have the co-occurring issues that may lead to them acquiring non crime markers. Further exploration of the circumstances that the offender only group are experiencing their violent victimisation in may be beneficial. Hypothetically it could relate to public place violence occurring outside of the home rather than domestic violence.

Prediction of victim-offenders

The fourth model examined the effects of the variables on prediction of whether the individual will be in only offender group post. Overall, the model was statistically significant ($p<0.001$), explaining 19.10655% (Nagelkerke R2) of the variance in outcomes, correctly classifying 84.58% of cases. The model produced a sensitivity of 0.0500 with a specificity of 0.9854 positive prediction value was 0.3750, and negative prediction value was 0.8553. Prevalence was 0.3750 while the detection rate was 0.0500. Kappa was 0.0551. The false negative rate was 14.18% with 57 cases classed incorrectly by the model as not being victim-offenders.

Table 35: Model 8 Prediction of victim-offender group membership post randomisation

Model and predictor	*Odds ratios*	*B (Coefficent)*	*SE*	*Z value*	*P value*
Intercept	n/a	-3.0457	0.3942	-7.727	1.10e-14 ***
Assignment (Treatment)	1.9410542	0.6633	0.3098	2.141	0.0323 *
Number of victimisations prior	1.11894731	0.1124	0.0652	1.724	0.0847 .

Not involved prior to randomisation	0.38469636	-0.9554	0.4676	-2.043	0.0410 *
Criminal damage offending prior to randomisation	1.99217804	0.6893	0.3692	1.867	0.0619
Age under 25	4.16015435	1.4257	0.3261	4.372	1.23e-05 ***

Variables: Assignment (0 = control, 1 = treatment), Number of victimisations prior (Categorical 0 – 20), Not involved prior (0 = no, 1 = yes), Criminal damage offending prior (0 = no, 1 = yes), age under 25 (0 = no, 1 = yes)

The findings here indicated that five of the possible 20 variables presented the best possible fit for the model. These were assignment, number of victimisations prior, not involved prior to randomisation, criminal damage offending prior to randomisation and finally age under 25. These models showed five key findings; firstly, that assignment to the treatment group increased the likelihood of becoming a victim-offender – this may be due to the issue discussed earlier in this thesis that showed the treatment group females had higher levels of initial victimisation than the control group. Secondly more victimisation prior increased the risk of belonging to the victim offender group post – although this only reached significance at the 0.1 level. Those who were not involved in victimisation or offending were less likely to belong to the victim-offender group post. The final critical variable was the age of the offender, the victim-offenders were more likely to be younger than the non-involved or victim-only groups.

Discussion

The critical findings suggest to some degree prediction of becoming a victim or victim-offender in future is possible, and this could form part of a triage tool. The first part of this chapter looked primarily at predicting victimisation with several critical findings. Some of these findings from this study supported Mckillop et al (2016) however other aspects contrasted with their findings. Aligning with Mckillop et al (2016) continued offending was one of the best predictions of continued victimisation, however in their model prior victimisation in fact reduced the risk of future victimisation. This finding is contrary to both the findings in this study and prior research e.g Tseloni and Pease (2005). Why Mckillop et al. (2016) sample saw a negative relationship between prior victimisation and latter victimisation is unclear, speculatively it may be that youths were entering the GYFS at points were their exposure and vulnerability to victimisation was declining. Or the GYFS may in fact have been effective in preventing victimisation – although this was an effective seen in both the treatment and comparison groups.

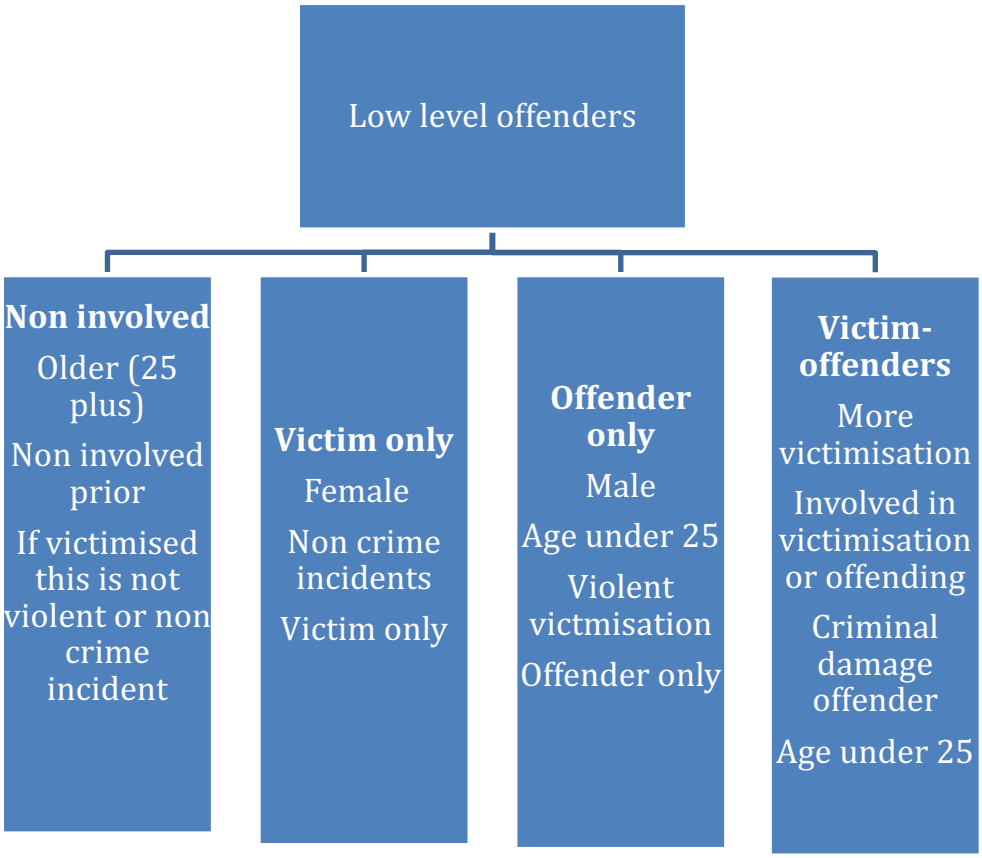
Here however the data supports that prior victimisation relates to an increased risk of latter victimisation, and the total number of victimisations was significant. This would support the suggested approach prior that additional resource should be placed to the "*power few*" that have reported significant numbers of victimisation. Other than continued offending gender was the largest risk factor for victimisation, with females 2.11 times more likely to report any form of victimisation post and 1.77 times for criminal victimisations. As previously discussed in this thesis female low-level offenders appear to have more problematic victimisation histories than males, and here the evidence is that they are more likely to be victimised during the follow up period.

As well as considering the victimisation factors, this research also considered whether the variables associated with prediction group membership post randomisation date differed to identify if it was possible to predict whom would become victim only, offender only, victim-offender or non-involved in the period post. Prior research suggests there are key differences between victims, offenders, and victim-offenders (e.g Cuevas et al, 2007), and are known to be

a particularly high harm. Victim-offenders comprised only 15% of the total sample in the two years post randomisation they caused or had committed on them 52% of the total harm. Therefore, arguably from a targeting perspective identifying whom the victim-offenders are likely to be in future as well as previously is a key goal.

There were key differences found between risk factors associated with the four groups (Figure 46). Those found not to be involved in victimisation or offending post intervention tended to not be involved in victimisation or offending prior (i.e they were naïve entrants to the CJS), if they were victimised then this was not a violent or non-crime offence, and finally they tended to be over the age of 25. Victims only were more likely to be female, be involved in only victimisation prior to intervention and finally have a non-crime incident prior. These appear to be markers of being vulnerable to only victimisation accompanied by very little offending and may require consideration of different more victim-focussed approaches to the other groups. Offender only were more likely to be female, less likely to have only been victimised prior, be a victim of violence but not have any no crime markers, be younger and finally be a member of the offender only group prior. While victim-offenders may have more victimisation prior, be involved in victimisation or offending, and be a criminal damage offender.

Figure 46: Showing significant risk factors for each group



Here the models used to predict group membership produced a high degree of false negatives i.e the models were predicting that individuals would not become victims, offenders, or victim-offenders and yet unfortunately they did so. The rate of false negatives varied from 10.95% to 24.63%, unarguably a rate of false negatives too high for these models to be taken and used in practice. However, the Turning Point sample is a very specific and limited group of offenders, that were carefully selected for eligibility for this specific trial. It is entirely possible that with a more diverse and larger sample with additional variables on victimisation and offending – e.g age when first victimised, mental health issues and maybe the addition of self-reported victimisation and offending – more accuracy can be achieved. For example, the HART model was build using five years of custody data, totalling around 104,000 unique events, with 34 predictor variables used.

Despite the high degree of false negatives produced by these models they do however highlight that there are critical differences between the non-involved, victim only, offender only and victim-offender groups. This may begin to indicate within groups of low-level offenders considered for delivery of an OOCD who is the most appropriate for the "*light touch*" basic version versus a more intensive intervention. From the research here some groups can be readily identified that may be triaged to a higher level of resource than other groups.

Implications for policy and practice – the so what question

When the ideal moment for an intervention to take place is not something that this study can tell. However, when individuals encounter the CJS there may be a historic event or events, as well as demographic features (e.g age and gender) that mean they are at higher risk of offending in future or indicate increased vulnerability to victimisation or both. As with Mckillop et al. (2016) one of the best predictors of victimisation post was continued offending. Therefore, monitoring low level offenders may be valuable to gage continued victimisation risk after intervention.

It may be possible to create an algorithm or similar forecasting tool to identify individuals and groups at greater risk of victimisation or becoming a victim-offender. The models used here all produced high rates of false negatives, which should be reduced before considering utilising an algorithm as part of practice. Further research would be necessary to refine the models and identify if it is possible to reduce the false negative rates. These models could also potentially be applied to all offenders entering custody akin to the approach in HART (Oswald et al, 2018) to identify those most suitable for OOCD, and whether a "*light touch*" out of court disposal or a more intensive intervention is the most suitable option.

An interesting further piece of research would be the investigation of how accurate prediction of victim-offenders by police officers would be comparative to the prediction models. Previous research has suggested that human accuracy is limited and is typically more accurate when combined with statistical forecasting (Oswald et al, 2018). Movement to a computer only

decision would be inadvisable since sometimes there are contextual factors that the human only can identify – e.g a false imprisonment could be an event where a child is shut in and told to clean their room, but also an event where someone is forcibly held in a house. Clearly one event is associated with a higher risk, but to the computer they may appear the same. The best practice from research would be to move towards a guided discretion model, where the algorithm is used to inform decision making, with the human given the ability to override where appropriate (Oswald et al, 2018).

Despite these limitations of the current method and dataset some avenues to explore in future research are highlighted through this work. A potential starting point strategy is outlined in table 36. From this research the main recommendations for triage would be to focus on firstly the younger portion of the sample, the under 25s were 46% of the total sample yet accounted for 68% of the harm from victimisation in the two years post and 84% (table 38) of the offending harm. Suggesting that younger low-level offenders eligible to receive an OOCD are both more active offenders and more vulnerable to victimisation. While this is a fairly large proportion of the sample at 46% (table 37) and does not fit the Sherman (2007) definition of the "*power few*" per se age is likely to be a prime consideration in any triage tool.

Table 36: Potential priority categories suggested by this research

Priority	*Suggestions of who to prioritise at the point of entry into an OOCD (For prevention of future offending or victimisation)*
Higher	- Age under 25 - Females with a history of victimisation - Non-criminal markers - Individuals with a high number of victimisations prior
Medium	- Victimisation prior – potentially particularly violent victimisation - Offending prior – potentially in this sample particularly criminal damage offending

Lower	- Those with no victimisation or offending recorded up to the date of randomisation. - Age over 25

Other high priorities are clearly females with a history of victimisation, composing only 15% (n=62) of the total sample they recorded 70% (n=221) of the total number of victimisations and 42% (9336.3 CCHI points) of the harm post intervention. The final priority category indicating by the study would be those with no crime markers prior to TPP, this group was 12% of the total sample and accounted for 44% (n=138) of total number, and 34% of the total harm from victimisation. However, their offending harm was only 15% of the whole, suggesting these individuals tend towards victimisation roles and interventions for them should be focussed on victimisation primarily. Some of these groups are overlapping e.g under 25s who also have non crime incidents. Where priority classifications overlap these could be clear priorities for triage into the more intensive version of the OOCD.

Table 37: Showing the total number and percentage victimisation post intervention for the highlighted categories for triage priority.

Category	*N*	*% of total number*	*No. of victimisation post*	*% Total victimisation*
Females with a history of victimisation	62	15%	221	70%
Non crime marker prior to randomisation	48	12%	138	44%
Age under 25	184	46%	204	65%
Violent victimisation prior to randomisation	98	24%	158	50%
Any type of victimisation prior to randomisation	202	50%	229	73%
Criminal damage offender prior	56	14%	58	18%
Any type of offending prior	240	60%	292	93%
Violent offending prior	145	36%	141	45%

No victimisation prior	200	50%	85	27%
No offending prior	162	40%	22	7%
Age over 25	218	54%	110	35%
Total	402	100%	314	1

Table 38: Showing the total of harm and percentage for victimisation and offending post intervention for highlighted categories with defined priorities.

Category	*N*	*% of total*	*Amount of victimisation harm post*	*% of total victimisation harm Post*	*offending harm*	*% of total offending harm Post*
Females with a history of victimisation	62	15%	9336.3	42%	4360.25	14%
Non crime marker prior to randomisation	48	12%	7596.65	34%	4728.75	15%
Age under 25	184	46%	15210.5	68%	26746.8	84%
Violent victimisation prior to randomisation	98	24%	9370.95	42%	8390.25	26%
Any type of victimisation prior to randomisation	202	50%	17908.1	81%	14268.5	45%
Criminal damage offender prior	56	14%	3094.5	14%	7739.75	24%
Any type of offending prior	240	60%	19320.8	87%	25287	80%
Violent offending prior	145	36%	12328.6	55%	20057.5	63%
No victimisation prior	200	50%	4306.8	19%	17467	55%
No offending prior	162	40%	2894.1	13%	6448.5	20%

Age over 25	218	54%	7004.4	32%	4988.75	16%
Total	402	100%	22214.9	100%	31735.5	100%

The information in this study would suggest deprioritising those without a history of victimisation or offending, as these individuals are more likely to be part of the non-involved group post. Older low-level offenders also appear to pose less issues. They tend to be less vulnerable to victimisation and less active offenders. Those over 25 were 54% of the total number of the sample yet only caused 16% (4988.75 CCHI points) of the offending harm.

As well as prioritising younger offenders, females with a history of victimisation and those with non-crime markers, using an EBP approach would suggest placing resources into those identified as most vulnerable or at risk which would be victim-offenders. Those predicted to be involved as victim-offenders were found to be where the harm is most concentrated consistent with Sandall et al 2018 and Hiltz, Bland, and Barnes (2020). Victim-offenders may present the primary target group for a more intensive OOCD model, although due to minor types of victimisations for some victim-offenders the basic OOCD model utilised by TPP may still be appropriate. While the models predicting outcomes here presented significant degrees of inaccuracy that would prevent their current use in practice, this is certainly something to investigate further in future.

A decision-making tool that could assist police with understanding who is at most risk of future victimisation, offending or becoming a victim-offender could have significant benefits. Identification of likely group membership could allow plans to be tailored with different priorities. For example, those that are predicted to be offender only the focus could be towards targeting criminogenic needs only, and vice versa for the victim only group. While victim-offenders could have plans tailored to approach both victimisation and offending. However, a RCT of this approach to investigate if tailoring plans is the most effective strategy, since due to the victim-offender overlap the most effective type of intervention may be one that approaches both victimisation and offending. Even in those who are predicted to be offender only.

Limitations

This analysis focused on prediction of binary outcome i.e did the individual become victimised or become a victim-offender. It may be beneficial for future to research to identify if it is possible who becomes "*power few*". This could be both in terms of quantity and harm. An approach like that presented by HART where offenders are placed into three categories – high, medium, and low may also be beneficial for resource allocation, rather than using a simple binary outcome.

It may also be beneficial to consider if different types of offending or victimisation are more predictable than others. This may be particularly relevant for violent victimisation. The variables did not include a timing of victimisation respective to the age of the victim at the time. It may be a beneficial avenue for future research to pursue if victimisation within certain time periods in the lifespan produce an increased likelihood of further victimisation or becoming a victim-offender. Here the consideration was factors that related to victimisation and offending prior to intervention against outcomes afterwards, yet further analysis looking at trajectories over different time points may also be beneficial, looking at patterns of escalation and desistence in victimisation and offending may provide additional insights into the victim-offender overlap.

Another possibility is the use of different prediction methods for example random forest may produce more accurate results. Random forest can model relationships in non-linear wats and balance the costs of different types of errors (i.e false positive versus false negative) (Oswald et al, 2018). This model can be constructed from multiple regression and decision trees which are combined into the full forecasting model, each "*tree*" casts a vote about a probable outcome which are then summed to give an overall outcome based on what receives the most votes (Oswald et al, 2018).

Here the factors available for analysis were limited to only those provided within the police reports, these included date of victimisation, type of victimisation, date of offending, type of offending and some basic demographic variables such as age and gender. While evidently some of these showed significant

relationships to the outcomes the models were only able to explain a small proportion of the variability. Potentially additional factors such as employment, education, residential postcode, and measures of interpersonal differences such as self-control, anxiety and depression may be useful additional factors to consider. Although it should be noted that the HART algorithm the 34 predictor variables used the majority (29) came from the suspects offending history (Weir et al, 2018), so it may not be necessary to expand variables extensively beyond those available within police data. In fact, in the earlier example on domestic violence used by Grogger et al. (2021) addition of extra variables from DASH forms didn't appear to increase model accuracy above those available from criminal history.

Conclusion

This chapter explored if based on what is known about the criminal and victimisation history of low-level offenders it is possible to predict both victimisation and group membership including the prediction of victim-offenders. Based on the analysis in key considerations are firstly if the individual continues offending post, while involved in offending the individuals' risk of continued victimisation is higher than those who cease offending. Monitoring offending after an intervention may assist in identifying those at highest continued risk of victimisation. Prior victimisation, offending, gender, and age also relate to increased victimisation. Suggesting the potential is there to build triage tool to distribute resources relative to those most a risk of victimisation.

Dividing the sample into four groups – offenders only, victims only, non-involved and victim-offenders indicates that key variables associated with each group are different. Post intervention the victim-offender group both caused and suffered the most harm, therefore prediction of victim-offenders may be of value. Victim-offenders tended to be younger and be involved in victimisation or offending prior to randomisation. While the models built here had high levels of false negatives potentially with a larger sample to build the models on greater accuracy could be achieved. Despite the inaccuracy the models do suggest some key groups to target. Keys groups are younger offenders, particularly those with a history of offending or victimisation, female low-level offenders

especially those with a history of victimisation and finally those with non-crime markers.

Chapter 11

Conclusion

The most important takeaway point from this project is - *from police records alone* - a large overlap (63%) exists for this sample of low-level offenders. Individuals reported up to 34 victimisation events, ranging from minor thefts, assaults, criminal damage, to seriously harmful victimisation types such as rape and attempted murder. There were clear gender differentials for some aspects of victimisation and offending. Females tended to be more heavily victimised while males were more heavily involved in offending. For females more harm came from sexual victimisation whereas for males – violence. There was significant variation in the victimisations reported by this sample, with the majority reporting none or few events, however a small proportion of the sample – classically called the "*power few*" – record a disproportionate amount. This is consistent with previous literature and highlights that even within those defined as low-level offenders there can be substantial variation. The victimisation experienced could be complex, harmful, and for some likely highly problematic.

Violence is the most prevalent type of both offending and victimisation and has the largest overlap. Showing that low-level offenders committing violent offences are likely to also be being violently victimised. From the use of the CCHI violent victimisation caused 31.1% of the total harm in these low-level offenders. Making violence not only the most prevalent type of offending and victimisation but also the most harmful. The prevention of violence – both victimisation and offending is a critical consideration to prevent future harm. Where and whom violent victimisation is being committed by and occurring varies significantly between males and females – with females more at risk within the home, and from offenders they know, whereas males show increased risk in public spaces, and are less likely to know the offender.

While due to the use of police records alone and the limited number of variables available definitive conclusions on the mechanism of the victim-offender overlap are impossible from this research. Offending and victimisation are linked in complex ways, and while a large overall overlap exists the correlation between victimisation and offending here was only a weak positive. This

suggests that within this sample there are different groups of victim-offenders, rather than offending and victimisation increasing in concert. This is contrary to some prior research which suggests that both increase in tandem, however, matches with others that indicates victimisation and offending can have more complex relationships.

With some tending towards suffering more victimisation and others more involved in offending. Two mechanisms can potentially be suggested from the data in this study. Firstly, it was common for victims to know their offenders suggesting who they are associating with, know and are selecting as partners relates to their risk of victimisation. Whom they know may be influencing one aspect (victimisation or offending) more than the other. Secondly risky lifestyles may provide a framework for explaining who is an most risk and where. Violent victim-offenders are more likely to be experiencing violent victimisation both within and outside of the home environment – it is possible that the victim-offenders have greater exposure to risky settings than those involved in victimisation or offending only. However, neither of these two proposed mechanisms can explain the victim- offender overlap in full.

As previous authors have advocated there needs to be a better underlying theory for the overlap – one that can be tested, proved, or disproved and then improved. This theory needs to put the person into the setting and be able to explain the development and links between victimisation and offending. SAT may provide one framework for potential exploration in future, arguably from the current research base the victim-offender overlap is the outcome of offending propensity and vulnerability to victimisation, and the exposure to setting conducive to one, or both outcomes.

The framework also suggested multiple points and approaches for intervention. The victim-offender overlap could be approached at an environmental level – by policing or intervening to change the environment to reduce criminogenic or victimogenic opportunities. Or we could aim to reduce the overlap through early intervention, attempting to reduce the development of criminogenic or victimogenic propensities within the offender. The final approach is what to do

when they do enter the CJS gateway, here the focus was on suggesting approaches that could be applicable for treating the offender approach. Consideration of the victim side could also be beneficial for recognising appropriate interventions. The most effective long-term strategy for victim-offenders indicated by the proposed mechanism would likely be as proposed here, that of a multifactorial one. Focussing intervention with many different methods rather than concentrating on a single point.

As well adding to the understanding of the victimisation and victim-offender overlap in low-level offenders, this thesis also looked at how victimisation harm was distributed through the sample. Harm is critical because crime and victimisations are not created equal, and if they are counted by number alone then murder and shoplifting would have the same effect on the overall count. Using a harm score draws attention to those crimes and victimisations that are causing significant harm. As with previous studies harm was not distributed evenly and instead a small proportion of the sample suffered the greatest proportion of harm. Harm was found to concentrate within a smaller number of individuals than number. However total number of victimisations is also an important consideration to provide context for how the harm is occurring. If the overall harm is the result of numerous moderately harm victimisations, single or few serious harmful victimisations or from the individual suffering very frequent but not seriously harmful victimisations, can be identified.

Arguably the best approach is to use both harm and number of victimisations or crimes and to group them into high and low harm/frequency categories. Here five distinct categories were found and labelled – priority victims, high harm victims, high frequency victims, low harm, and low frequency, and those not victimised. Different approaches can then be applied to each grouping of harm and frequency. Overall use of a harm index allows patterns in harm and individuals suffering high harm to be identified. Specifically, for the victim-offender overlap whether more harm is being incurred from victimisation or caused by offending can be measured, and victim-offenders could be grouped by harm and number of victimisations and offences.

Victimisations should be measured alongside offending when measuring the success or failure of an intervention aimed at preventing offending. There was no "*win*" in terms of preventing victimisation for either prevalence, survival, frequency, or harm using an OOCD rather than the usual court processing. In fact, the treatment side showed increased victimisation on all measures. Critically the TPP treatment group despite the randomised control trial design the treatment group ended up with significantly higher levels of victimisation before randomisation. This difference was found to be related to a small group of females in the treatment group who reported significantly higher rates of victimisation prior to entering the OOCD. Excluding the female treatment group from the analysis showed results between males on all outcome measures to be comparable and there was no backfire effect from the OOCD.

That the results here did not indicate a victory for TPP for preventing police recorded victimisation, not surprising since the overall TPP results indicated the OOCD was "*as good as*" court processing, given the victim-offender overlap would seem likely that any impact on offending would be seen in victimisation. The results here indicate that TPP would likely be safe for male low-level offenders, but further research with a larger sample of female low-level offenders may be necessary to confirm that the negative results seen here for victimisation were due to the pre randomisation differences. Adaptation of the original design of TPP to focus firstly on victimisation and offending rather than just offending and integrating some more intense therapeutic interventions with a longer term follow for those low-level offenders most at need may produce better results on re-offending and re-victimisation. At this time this is a hypothetical approach one that would require further testing. A further consideration is rather than giving the responsibility to run the interventions to offender managers who serving police officers, instead move the intervention to trained navigators such as those used in Checkpoint. Using non police officers with specific training to manage low level offenders may increase the legitimacy of the disposals and willingness of offenders to comply and disclose difficult issues such as victimisation.

The last part of this thesis explored if prediction of victimisation is possible through the criminal and victimisation history. While the models used here did not adequately explain victimisation and there are likely additional relevant variables, they did present some important findings. If offending continues post intervention, then the risk of continued victimisation remains higher. Continued monitoring of low-level offenders may be important to evaluate continued risk of victimisation. Prior victimisation, offending, gender (female), and age (under 25) also related to increased victimisation risk, and reduced survival outcomes. Therefore, it may be possible to build a model that could predict victimisation and be used to triage offenders into appropriate levels of victimisation intervention.

Victim-offenders were the group post that caused and suffered the most harm, making identification of future victim-offenders a priority. Breaking the sample into four outcome groups - offenders only, victims only, non-involved and victim-offenders found predictive variables differed. Victim-offenders tended to be younger and be involved in victimisation or offending prior. Victim only tended to be female, with a history of only victimisation and have no crime markers. Offender only tended to be male, younger, be victims of violence, and have a history of offending. The models built here had high levels of false negatives, potentially with a larger sample or a different modelling approach e.g random forest greater accuracy could be achieved. Despite the lack of accuracy related to the models they did highlight some important priority groups to consider; firstly, younger low-level offenders who are more at risk of continued offending or becoming a victim-offender, secondly females with a history of victimisation and finally those with no crime markers. Where priority groups overlap ie a young female with a history of victimisation, these could be the individuals to place at the highest precedence.

Future research

While the literature on the victim-offender overlap has grown substantially from the initial early studies, there are clearly still numerous gaps which require additional research. Crucially the victim-offender research is lacking are studies that effectively test mechanisms, and long-term consistency and change of the

overlap in individuals. Samples particularly lacking in the current literature base are studies using adults, currently data sets using youth or adolescent data predominate the research base. To study how the overlap persists – or doesn't into adulthood more studies using longitudinal samples are necessary. Studies should also consider the addition of a harm score into research measuring crime. Utilising a harm index is an approach that considers that not all crimes are created equal and can allow the approximation of harm suffered or committed. Measures of self-reported victimisation and offending alongside that of official records should be considered. This would allow the analysis of the degree to which different victim-offenders do engage in reporting victimisation to the police. As well as examining what offending behaviours are missed in official records.

It is clearly critical to expand the research base on the effectiveness of interventions, currently only this and one other study (McKillop et al, 2017) have tested the effects of an offending intervention on victimisation post-treatment. Numerous interventions that could be utilised to treat victim-offenders currently only report offending impacts, giving a very limited evidence based for suggesting appropriate interventions for victim-offenders. Collecting victimisation data should be a goal from the outset for future studies in intervention and it may be possible to retroactively collect victimisation data for recently completed intervention studies e.g Checkpoint and ongoing ones e.g London TPP. Testing of new interventions designed to explicitly designed to target the victim-offender overlap, would also be an essential avenue to test the theories and possible interventions forwarded in this research.

The final section of this study looking at prediction identified some crucial avenues to explore in future, and some potential groups to consider as priorities. The models used arguably produced a high number of false positives and false negatives therefore could not be readily integrated into practice in their current forms. However, these models did identify some important variables and considerations, and suggest some key avenues to pursue. Future research should aim to gather data on a larger group of offenders. This could involve the collection of data for more serious offenders expanding beyond just

consideration of risk factors for just low-level offenders. Like the HART model prediction of high, medium, and low risk victim-offenders may be possible. Another potential avenue to explore would be to identify victims that go onto become offenders.

Implications for policy and practice

1). Policy needs to address the victim-offender overlap

Firstly, that due to the significant overlap between victimisation and offending policy needs to explicitly take account of this overlap. While it may be an uncomfortable truth, the evasion of truth is never a good or sustainable policy long term. Any policy or intervention applied to either offenders or victims needs to acknowledge that that among those that it will be applied to there will likely be a significant number of victim-offenders. Victimisation of offenders also needs to be taken seriously, to encourage the reporting of victimisation and to alleviate the harm caused. Police data systems should be set up to collate victimisation and offending data under one file or identity for everyone, which would make identifying victim-offenders and completing research on the victim-offender overlap an easier task. This may also improve the ease of building forecasting tools for prediction, since currently police systems may pose issues in practice due to the separation of records. This necessitates the manual matching of records, which is both time consuming and can lead to errors due to missing data or misspelled names.

2). Prevention of violence

Violence and the harm from violence is a recurrent issue among this sample of low-level offenders and appears to be linked to different primary causes depending on gender. Among the females in the sample there is a significant amount of partner related violence, while the males tend to be involved in more public place violent victimisation. For the females' prevention of domestic violence may be the most important aspect for preventing violent victimisation, while for the males' strategies to reduce public place violence and the types of risky behaviours that place them at risk of both violent victimisation and involvement in violent offending may be more applicable. Violence prevention could be based at the community level as well as towards individuals. The most

effective approach may be to consider multiple levels of prevention using both community approaches such as hot spot policing and individual intervention. Early intervention may also be critical, although for the offenders in this study early intervention is clearly not applicable. Early prevention may form part of a long-term strategy to reduce both victimisation and offending in future cohorts. The final approach for once violence victimisation has occurred to alleviate the effects and prevent future victimisation or offending.

3). Identify where the most harm is occurring

Where the most harm is occurring or being caused needs to be identified, this can be accomplished using a crime harm index like the CCHI. This shifts the focus from considering crime by number alone and instead concentrates attention to those who are suffering or causing significant amounts of harm. Harm cannot be considered out of context with frequency - using the frequency alongside harm allows different groups to be identified. These groups can then be prioritised and tackled with different approaches depending on the harm and frequency. As well as identifying harm and number finding the victim-offenders could be critical these individuals may have more exposure to risky environments and delinquent peers that place them at higher risk of offending or being subject to victimisation that those involved in either offending or victimisation alone.

4). Inclusion of a measure of victimisation for research into offending and vice-versa

Any research into offending or victimisation needs to include a measure of the other, since arguably due to the overlap between the two one cannot be understood without the other. This is also true for research into interventions – if only one or other is considered the wrong aspects could be being targeted, or the intervention could be having unknown backfire effects. Additionally, even with RCT there can be significant differences within the groups that if only one aspect is measured are missed. Due to the strong and consistent links between victimisation and offending if one group accidently ends up with more victimised individuals in than the control this could influence the outcome of the study – both for victimisation and for potentially offending. Measurement of both

victimisation and offending allows these groups to be identified and potentially controlled for in the results.

5). Treat victimisation and offending together

Potentially interventions into offending could concurrently treat victimisation and the same time – and vice versa. While this would need some consideration of the best approaches and testing to validate this approach. The type of OOCD utilise by TPP could be adapted and repurposed for this tactic for low-level offenders. OOCDs such as TPP could increase the numbers of low-level offenders who are facing some form of justice for the offence they have committed and be more satisfactory for the victims. As well as presenting a more sympathetic way of dealing with potentially heavily victimised low- level offenders. While TPP originally focussed on an offending desistence policing approach that emphasised celerity and certainty, tackling the victim-offender overlap could add aspects of a therapeutic approach that would target both the criminogenic and victimogenic aspects of the individual's behaviour. When using this approach different groups of victim-offenders would need to be identified – this may be related to offence type or gender. A triage system could be developed using the CCHI and offending/victimisation frequency to distribute resources to the most needy and problematic. This could be composed of two types of OOCD – the first a "*light touch*" approach based on TPP and Checkpoint and the second a more intensive version with a longer follow up period and increased investment in high quality evidence-based intervention.

6). Creation of an algorithm to accurately forecast victim-offenders

Triage based on previous harm done or caused, and number of offences suffered or committed is one possible method. However, this is based on the past and offenders may have naturally began to cease involvement in offending or victimisation making the expenditure of resources unnecessary. An algorithm could be utilised to predict those most likely to be harmed or cause significant harm in future and be constructed firstly to predict risk of victimisation and secondly to predict whether the individual is likely to become offender only, victim only, non-involved or a victim-offender. While there has been resistance

to prediction and algorithms in policing it may be possible to construct them to assist in decision-making, making them a critical tool for use in EBP. Providing critical information for police officers faced with hard decisions on managing risk and deciding appropriate disposals. Human decision-making alone may not sufficiently accurate and supplementation of them through algorithms may help to improve decision making. These could inform decisions about whether OOCD are appropriate disposals based on the risk of re-offending posed by the offender, or whether the individual needs to be triaged to be more intensive approach. There are clearly caveats to use of algorithms and practical issues to overcome but it is certainly an approach that requires further investigation.

Conclusion

This thesis focussed on the victimisation and the victim-overlap in low-level offenders who were part of the TPP and focussed on three critical areas. Firstly, measurement of victimisation and the victim-offender, secondly using a crime harm index to measure harm from victimisation, thirdly used a novel approach by examining victimisation post intervention and finally looked at the possibility of prediction. The critical finding here is that there is large victim-offender overlap in low-level offenders. Any intervention, policy or practice aimed offenders needs to be created with the understanding that among those offenders that it would be applied to there will be a significant number involved in victimisation. Among these victim-offenders there no single blanket type and involvement in victimisation and offending varies significantly. The victimisation of low-level offenders can also be causing significant harm, utilising a crime harm index allows those suffering the greatest amount harm to be identified, rather than if victimisation was considered by number alone. It is essential that researchers consider both victimisation and offending when researching criminology, this is particularly true for studies into interventions. Failing to measure victimisation can lead to unknown differences between treatment and control groups and may miss key findings related to the impact or lack of it on victimisation of the intervention. A final avenue to pursue is that of prediction, the findings here while not able to produce accurate ready to use models, do indicate that utilisation of victimisation and offending history could be used to predict not only victimisation but also who is likely to become a victim-offender.

Once again, the victim-offender overlap proves to be an important phenomenon in criminology, and matters for policy, research, and potentially informing more effective interventions to prevent victimisation and offending in future.

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Appendix A: Eligibility criteria

Randomizer Case Number:

Custody No:
Custody Officers Collar No:
1. Is this a case involving a single defendant? Yes/No
2. If no, please list the custody record numbers for all the defendants

Defendant 1:

Defendant 2:

Defendant 3:

Defendant 4:

Defendant 5:

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3. Is the defendant (are any of the defendants) under 18?

4. Does the defendant (any of the defendants) have any previous convictions for a criminal
offence?

5. Is this offender (are any of the offenders, where there are multiple defendants) likely to be sentenced to a period of custody for this/these offences?

6. Is this a driving offence, including drink/drugs driving, that is likely to lead to a driving disqualification?

7. Does this offence involve the use or threatened use of a firearm, imitation firearm, knife or an offensive weapon 'per se'?

8. Did this offence contribute to a death of any person?

9. Is this offence connected with terrorism or official secrets?

10. Is this a sexual offence involving offenders or victims aged under 18?

11. Is this offender (are any of the offenders, if multiple defendants) currently on police bail, bail to court for an offence, on licence or serving a court-imposed sentence in the community?

12. Does this offence fit the hate crime policy according to CPS?

13. Does this offence fit the domestic abuse policy according to CPS?

14. Are there any other reasons to exclude the case?

Appendix 2 CCHI values

Harm values used in to score harm. Taken from the beta version of the CCHI available online (accessed on the 20/08/2019)

Crime type	CCHI score
Attempted murder victim aged 1 or over	3285
Grievous bodily harm with intent	1460
Grievous bodily harm without intent	18.75
Grievous wounding	1460
Wounding	18.75
Wounding with intent	1460

Malicious wounding	18.75
Actual bodily harm	10
Common assault	1
Robbery	365
Theft from person	2
Theft of motor vehicle	5
Theft from motor vehicle	2
Theft from dwelling	2
Theft other	2
Theft of pedal cycle	2
Taking motor vehicle no consent	5
Aggravated vehicle taking	10
Interfering with vehicle	3
Bilking	1
Harassment	10
Fear or provocation of violence	42
Causing intentional harm or distress	10
Threats to kill	10
Stalking involving serious harassment and alarm	182.5
Threats to damage property	2
Threaten with weapon	18.75
Racially aggravated harassment	42
Hate incident	2
Burglary dwelling	18.75
Burglary non dwelling	10
Criminal damage vehicle	2
Criminal damage to dwelling	2
Anti social behaviour	0.1
Sexual assault on an adult	18.75
Sexual assault on U13	182.5
Rape of a female	1825
Rape of a male child U13	2920

Indecent assault	18.75
Wilfully assault or neglect young person	84
Arson	18.75
Kidnapping	548
Breach of non molestation order	5
Intimidate witness	42