



‘Victim-Offenders’: a Third Category in Police Targeting of Harm Reduction

David Sandall¹ · Caroline M. Angel² · Jonathan White¹

Published online: 26 November 2018

© The Author(s) 2018

Abstract

Research Question To what extent do people classified by police as ‘offenders’ and those they classify as ‘victims’ overlap, thus creating a third category of individual targets for crime and harm reduction called ‘victim-offenders’?

Data Leicestershire police records in the 3-year period 2014–2016 were compiled on all 117,766 individuals who were identified as either victims or offenders in all 159,702 crimes in which one or more individual victims were named. A 730-day-at-risk tracking period after individuals’ initial appearance in the data set was examined for the tracked cohort of 42,916 individuals who entered the data set in 2014 only and were ultimately identified in 62,336 individual-victim crimes.

Methods Each individual who entered the data set from 2014 to 2016 was classified as (only) a victim, (only) an offender, or (both) victim and offender in separate events. We designate the latter category as victim-offenders. The total count of criminal events and total recommended days of imprisonment value of the Cambridge Crime Harm Index (CHI) were calculated for each individual, both for crimes committed and victimizations experienced. Individuals who entered the data set in 2014 were tracked for 730 days from their first recorded offence or victimization. All individuals were ranked, by both crime counts and CHI values, from highest to lowest.

Findings From 2014 to 2016, victims comprised 89.9% of the 117,766 individuals ever appearing as victims or offenders, offenders comprised 7.9% and victim-offenders were 3.2%. In 2014, all 38,318 individual victims and 4598 offenders were placed into the

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

✉ Caroline M. Angel
ca457@cam.ac.uk

¹ Leicestershire Police, Leicestershire, UK

² University of Cambridge, Cambridge, UK

730-day tracking period in which 1825 individuals became victim-offenders, or 4.2%. Initial offenders were seven times as likely to become victims (17.9%) as initial victims were to become offenders (2.6%). Victim-offenders had 74.5% higher average harm scores and 68% higher average crime counts than the overall 2014 entry cohort, with 65% of victim-offenders' harm a result of their victimisation. Only 417 'high harm-high volume' individuals experience or cause the most crime harm as well as the most crime, of whom 49.9% (208/417) are victim-offenders, 33.3% (139/417) victims and 16.7% (70/417) offenders.

Conclusion Opportunities to reduce crime and harm through targeting police and partnership resources on the 'power few' (Sherman, *Journal of Experimental Criminology*, 3(4), 299–321, 2007) can be enhanced by identification of victim-offenders and testing prevention strategies appropriate to this third category of people.

Keywords Victim-offenders · Victims · Offenders · Targeting · Evidence-based policing · Repeat victimisation · Repeat offending

Introduction

In 2015, Leicestershire Police identified an innovative opportunity to apply the Cambridge Crime Harm Index (Sherman 2013; Sherman et al. 2016) to reported crime data. The Cambridge Crime Harm Index (CCHI) provides a method of scoring the legal severity of each crime event by weighting each reported category of crime using Sentencing Council guidelines. Those guidelines recommend the number of days of imprisonment as the 'starting point' in determining the actual sentence for each offence resulting in conviction. The CCHI enhances the traditional crime counting methods Leicestershire Police uses to target resources that counted each crime such as a theft and murder with equal weight, despite such crime being very unequal in the harm that they cause (Sherman et al. 2016).

The application of CCHI in Leicestershire in 2015 revealed that the concentration and distribution of crime based on crime count by location were different from the places recording high crime harm. This resulted in the implementation of a new Police Community Support Officer role, aimed at problem solving and targeting the identified place-based 'high harm' (The Economist 2016).

The next application of the Cambridge CHI in Leicestershire was to individuals. The analysis needed to prioritise victims and offenders within those two categories led the Constabulary to confront a third category of people: those whose reported crime records include both victimisation and offending. The data analysis compelled police to acknowledge a third category of individuals touched by crime: the victim-offenders whose records show repeated events, including at least one crime in which each individual was a victim and one in which they were an offender. The Constabulary agreed that this third category would enhance its understanding of the distribution and concentration of individual crime and crime harm, allowing more effective targeting strategies to be implemented to achieve the aims of the Police and Crime Commissioner's Crime Plan and of the Chief Constable's objective to 'protect our communities'.

Previous applications of the Cambridge Crime Harm Index have focused on places, victims and offenders (see Etheridge (2015), Dudfield et al. (2017) and Jackman (2015)), identifying a concentrated small number of people from the broader population who are found suffering disproportionate levels of harm. This small group of people or places suffering disproportionate levels of harm is referred to by Sherman (2007) as a (statistical) ‘power few’. The significant research investment into these concentrations of victims and offenders, however, has been developed in separate ‘silos’, without charting the overlap between them. This article offers what appears to be the first use of the Cambridge CHI or any kind of severity index (including the UK’s Crime Severity Scores) to analyse harm to individuals who are both victims and offenders across all victimisations and offending.

Research Questions

The basic questions this article attempts to answer are these:

1. How substantial is the crime and harm associated with individuals who are reported as both victims and offenders (i.e. ‘victim-offenders’), relative to the majority of persons known to the police who are identified over relatively long periods of time as only victims or only offenders?
2. How would police use this third category of individuals in any analysis or rank ordering of individuals for prioritising police or partner agency resources?

These questions build on prior research relating to victim-offenders, high-harm victims and offenders and the Cambridge CHI.

Victim-Offenders The category of victim-offender is described by Bottoms and Costello (2010) as a common term that needs to be more clearly defined, such as limiting it to people with reports in both categories within a short time period. Wolfgang’s (1958) study of police homicide records in Philadelphia, for example, identified a link between victimisation and offending, but used a much longer time period (reporting 64% of homicide offenders and 47% of homicide victims had previous arrest records). Forty-eight years later, Broidy et al. (2006) reported similar results to Wolfgang (1958) in Bernalillo County, NM, from 1996 to 2001: 57% of homicide offenders had prior arrests, and 50% of homicide victims also had prior arrests for criminal offences.

A broader identification of victim-offenders is evident in the review of the literature by Jennings et al. (2012). They identified 37 victim-offender studies, of which 31 identified an overlap between victimisation and offending; six studies were inconclusive in identifying the overlap. The recent victim-offender literature demonstrates differences across various crime types, places, data sources, genders and ages, yet most identify a small but not insignificant group of individuals who are victim-offenders.

Bottoms and Costello (2010) also found the relationship between offenders becoming victims was disproportionality linked to acquaintances. Their study developed the research as it focused away from violence and applied the concept of victim-offenders to household crimes. The study used police recorded crime data from Sheffield in 1995

and utilised different empirical methodologies of data analysis and interviews with offenders. The household crimes were defined as dwelling burglary and damage, burglary and damage of sheds and garages connected to the house and personal vehicle crime at the home. Bottoms and Costello found a strong overlap between victimisation and offending and reported that offenders living in offender households were willing to report victimisations. Gender, repeat victimisation, violence and sexual offence victimisations are often key components of the findings in domestic violence studies (Muftic et al. 2012; Van Gelder et al. 2007).

The Power Few

The Crime Harm Index (Sherman et al. 2016) provides a tool to measure harm consistently within police recorded crime data. The Cambridge Crime Harm Index applies a harm score to each crime. By analysing each crime harm score of every crime suffered by victims or committed by every offender or the crime harm combined of individuals who are victim-offenders, it is possible to rank the overall crime harm generated by each 'unit of analysis' from highest to lowest. This provides an opportunity to enhance the targeting of police resources through identifying and understanding the concentration and distribution of crime harm, which is a central component of this thesis.

The most direct use of the Cambridge CHI with victims has been accomplished in Dorset, where Dudfield et al. (2017) identified a power few in a 1-year sample of victims. Dudfield et al. applied the Cambridge Crime Harm Index to victims, examining all 25,831 crimes recorded there from June 2015 to May 2016. Dudfield et al. (2017) created unique identification numbers for each individual to identify individual CCHI scores based upon the total known victimisation of each individual reported as a victim. The victimisation analysis by Dudfield et al. identified a power few of victims. He found less than 4% of victims suffered 85% of the recorded victim-based CCHI, with demographic factors of age, gender and repeat victimisation appearing connected to the high harm.

The power few was also evident in Jackman's (2015) striking findings in a study focussing on a cohort of 1098 registered sex offenders. Jackman used this approach to find that a third of the cohort, 363 offenders, accounted for 80% of the total harm of crimes in their record. Yet among these 363 registered sex offenders, 250 were not in prison, of whom 123 were categorised as 'low risk'—who would only be visited once a year.

Data and Methods

In order to answer the research questions, this study employed 3 years of crime reports in Leicestershire to undertake two kinds of analyses. One approach created a complete snapshot of all crimes, victims and offenders reported at any time within a 3-year period, each with a range of 1 day to 3×365 days (1095) during which they could be named in repeated crime reports. The second, more controlled approach created a cohort of every individual named in a crime report during calendar 2014, with further

records for each of them covering a period of exactly 730 days (2 years) after their initial appearance in a 2014 crime report. The value of the latter approach is that it provides a level playing field for analysing characteristics and distributions of victim-offender overlap.

Establishing the Data Set Leicestershire crime data in 2014 was held on a system known as the Crime and Intelligence System (CIS) which has since been decommissioned, but the data is still accessible in a downloaded raw format. The force migrated in April 2015 without ‘back-records’ converting to a new crime records management system, called NICHE, which remains in place today. Both these systems incorporate the Home Office Crime Codes, but also have the details of the specific offences, enabling the Cambridge Crime Harm Index (Sherman et al. 2016) to be applied systematically to both, despite the different origins of data.

NICHE and the Cambridge CHI offences can be linked by the Home Office Code and/or the CJS code. However, CIS does not have CJS codes registered; therefore, the Home Office Code was utilised but cross checked with the crime description, to ensure the crime type was comparable. The ‘Business Objects’ data system is utilised to extract the CIS and Niche data and produces a Comma-Separated Values (CSV) file which stores numbers and text data in plain text. The data includes the Niche and CIS identifiers, forename, surname, date of birth, gender, age, ethnicity, offence classification, occurrence number and summary, first offence date, Home Office crime code, type and category. The data in the CSV file is then placed into the Access Database System which tabularises all the sections of data. The Access Database was utilised to prevent duplication of individuals in the data through the ‘primary key functionality’ (for further details, see Sandall 2017).

Developing the Data Set The HMIC (2013) ‘Crime Tree’ illustrates how the broad categories of ‘crimes’ are broken down into two groups: either a victim-based or non-victim-based crime. The two groups are then broken down into crime classifications, then into crime type before going down to a specific offence. The Home Office codes are utilised to identify the victim-based crimes. These are crimes defined as having an identified individual victim.

Crimes with a Home Office code relating to Other Crimes against Society include drug offences, possession of weapons and other offences often detected by proactive police efforts, usually crimes without specific victims. Such crimes were removed from the study’s data set, consistent with the Sherman et al. (2016) instructions in applying the Cambridge Crime Harm Index. Because these levels of harm are easily manipulated by changing allocation of police resources, these crimes should arguably be omitted. In the present study, however, shoplifting and other offences with a named recorded individual victim are still included. The focus on victim-based crimes is something this study has in common with the National Crime Survey of England and Wales.

Applying the Cambridge Crime Harm Index Scores and Analysis The Cambridge Crime Harm Index (Sherman et al. 2016) harm score for each offence is applied to the recorded individual victimisation and offending. The harm score is created by converting the recorded victim-based crime, Home Office code into a Cambridge Crime Harm Index (CHI) score. The score for each offence, irrespective of detection

or conviction status, is assigned based on the number of days of imprisonment an offender would receive, according to the sentencing guidelines of England and Wales for that crime (Sherman et al. 2016).

The Cambridge Crime Harm Index (Sherman et al. 2016) was downloaded from the Cambridge Criminology Institute on 23 March 2017 (see <http://www.crim.cam.ac.uk/>). In applying the Cambridge Crime Harm Index, if a crime did not have an assigned harm score, then the harm was recorded as 0, but the crime record is retained in the crime count. In the 2014–2016 data, there were 12 crimes scoring 0 harm and only two crimes scoring 0 in the 2014 cohort. The crime and crime harm score for an individual offender and individual victim can relate to the same recorded crime, and both scores are included in the total cohort harm score and crime count.

Testing the Data The initial downloaded data from 2014, 2015 and 2016 produced 253,365 individuals. On examination, 134,464 individual details had been downloaded for individuals who had no linked victimisations or offending (due to records on individuals linked to non-recordable crimes, such as domestic incidents where there are no crimes recorded). Further testing the data checked that each crime type had received the correct Cambridge CHI score, revealing that one crime category (Aggravated Burglary) had provided a lower CHI harm score relating to Burglary other than Dwelling.

Findings

All 2014–2016 Leicestershire Crime Data The data extracted from Leicestershire Police CIS and Niche crime recording systems from 2014, 2015 and 2016 show a total of 117,766 individuals identified. They incorporate 104,717 (88.9%) individuals who are only listed as victims on one or more occasions, 9321 (7.9%) individuals who are only listed as offenders on one or more occasions and 3728 (3.2%) individuals who are recorded as both a victim in at least one crime and an offender in at least one other crime. The latter group is referred to as the victim-offenders.

The total 117,766 individuals were identified across 159,702 separate victim-based crime records. Each of these crimes was assigned the number of days of imprisonment recommended by Sentencing Council guidelines as the ‘starting point’ for offending. The sum of these days of recommended imprisonment is a total CHI harm score of 7,429,053.50 days of imprisonment. Put another way, in 3 years, the punishment value of recorded crimes against victims in Leicestershire was equal to 20,353 years of imprisonment, or 20,000 offenders getting 1 year in prison each. Thus, the average penalty for each of the crimes recorded was about 8 days of imprisonment.

2014–2016 Victims-Only Controlling the time at risk so that it is equal for each individual who entered the sample via a crime reported in 2014, a total of 104,717 individuals were recorded as ‘victim-only’ victims (which excludes victim-offenders) who suffered 131,453 recorded crimes. Repeat victimisation therefore accounts for 20.34% of the overall crime events (26,736/131,453). These results show that the victim-only group is the dominant group within the data set, with 97.04% of the total

135,457 combined victim and victim-offender victim crimes and 93.2% of all victimised events.

2014–2016 Offenders-Only There are far fewer (known) individual offenders than victims, partly because the offender data only relates to detected crime where the individual offender is recorded as an offender on the crime record. From 2014 to the end of 2016, there are 9321 individual offenders.

2014/2016 Offenders and Victim-Offenders Offending Combined The total 13,049 individuals who are recorded as offenders account for 24,245 detected crime records. This means that detected ‘repeat offending’ over 3 years accounts for 46.2% of the detected offending (11,196/24,245).

2014–2016 Victim-Offenders The individuals who are recorded as both a victim and an offender form a subgroup of 3728 individual victim-offenders who record a total of 8871 crimes, which consist of 4867 (55%) crimes as an offender and 4004 (45%) crimes as a victim. The total 629,454.75 victim-offender harm encompasses a recorded offender harm of 234,759 (37.3%) and victim harm score of 394,695.75 (62.7%). In other words, victim-offenders suffer almost twice as much harm as victims as they cause as offenders, as illustrated in the following pie charts. The two charts in Fig. 1 below show that the difference is barely discernible in crime counts, but far more pronounced in the crime harm measure. Put another way: victim-offenders commit less serious crimes against other victims than they suffer as victims themselves.

The 2014 Tracked Cohort Counting all 42,916 individuals who were named at any point in recorded crimes in 2014, we tracked each one for 730 days from their initial crime record as a victim or offender. While each of these individuals could have had prior offences before the first 2014 victimisation or offending crime record, this method provides a controlled comparison across all three categories of individuals for exactly the same amount of time.

The 2014 cohort has 38,318 individuals recorded initially as a victim and 4598 individuals recorded initially as an offender. Over the following 730 days from the

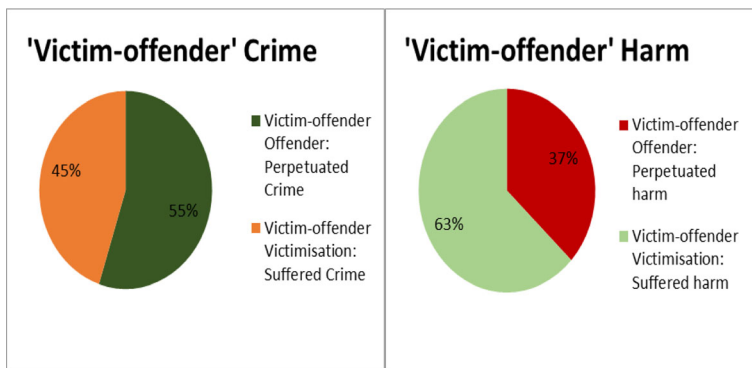


Fig. 1 Two pie charts illustrating 2014–2016 percentage of victim-offender perpetuated and suffered crime (total 8871 crimes) and crime harm (total 629,454.75 CHI harm)

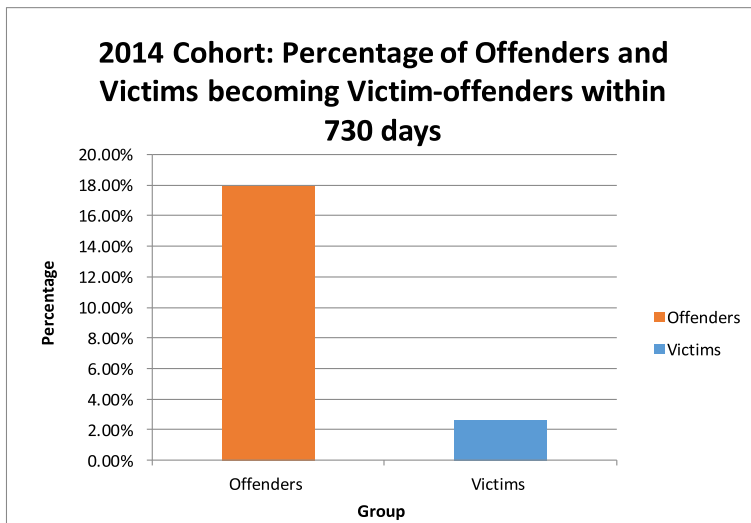


Fig. 2 2014 cohort: percentage of offenders and victims becoming victim-offenders within 730 days

initial crime record, 37,315 remain recorded as a victim-only and 3776 individuals remain recorded as an offender-only. Of the 1825 individuals subsequently recorded as victim-offenders, 1003 were initially victims who within 730 days go on to offend, while 822 were initially offenders who were subsequently recorded as a crime victim.

Almost seven times as many offenders went on to become victims (17.9% of the total 4598 initial offenders) and as victims went on to become offenders (2.61% of the total 38,318 initial victims went on to offend), as illustrated in Fig. 2.

2014 Cohort Crime Counts The 42,916 individuals in the 2014 cohort over their 730 days follow-up recorded a total count of 62,336 crime reports. That count reflects 51,221 victim crime records and 11,115 offender records. The crime count in terms of individuals encompasses 47,649 crimes where the individual recorded as a victim of the crime is a victim-only and 6985 crimes where the individual is an offender-only. There are 7702 crimes where the individual is a victim-offender, in which the individuals are recorded as a victim on 3572 crimes and as an offender on 4130 crimes.

The average crime count per individual victim-offender is four times higher than for victim-only victims, and twice as high as for offender-only offenders. The average total crime count for the cohort is 1.45 crime records per individual (SD of 1.36), but when analysed by group (victim, offender or victim-offender), there are substantial differences. A victim-only individual averages 1.34 crimes (SD = 0.87), an offender-only individual averages 1.98 crimes (SD 2.43) and a victim-offender averages 4.22 crimes (SD 3.37) per individual.

The victim-offender group explored further in terms of the offending and victimisation shows that the offending element of the victim-offender relates to an average of 2.26 crimes per individual (SD 2.71) and the victimisation elements of the victim-offender gives an average of 1.96 crimes per individual (SD 1.79).

The cumulative crime count when compared to the number of individuals is illustrated in Fig. 3. The distribution and concentration of the crime count are

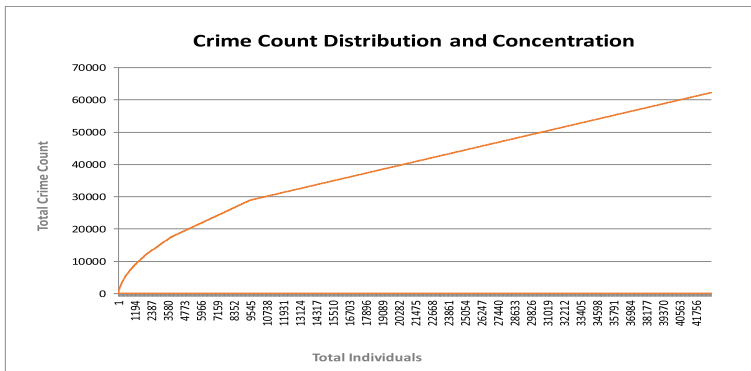


Fig. 3 2014 cohort: crime count distribution and concentration

not as striking as the findings shown later in regard to crime harm. There is not a significant or clear power few identified for crime count, although the graph illustrates that the highest 5.1% (2183) of individuals based on crime count are identified on 20.28% of the overall crime count (12,649/62,336 crimes). These individuals also record 22.82% of the total 2014 cohort harm score (624,744.522/2,737,893).

The 2183 individuals composing the top 5.1% based on the highest individual crime count consist of 814 victim-offenders who represent 44.6% of the total cohort of 1825 victim-offenders and record 5283 crimes. This compares to 10.59% ($n = 400$) of the 3779 offenders who record 2692 crimes and 2.5% ($n = 969$) of the 37,315 victims who record 4674 crimes.

2014 Cohort and Crime Harm The total Cambridge Crime Harm Index (CHI) score for the 2014 cohort is 2,737,893, with an average harm score per individual of 63.80 (SD = 326.97). The total harm score combines a victim-only CHI score of 1,780,860, with an average per individual of 47.73 (SD = 260.94), offender-only CHI score of 500,522, with an average of 132.59 (SD = 565.89) and the victim-offender related harm score of 456,511, with an average per individual of 250.14 (SD = 640.22)—or five times higher than for victim-only victims. Interestingly, the victim-offender harm score is comprised of 65% victimisation and 35% offending. The victim-offenders victimisation relates to a harm score of 296,753/456,511, with an average victimisation harm score per individual of 162.60 (SD 535.23). The victim-offender offending element relates to a total harm score of 159,758/456,511, with an average harm score per individual of 87.54 (SD 339.44).

Figure 4 shows that the average harm score per individual is higher when the individual is a victim-offender than when the individual is a part of any other group. The victimisation element of the victim-offender is higher than that of an individual who is solely a victim, but in contrast to the crime count findings; the offending element for harm is lower than the individual offender average.

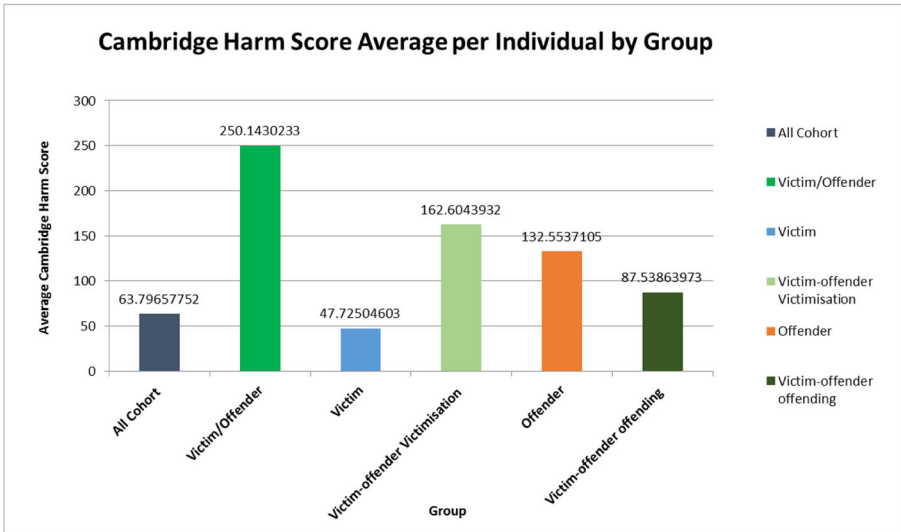


Fig. 4 2014 cohort: Cambridge Harm Score average per individual by group

The 2014 Cohort Power Few As predicted (Sherman 2007), there is a power few of individuals who experience the most harm within the 2014 cohort. From the 42,916 individuals, 2183 (or 5.1% of the total individuals) were associated (as victims or perpetrators) with 85% of the recorded harm score of 2,325,868.785 days (summing harm of both victims and offenders for the same crimes). The breakdown of the harm is illustrated in the graph below, which shows the cumulative harm score compared to the number of individuals in the cohort (Fig. 5).

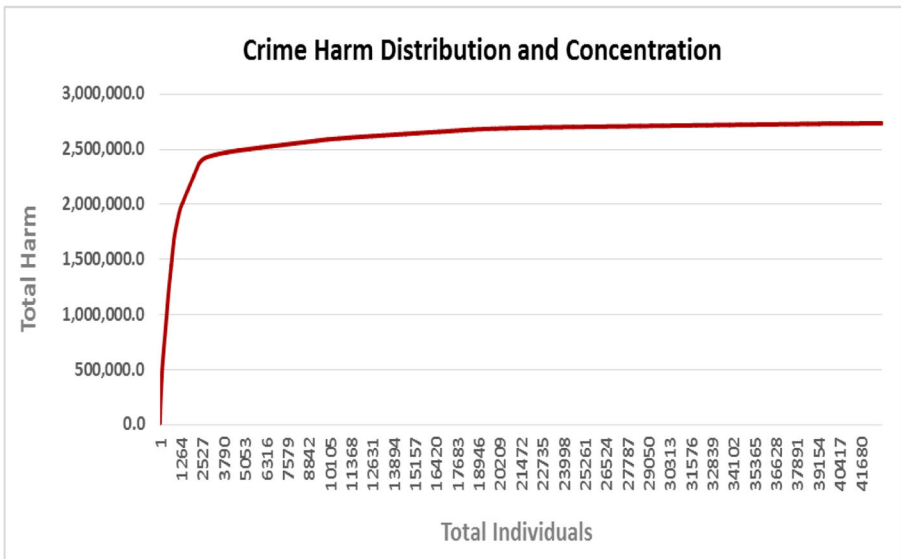


Fig. 5 2014 cohort: distribution and concentration of harm. Cambridge Harm Score cumulative score – number of people

The power few of 2183 individuals is associated with 85% of the harm suffered or caused, in which victim-offenders are vastly over-represented. They are made up of 1510 individuals who are victims-only, 335 individuals who are recorded in the 2014 cohort as offenders-only and 338 individuals who are recorded as victim-offenders. In considering the overall cohort and breakdown of the individual groups, 18.5% of the overall victim-offender (338/1825) individuals form part of the power few compared to 8.9% of the overall offenders (335/3776) and 4.1% of the total victims (1510/37,315). Since only 3728 individuals are victim-offenders (of whom 338 or 9% are in the overall power few) and just 9321 offender-only offenders produce 335 in the power few (or 3.6%), the victim-offenders are 2.5 times more likely to get into the power few than the offender-only offenders.

The Cambridge Harm score total for the power few is 2,325,868.785. This encompasses a total harm score for victims of 1,466,516.278, for offenders of 441,456.7539 and for victim-offenders of 417,895.7528. The number of recorded victims and the level of total harm for victims have the highest score within the power few, but when considered at an individual level, the average harm per individual for a victim-only victim is the lowest at 971.20 (SD 884.99). An offender average harm score is 1317.78 (SD 1432.16), and the average harm per individual in the victim-offenders group is slightly lower at 1236.38 (SD 1008.77).

The Harm Power Few and Crime Count The application of the Cambridge Harm Index identifies a clear power few of individuals experiencing and perpetuating disproportionate CHI harm. The crime count distribution and concentration of crime are not as concentrated in a power few as is the level of harm. As a comparison between crime harm and crime count, the 5.1% (2183/42,916) of individuals recording the highest levels of harm also record 8.5% of the total crime (5304/62,336 crimes). The 5304 crimes encompass 2595 victim-only crimes, 884 offender-only crimes and 1825 crimes recorded to individuals in the victim-offender group. In contrast, the highest 5.1% of individuals based on crime count are identified on 20.28% of the overall crime count (12,649/62,336 crimes) and record 22.82% of the total 2014 cohort harm score (624,744.522/2,737,893). The 12,649 crimes encompass 4674 victim-only crimes, 2692 offender-only crimes and 5283 victim-offender crimes.

The analysis also found a group demonstrating ‘high harm-high volume’ behaviour. There are 417 individuals in this 5.1% power few for harm and the highest 5.1% for crime count. The 417 individuals are made of 208 victim-offenders (49.9%), 139 are victims (33.3%) and 70 are recorded as offenders (16.7%). Two hundred and fifty of the individuals are recorded as male and 167 as female. The average harm for the 417 per individual is 1351.76 (SD 1396.19), and the crime count average is 6.48 per individual (SD 3.87).

The 208 victim-offenders forming part of the 417 high harm-high volume individuals average a lower harm score, at 1294.82 per individual (SD 1052.82), than both a victim at 1464.57 (SD 1486.03) and an offender 1296.95 (SD 1993.06). Victim-offenders do, though, record a higher crime count at 7.25 per individual (SD 4.39) than an offender at 6.87 (SD 4.27) and a victim recording 5.15 crimes per individual (SD 2.11).

The 208 high harm-high volume victim-offenders commit more crime than they experience, but they experience higher levels of harm than they perpetuate.

2014 Cohort: Gender The 42,916 individuals in the 2014 tracked cohort consist of 24,889 males (57.99%) and 17,924 females (41.7%), and there are 103 records (0.24%) without a gender recorded. The number of males in the cohort relates to 20,300 victims,

3267 offenders and 1323 victim-offenders. The males encompass 81.56% victims, 14.57% offenders and 5.31% victim-offenders. The females in the 2014 cohort consist of 16,916 victims, 506 offenders and 502 victim-offenders. The female percentage breakdown is different to males, with 94.37% of females recorded as victims, 2.82% as offenders and 2.80% as victim-offenders.

The total 62,336 crime records of the 2014 cohort relate to 36,474 crimes where the victim or offender was male, 25,695 where the victim or offender was female and 167 records where no gender is recorded. The crime count average per individual for females is 1.43 (SD 1.29) and slightly higher for males at 1.47 (SD 1.41). The total harm score is 2,737,893. This is made up of CHI male harm of 1,449,152.5, female harm of 1,282,855.75 and a no gender harm score of 5884.75. The average harm score for the cohort is 63.80, with females averaging higher levels of CHI harm per individual at 71.57 (SD 356.6) than males at 58.23 (SD 304.1).

In considering gender and the power few, the 2183 individuals representing 5.1% of the total cohort who experience 85% of the recorded harm encompass 1292 males, 886 females and 5 individuals with no gender recorded. The highest 5.1% of individuals considered from a crime count perspective encompass 1300 males and 878 females and 5 individuals with no gender recorded.

The 2014 Cohort: Age There are vulnerabilities in regard to the age data due to the quality of the data inputting (Sandall 2017), yet we can still see clear patterns in the data. The 2014 cohort shows that the average age is 37.99 (SD 17.07), with victims having the oldest average age of 39.22 years of age (SD 17.30), offenders averaging 30.13 years of age (SD 13.15) and victim-offenders being the youngest, averaging 29.13 years of age (SD 11.64).

The average age does not provide a clear measure of the issues, as the following graph clearly and significantly shows (Fig. 6). The graph illustrates that individuals 11–20 years of age experience greater levels of crime harm and that the level of harm experienced reduces as individuals get older.

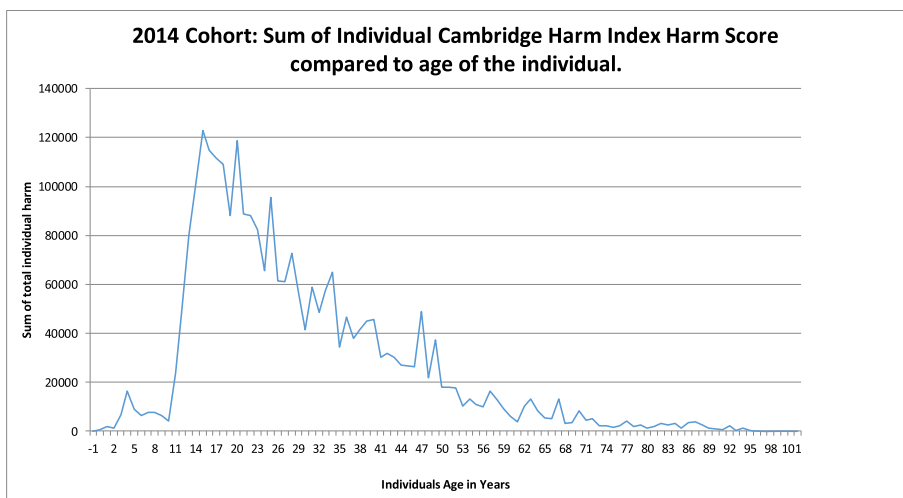


Fig. 6 2014 cohort: sum of Cambridge Crime Harm Index score compared to the age of each individual

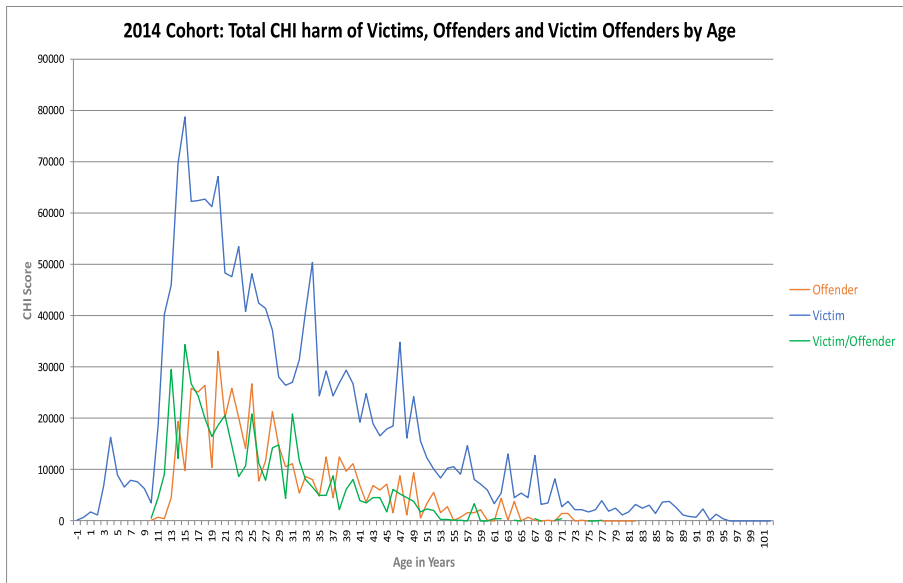


Fig. 7 2014 cohort: sum of Cambridge Crime Harm Index score compared to the age of individual victims, offenders and victim-offenders

There are differences in regard to age across the victim, offender and victim-offender groups as illustrated in Fig. 7, which shows that victim-only and victim-offender harm peaks at an earlier age than offender-only recorded harm.

The age the harm is experienced also differs by gender. Females experience higher levels of harm at an earlier age, from 11 to when it reaches a peak at 15 years of age; then, the level of harm declines until 29 years of age. The female harm then rises again to a peak at 34 years of age, before continuing to reduce over the life course. Males reach a peak at 20 years old, which is not as high as the female peak, but the harm experienced declines less quickly over age than females.

Conclusions

The purpose of this article is to determine whether there is substantial crime and harm associated with individuals who are reported as both victims and offenders (i.e. victim-offenders), relative to the majority of persons known to the police who are identified as only victims or only offenders. The answer to that question is clearly yes: a major subset of the most harmful and harmed individuals in Leicestershire consists of victim-offenders.

These findings make the corollary question for this article even more important for policing: *how* would police use this victim-offender, third category of individuals in any analysis or rank-ordering of individuals for prioritising police or partner agency resources?

First, the findings suggest that reductions in crime and crime harm could be targeted more effectively by focussing on individuals named in more than one crime event. Repeat victimisation accounts for 20.34% (26,736 crimes) of the total 131,453 crimes.

For the 24,245 *detected* crimes, repeat offending accounts for 46.2% (11,196 crimes) of the total 24,245 detected crimes. In many police agencies, performance reporting does not currently focus on repeat victimisation or offending, but such patterns may significantly contribute to overall levels of crime and crime harm.

The opportunities to reduce individual crime and harm clearly include the targeting of resources to the group of 3728 individuals who are identified as victim-offenders, those individuals who record both a victimisation and an offending. The victim-offender group of individuals only accounts for 3.2% of the individuals identified in 2014–2016. But as the group is the smallest in the 2014 cohort, it makes it easier operationally to target and track, with substantial benefits. The victim-offender group records higher average crime per individual than any other group, and the victimisation and offending elements each show higher averages per individual than in the victim and offender groups. This matches the observations of TenEyck and Barnes (2017) that victim-offenders had the highest risk factors for both offending and victimisation.

The victim-offender group is recorded more often for offending than for being victimised, but suffers more harm than they perpetrate. This small group of individuals is experiencing and perpetrating high levels of crime and crime harm. While they have been largely an invisible group, they are a highly targetable group of individuals.

The opportunity to reduce crime harm and crime count is most evident in regard to the identification of a group of individuals who are in the 5.1% power few for harm and in the top 5.1% for crime count. The 417 individuals in both groups can be described as high harm-high volume individuals. Currently in Leicestershire, they are not identified or prioritised and they are not targeted for crime prevention, through the Integrated Offender Management (IOM) or Partnership Troubled Families schemes.

There is considerable resource investment into the Integrated Offender Management programme, but of the 417 high harm-high volume individuals, only 16.7% (70) are solely offenders. In contrast, 49.9% (208) are victim-offenders. Thus, the largest part of high-harm, high-volume offenders are victim-offenders.

Policy Implications These findings suggest several specific policy implications. The first recommendation is to reduce individual crime harm and crime, based on a targeting strategy in which offending and victimisation are combined. The clear power few (2183 individuals representing 5% of the overall cohort) can be targeted for 85% of the total crime harm.

A second recommendation would be to include offender victimisation into the current integrated offender management programme, which already invests substantial resources into reform of problematic individuals.

A third recommendation would be to introduce a strategic priority in regard to repeat individuals to reduce victim-offender crime harm and crime.

These recommendations would address repeat victimisation and offending whilst raising the profile of the invisible victim-offender group and ensure the focus on this group cross cuts across a number of the policy recommendations in this study.

The engagement of partner agencies by the police in order to prevent and detect crime is recommended and is specifically recognised by Bottoms and Costello (2010) in regard to victim-offenders, a group identified within the Leicestershire Police dataset. Bottoms and Costello (2010) suggest that understanding the details of victim-offenders provides the opportunity to use the findings to enhance the partnership engagement,

cooperation and joint working to target individuals causing and suffering the highest harm, with the aim to reduce individual harm, crime and harm within communities.

Research Limitations The limitations to this study include the under-reporting of crime, which will have reduced the number of individuals as both victims and offenders that are identified. There are also limitations in the police decision making in regard to crime classification, which directly impacts on the Cambridge Crime Harm Index score and the data quality, which all impact upon the findings. The use of the Cambridge Crime Harm Index itself may be seen as a limitation, instead of the alternatives such as the Office of National Statistics (ONS) Severity Score. Yet whether the use of the ONS metric will change the results is an empirical question. The removal of the crimes classified as ‘Other Crimes Against Society’, where there was no identified victim may (or may not) also impact on the findings. As in all first outings, the present study will become more useful in the context of similar analyses done in other places, times and social contexts.

Acknowledgements The authors would like to thank the College of Policing and the Leicestershire Police for their financial support of the research on which this article is based, which was led by the first author as a thesis submitted to the University of Cambridge in partial completion of the Master of Studies in Applied Criminology and Police Management at the Police Executive Programme, Institute of Criminology.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- Bottoms, A., & Costello, A. (2010). Hearing the victim: adversarial justice, crime victims and the state. In A. Bottoms & J. V. Roberts (Eds.), *Cambridge criminal justice series*. Cullompton: Willan.
- Broidy, L. M., Daday, J. K., Crandall, C. S., Klar, D. P., & Jost, P. F. (2006). Exploring demographic, structural, and behavioural overlap among homicide offenders and victims. *Homicide Studies*, *10*, 155–180.
- Dudfield, P., Angel, C., Sherman, L. W., & Torrence, S. (2017). The “power curve” of victim harm: targeting the distribution of crime harm index values across all victims and repeat victims over one year. *Cambridge Journal of Evidenced Based Policing*, *1*, 38. <https://doi.org/10.1007/s41887-017-0001-3>.
- Economist (2016). *Measuring crime: bobbies on the spreadsheet, a new way to count crimes could reduce the amount of harm they cause*, Print edn. UK, September 3rd 2016.
- Etheridge P (2015). *An exploratory study of the application of the Cambridge Harm Index (CHI) to crime data in South Yorkshire*. Police Executive Programme, Cambridge University (Unpublished).
- HMIC (2013). *Her Majesty's Inspectorate of Constabulary 2013 crime tree*. <https://www.justiceinspectors.gov.uk/hmicfrs/media/crime-tree.pdf>. Accessed.31/08/17
- Jackman R (2015). *Measuring harm in a cohort of sex offenders in Norfolk*. Police Executive Programme, Cambridge University (Unpublished).
- Jennings, W. G., Piquero, A. R., & Reingle, J. M. (2012). On the overlap between victimisation and offending: a review of the literature. *Aggression & Violent Behaviour*, *17*, 16–26.
- Muftic, L. R., Finn, M. A., & Marsh, E. A. (2012). The victim-offender overlap, intimate partner violence, and sex: assessing differences among victims, offender and victim offenders. *Crime and Delinquency*, *61*(7), 899–926.

- Sandall, D. (2017). Ranking individuals by crime count and crime harm index values, combining offending and victimisations: implications for harm focussed policing, police executive programme, Cambridge University (Unpublished).
- Sherman, L. W. (2007). The power few: experimental criminology and the reduction of harm. *J Exp Criminol*, 3(4), 299–321.
- Sherman, L. W. (2013). The rise of evidenced based policing: targeting testing and tracking. In M. Tonry (Ed.), *Crime and Justice in America, 1975–2025, crime and justice: a review of research* (Vol. 42, pp. 377–452). Chicago: University Press.
- Sherman, L. W., et al. (2016) The Cambridge crime harm index: measuring total harm from crime based on sentencing guidelines In *Policing a Journal of Policy and Practice*. <https://doi.org/10.1093/police/paw003> first published online: April 3.
- TenEyck, M., & Barnes, J. C. (2017). Exploring the social and individual differences among victims, offenders, victim-offenders, and Total Abstainers. *Victims & Offenders*. <https://doi.org/10.1080/15564886.2016.1268985>.
- Van Gelder, J. L., Averdijk, M., Eisner, M., & Ribaud, D. (2007). Unpacking the victim-offender overlap: on role differentiation and socio-psychological characteristics. *J Quant Criminol*, 1–23.
- Wolfgang, M. E. (1958). *Patterns in criminal homicide*. Oxford, England: University of Pennsylvania Press.

David Sandall is a serving Detective Chief Superintendent from Leicestershire Police with 19 years' experience, predominantly in the detective investigative field with experience in volume, serious, major, safeguarding and covert policing. He is an accredited Senior Investigating Officer (PIP4, PIP3, SIM) and also an active Tactical and Strategic Firearms Commander. He has an LLB (Hons) undergraduate degree and completed this research as part fulfilment of an M.St Degree in Applied Criminology and Police Management at Cambridge University.

Dr. Caroline M. Angel is a psychiatric mental health who has a Ph.D. in Nursing and Criminology from the University of Pennsylvania. She is an Academic Supervisor with the University of Cambridge's Police Executive Programme. She is the Co-founder of the Reintegrative Health Initiative.

Jonathan White is Leicestershire Police's most senior Analyst and has been the lead for introducing the Cambridge Crime Harm Index into Leicestershire Police Crime and Performance data.