



The Scottish  
Government

# 2009/10 Scottish Crime and Justice Survey: Technical Report

Crime and Justice



# **2009/10 Scottish Crime and Justice Survey: Technical Report**

**2009/10 SCOTTISH CRIME AND JUSTICE  
SURVEY:  
TECHNICAL REPORT**

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Scottish Government Social Research

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**TNS-BMRB**  
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## SCJS publications

The 2009/10 Scottish Crime and Justice Survey: Main Findings was published on November 2<sup>nd</sup> 2010. Three supplementary reports will also be published on the subjects of partner abuse, sexual victimisation and stalking, and illicit drug use.

The dates of SCJS publications are pre-announced and can be found via the UK National Statistics Publication Hub:

<http://www.statistics.gov.uk/hub/index.html>

Copies of this report and other SCJS related Scottish Government publications are available from the Scottish Government survey website:

<http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>

For further information about the Scottish Crime and Justice Survey and Scottish police recorded crime statistics, please email [stuart.king2@scotland.gsi.gov.uk](mailto:stuart.king2@scotland.gsi.gov.uk) or write to: Scottish Crime and Justice Survey, Scottish Government, St Andrew's House – GWR, Regent Road, Edinburgh EH1 3DG.

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## 1 Background

### **1.1 Introduction to the Scottish Crime and Justice Survey**

The Scottish Crime and Justice Survey (SCJS) is a survey of public experiences and perceptions of crime in Scotland. The survey involves interviews with around 16,000 adults (aged 16 or over) who live in private residential addresses in Scotland annually, with a continuous fieldwork period from April through to March of the following year. The 2009/10 survey is the second sweep of the SCJS, with the first being conducted in 2008/09.

Fieldwork for the 2009/10 sweep of the survey began on 1<sup>st</sup> April 2009 and finished on the 31<sup>st</sup> of March 2010, with a target of 1,333 interviews being conducted each calendar month. The survey is conducted face-to-face in-home and is administered by specially trained professional interviewers using Computer Assisted Personal Interviewing (CAPI). The survey also contains a short self-completion section on sensitive topics which respondents answer using Computer Assisted Self Interviewing (CASI).

There have been nine previous surveys of victimisation in Scotland, beginning with the 1982 and 1988 sweeps of the British Crime Survey (BCS) coordinated by the Home Office.<sup>1</sup> BCS coverage in Scotland was limited to south of the Caledonian Canal. The first independent Scotland-only survey was commissioned by the Scottish Office in 1993 under the title of the Scottish Crime Survey (SCS) and was followed by repeated sweeps in 1996, 2000 and 2003.<sup>2</sup> In 2004, following an external review, the survey underwent both a name change, under the title of the Scottish Crime and Victimisation Survey (SCVS), and a major methodological change, with a move away from in-home face-to-face interviewing to telephone interviewing. However, the 2006 survey returned to face-to-face interviewing after it was shown that the robustness of the data produced by the 2004 telephone survey could not be substantiated.<sup>3</sup>

The first sweep of SCJS was conducted in 2008/09.<sup>4</sup> The 2009/10 sweep retains the design of the 2008/09 survey with an amendment to the sample design and changes to the modular sections of the questionnaire (Box 1).<sup>5</sup>

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<sup>1</sup> Further information on the BCS can be found at the Home Office website: <http://www.homeoffice.gov.uk/rds/bcs1.html>.

<sup>2</sup> For more information see the Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

<sup>3</sup> For more information see Hope (2005). The SCVS 2004 survey contained a face-to-face calibration survey to run in parallel against the main telephone survey, and the 2004 crime estimates were based on this survey rather than the telephone survey.

<sup>4</sup> Data and supporting documentation for the SCJS 2008/09 is available on the UK Data Archive, study number 6362: <http://www.data-archive.ac.uk/>.

**Box 1: Changes between the 2008/09 and 2009/10 surveys**

**Sampling:**

The 2009/10 survey included a change to the sample design with further stratification by Local Authority (LA) which led to a re-distribution of interviews within Police Authority Area (PFA).

**Questionnaire:**

The modular design of the SCJS means that it is possible to rotate modules and sections on and off of the questionnaire, allowing the survey to explore new areas of interest year on year. As a result, the bulk of the major changes to the questionnaire were in the modular sections:

**Main questionnaire:**

Full sample modules:

- *Local community*: section ADDED.

Quarter sample modules:

- Module A:
  - *Workplace violence*: section REMOVED.
- Module B:
  - *Insulted / pestered / intimidated*: section REMOVED;
  - *Police*: section ADDED.
- Module D:
  - *Civil justice*: section REMOVED (but retained in quarter sample module C);
  - *Crime scenario*: section ADDED.

**Self-completion questionnaire:**

- *Sexual victimisation*: reference period for incidents of serious sexual assault extended to cover last incident experienced since the age of 16 – see section 3.6.4).

The SCJS is primarily a victimisation survey, in which respondents are asked about:

- Property crime experienced by the *household as a whole* (e.g. housebreaking);
- Personal crime (e.g. theft from a person) which the respondents themselves have experienced.

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<sup>5</sup> Other minor changes to the SCJS questionnaire were also made. For further details see Annex 6.

The statistics produced from victimisation surveys provide a picture of the level of crime in the area covered. Respondents are asked directly about their experience of crime, irrespective of whether or not they reported these incidents to the police (police recorded crime).<sup>6</sup> These surveys provide a record of peoples' experiences of crime which is unaffected by variations in reporting behaviour of victims or changes in police practices of recording crime. However, the SCJS and police recorded crime statistics should be seen as a complementary series, which together provide a more complete picture of crime than could be obtained from either series alone.

The survey uses a victim form questionnaire to collect extensive details about the nature of each incident that respondents report (up to five), such as when and where it occurred and details about the offenders and other relevant information. This allows classification and hence counts of crimes in Scotland.

The SCJS collects information on incidents occurring in the previous 12 calendar months before the month in which the interview takes place. This time period is referred to as the survey *reference period*. Continuous fieldwork throughout the financial year means that the survey reference period varies depending on the month in which the interview took place, although the reference period covers an equal length of time (12 calendar months) for each respondent. More detail on the implications of this design is provided in section 5.1.

The SCJS only collects data on incidents occurring in Scotland in the reference period – incidents which happened in England and Wales are recorded in the BCS, and incidents which happen abroad are not covered by the survey (termed non-valid incidents). Incidents which meet these criteria and which are identified as crimes within the scope of the survey (see section 7.1) are used to produce the 'all SCJS crime' statistics which are published in the 2009/10 SCJS Main Findings report.<sup>7</sup>

The remit of the SCJS is much wider, however, than a simple victimisation survey. The survey collects socio-demographic information from respondents which allow a picture to be built up about the nature of crime in Scotland and the risks of victimisation among subgroups of the population. It also collects information on a number of sensitive issues, including the prevalence of illicit drug taking, sexual victimisation and partner abuse (collected via the self-completion element of the questionnaire).

The SCJS has a quarter-sample modular design. All respondents (16,036) were asked the main questionnaire, and four randomly assigned groups of

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<sup>6</sup> For more information on police recorded crime, see the Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/TrendType>.

<sup>7</sup> Available from the Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

c.4,000 respondents were asked one of the four modules. This design allows a broader range of other topics to be covered.

All respondents were asked to complete the self-completion questionnaire though they had the option to refuse (13,418 respondents accepted the questionnaire – 84%).

Chapter 3 provides more detail on the coverage of the questionnaire.

The SCJS is designed to achieve a minimum effective sample size of 1,000 interviews in the eight Police Force Areas (PFAs), allowing robust analysis at this level. The survey also provides analyses for a number of performance targets for the public sector in Scotland, at a national and a local level. Specifically, it is the main source used by the Scottish Government to measure progress against two of its National Indicators (used to monitor National Outcomes).<sup>8</sup>

Despite changes in the design of crime surveys in Scotland over time (Box 2), the wording of the questions that are asked to elicit experiences of victimisation have generally been held constant. Care must be taken, however, when comparing different surveys, both those conducted in Scotland and other UK surveys,<sup>9</sup> and analysts should be careful to read the relevant technical documentation to ensure that like-on-like comparisons are being made.<sup>10</sup>

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<sup>8</sup> More information including details of the specific indicators, can be found on the Scottish Government's 'Scotland Performs' website at: <http://www.scotland.gov.uk/About/scotPerforms>.

<sup>9</sup> The BCS (<http://www.homeoffice.gov.uk/rds/bcs1.html>) provides data on victimisation in England and Wales, and the Northern Ireland Crime Survey (NICS) (Central Survey Unit website: <http://www.csu.nisra.gov.uk/survey.asp8.htm>) for Northern Ireland. (Section 11.3 provides more detail on comparisons with the BCS.)

<sup>10</sup> An attempt to look at the differences between the Scottish Crime and Victimisation Survey (SCVS) and other UK surveys was made by Norris and Palmer (2010).

**Box 2: Variation in design of past Scottish crime surveys**

The previous versions of the crime surveys in Scotland have varied in different ways, for example:

- Data collection technique – from paper to telephone to Computer Assisted Personal Interviewing (CAPI);
- Sample size – from around 5,000 interviews in most previous surveys to 16,000 interviews for the SCJS;
- Sample design – from excluding Highlands and Islands to covering the Highlands and major islands, and from representative data at only a national level to producing robust estimates at individual PFAs.

## **1.2 Outputs from the SCJS 2009/10**

The data arising from the SCJS 2009/10 are reported by TNS-BMRB Scotland, who conduct the survey, working with the Scottish Government. These reports include the 2009/10 SCJS Main Findings report, as well as three supplementary reports on the subjects of partner abuse, sexual victimisation and illicit drug use. A separate User Guide is also available for data users.

Copies of the reports and other SCJS related Scottish Government publications are available from the Scottish Government survey website:

<http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

The survey data and supporting technical documentation, providing information and guidance for users of the survey data, are published on the UK Data Archive at the University of Essex.<sup>11</sup> There are three separate data files for the SCJS 2009/10:

- Respondent file (RF) (containing data from the main questionnaire and full and quarter sample modules);
- Victim form file (VFF);
- Self-completion file (SCF).

The SCJS is accredited as National Statistics by the UK Statistics Authority. This accreditation ensures that the survey data is produced to the highest professional standards and free from political interference.<sup>12</sup>

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<sup>11</sup> The UK Data Archive's website is at: <http://www.data-archive.ac.uk/>.

<sup>12</sup> The UK Statistics Authority's website is at: <http://www.statisticsauthority.gov.uk/>.

### **1.3 Structure of the Technical Report**

The survey sample design is set out in **Chapter 2**. **Chapter 3** provides a summary of the content and development of the questionnaire, while **Chapter 4** examines fieldwork procedures and response rates, and **Chapter 5** the details and practicalities of the interview itself. **Chapter 6** provides information on data processing, including the offence coding process and checking of data. **Chapter 7** looks at the offence codes, survey statistics and crime groups used. **Chapter 8** outlines the design, calculation and application of the weighting required for analyses of the data. **Chapter 9** looks at the data outputs, including the structure of the SCJS SPSS data files and conventions used in them. **Chapter 10** provides information on statistical significance and confidence intervals for the data and **Chapter 11** presents guidance for comparing the SCJS data with other sources of data about crime.

**Annexes** referred to in this report are published as a separate document: 2009/10 SCJS Technical Report Annexes.<sup>13</sup>

This report documents how the SCJS was designed, the way in which it was conducted and the how the survey data are produced, and should be read whenever using data from the survey. It is worth emphasising that the SCJS, in common with most victimisation surveys, is a complex study with data organised at different levels (households, individuals, and incidents) and has a number of sub-samples contained within it, including the modular and self-completion samples. Accordingly, data users should read this report before analysing the data to ensure that it is interpreted in a valid manner.

The dataset does not contain any indicators which allow identification of a particular person or address, and information which would allow this is not released to the Scottish Government or any other organisation by TNS-BMRB. Substantial emphasis is given in the course of the interview to assure respondents that the information they provide will be held in confidence.

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<sup>13</sup> Available from the Scottish Government survey website:

<http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

## 2 Sample Design and Selection

### 2.1 Introduction

The requirements of the design of the SCJS 2009/10 sample were:

- An annual sample size of 16,000 interviews, with the equivalent of at least 1,000 simple random sample (SRS) interviews in each of the eight Police Force Areas (PFAs);
- The equivalent of at least 250 simple random interviews in each Local Authority (LA) area (with the exception of the three island groups);
- Interviews spread equally across the 12 month continuous fieldwork period (during which all interviews had to be conducted).

The majority of the SCJS sample was un-clustered; clustering only occurred in the more sparsely populated 'rural' areas of Scotland.

Details of how the design was implemented are given in the following sections.

### 2.2 Sample design

#### 2.2.1 Survey universe and sample population

The survey universe was defined as all households living in private residential accommodation in Scotland and within those households, all individuals aged 16 or over. The smallest inhabited islands, while included in the early stages of sample selection, were excluded from final address selection (Annex 1 lists these excluded islands and notes the exclusion criteria).

The sample design preparation made use of delivery point counts from the Postcode Address File (PAF) after editing (see section 2.3) as approximations to the household populations in each strata.

When the data collected for the survey were weighted, the latest estimates for household and individuals published by the General Register Office for Scotland (GROS) were used instead of the delivery point counts. Details are provided in Annex 2 which contains population targets used for weighting and detail on the sources of those data.

#### 2.2.2 Sample size and structure

The target sample size was a total of 16,000 interviews spread across Scotland. A requirement of the survey specification was that the effective sample in each PFA should be equivalent to a simple random sample of at least 1,000 interviews. An additional stipulation that the effective sample size in each LA should be the equivalent to a simple random sample of at least 250 interviews was added for the SCJS 2009/10 survey (this was not the case in the 2008/09 survey). The three island group LAs (Orkney, Shetland and Western Isles) were exempted from this requirement due to the relatively high cost of obtaining interviews in these authorities and their comparatively small size. A disproportional sample design by PFA area and LA area was

necessary to meet these stipulations, as PFAs and LAs with smaller populations required samples larger than their corresponding population proportions.

Sample selection differed between urban and rural areas as defined by the Scottish Government's urban / rural classification.<sup>14</sup> In urban areas the sample was systematically selected within PFA with a fixed interval giving an un-clustered sample. In rural areas, data zones were selected as primary sampling units (PSUs) with probability proportional to population size and the sample was clustered within those areas.

A further stipulation of the specification was that the sample must be spread evenly across the survey year with approximately equal numbers of interviews conducted in each month. TNS-BMRB extended this requirement to apply not just overall (with approximately 1,333 interviews per month), but also by PFA and by relative crime level as defined by the crime component of the 2006 Scottish Index of Multiple Deprivation (SIMD).<sup>15</sup> In this way the seasonality of crime patterns across the 12 month fieldwork period would be correctly reflected without being affected by inconsistent sample size and structure across the period.

A final stipulation was that fieldwork for the survey must be completed within the year 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010. Addresses issued for 2009/10 survey sweep could not be carried over into April 2010 or subsequent months during which the 2010/11 survey was in the field.

Experience from surveys similar to SCJS in Scotland suggested a likely response rate of 60% from eligible addresses in their month of issue rising to 70% overall by reissuing addresses in subsequent months. Those estimates, and the need for equal numbers of interviews per month, required the issue of larger numbers of original first-issue addresses in the early months of the survey year compared with later months. In the first two months of the fieldwork year (April and May 2009) all interviews were conducted on original first-issue addresses, i.e. interviewers called at addresses for the first time. Thereafter a proportion of interviews conducted in each month used re-issued non-productive sample from an earlier month. In March 2010, the final month of fieldwork for the 2009/10 survey, re-issued sample accounted for a higher proportion of interviews than in any previous month. Annex 3 provides the numbers of issued first-issue addresses and target sample size by month.

### **2.3 Sample frame**

The sample frame for SCJS 2009/10 was the Small User File of the Postcode Address File (PAF) expanded using the multiple occupancy indicator (MOI). PAF is currently the most comprehensive and reliable sample frame available

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<sup>14</sup> Details of the 2007-2008 Scottish Government Urban Rural Classification used in this survey can be found at <http://www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification>.

<sup>15</sup> Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/>.

in the UK for surveys of this kind but, in common with all similar sample frames, there are a few issues that need to be addressed before the data can be used for survey sampling. These are outlined below.

### **2.3.1 Deadwood**

Royal Mail issues updates of the PAF at quarterly intervals but despite this it includes what is often referred to as ‘deadwood’, that is a number of ineligible addresses and other forms of redundancy. These are properties that are not private residences (for example: small shops, offices and other businesses, and dwellings that have been demolished), or are unoccupied, possibly because they are holiday / second homes. In a few cases it will include some dwellings that are still under construction.

Use of the PAF in the Scottish Household Survey (SHS) 2005/06 showed that ineligible and redundant addresses together account for nine per cent of the total sample frame with some variation by area.<sup>16</sup> In common with standard survey practice, allowance was made for these by issuing slightly more addresses in the sample than the target response rate would suggest would be needed to achieve the final required sample size.

### **2.3.2 Multiple occupancy at addresses**

The PAF is an address based frame but, as noted above, the MOI field on the file is available allowing the identification of addresses with more than one household. Where the MOI value is three or more it was used to expand the number of addresses in the universe file to give each household at that address an equal probability of selection in the issued sample. There are some instances where the MOI indicator is incorrect and the number of dwellings differs from that expected. In these rare instances, when interviewers called at those addresses, a random selection of which household to interview was made using an algorithm built into the questionnaire CAPI script (see section 2.8). MOI values of two are not used to expand the PAF addresses as almost all consist of a small business, often a shop, with a flat attached and thus only consist of a single residential address.

### **2.3.3 Ineligible addresses**

The SCJS surveys private residential accommodation in Scotland (and within those households, an individuals aged 16 or over). Prior to sampling, certain types of addresses were excluded from the PAF:

- Business addresses: addresses with an entry in the business field or having a PO Box;<sup>17</sup>

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<sup>16</sup> Further information about the SHS can be found on the Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/16002>. Final deadwood rates from the SCJS 2008/09 were not available at the sample drawing stage of the SCJS 2009/10.

<sup>17</sup> A small number of businesses were inevitably missed in this process. Where these were subsequently identified by interviewers they were coded as business / industrial addresses and recorded as ineligible addresses in the CAPI outcomes (Table 4.1).

- Communal establishments where access is restricted: student halls of residence and military bases.

All other addresses included on the file were extracted to be available for sampling.

Some cases where access is restricted may remain in the file, such as nurses' homes and similar communal establishments. Where they could be identified, these were excluded from the sample in advance, or replaced if selected in the sample. Other communal establishments such as prisons and hospitals are not usually listed on the PAF as they do not contain private residences.

## **2.4 Stratification and clustering**

Analysis of SCJS was required by Community Justice Authority Area (CJAA) as well as by PFA. Therefore both were used to form strata. There are eight PFAs and eight CJAA's in Scotland. These were combined into 11 mutually exclusive areas, details of which appear in Annex 4. Forming the strata in this way enabled more control of the sample in the largest PFA (Strathclyde) and also allowed representative samples to be selected by CJAA as well as by PFA.

Given the requirement that each LA should be the equivalent to a simple random sample of at least 250 interviews (with the exceptions outlined in section 1.2.2), LA was used as a strata within the 11 combined mutually exclusive PFA / CJAA combination areas. Forming the strata in this way allowed for the requirements at the LA level as well at the PFA level.

Clustering of a sample increases sampling variation and reduces the effective sample size relative to an un-clustered sample. While no clustering at all is theoretically preferable, the relationship between potential gains in sampling efficiency and the additional economic costs necessary to make those gains is an important factor when designing surveys. Hence consideration must be given to how fieldwork can be carried out to achieve a given level of sample precision in a cost effective manner. This is usually achieved by grouping fieldwork into practicable interviewer assignments resulting in a clustered sample, with the benefit of reducing fieldwork costs.

The design recommended and adopted for the SCJS 2009/10 was un-clustered in urban areas and clustered in rural areas (as defined by the Scottish Government's urban / rural classification). This provides the best compromise between sampling and fieldwork efficiency. For reasons of practicality a rule was agreed for determining whether the sample in a combined PFA and CJAA stratum was clustered or un-clustered based on the proportion of its urban component:

- The sample selected in a stratum was to be un-clustered if the urban component of the stratum was 80% or more;
- The sample selected in a stratum was to be clustered if the urban component of the stratum was less than 20%;

- Those strata with values between those 20% and 80% retained both clustered and un-clustered parts.

Adding urban / rural classifications to the stratification based on 32 LAs using the 11 combined PFA and CJAA areas, as described above, resulted in 55 strata.

Application of the rule above to the strata resulted in a completely clustered sample in the Northern PFA and totally un-clustered samples in the Glasgow and Lanarkshire CJAA's within the Strathclyde PFA. The allocation of strata to un-clustered and clustered samples is given in Annex 5.

## **2.5 Disproportional design**

The target sample sizes required in each PFA were determined by a number of factors:

- Population;
- Estimated design factors related to the partially clustered designs and weights applied to the data after collection arising from the disproportional sampling and non-response;<sup>18</sup>
- The requirement that the size in each PFA should yield a sample equivalent to a simple random sample of 1,000 as a minimum and for each LA a minimum of 250 (with the exceptions outlined in section 2.2.2).

There were also some small adjustments to enable equal sized interviewer assignments to be produced.

The requirement to meet the equivalent of 1,000 simple random sample minima resulted in a disproportional design whereby PFAs with smaller populations were over-sampled relative to their populations and those with the largest populations under-sampled. Within each PFA there was further disproportional design with LAs with smaller populations over-sampled relative to their populations and those with largest populations under-sampled. Under-sampling was required to maintain the total sample size at 16,000 interviews.

For the calculation of the target sample sizes in each stratum a design factor of 1.05 was assumed for the un-clustered assignments in the sample and 1.30 for the clustered assignments. These assumptions were based on knowledge of design factors in general and on estimated design factors for the Scottish Crime and Victimization Survey (SCVS) 2006 and the British Crime Survey (BCS).

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<sup>18</sup> Design factors and resulting standard errors are presented in Chapter 10 and the weighting used on the survey is described in Chapter 8.

The values of the design factors were used to determine the target sample sizes needed to achieve the minimum effective samples of 1,000 required in each PFA and 250 within each LA. These new targets were compared with proportional sample values. Where the new targets were more than the proportional values the stratum value was increased to the new target. Values in the other strata were then reduced proportionally to bring the total interviews required back to 16,000.

The final sample numbers for issue to interviewers were determined by allowing for the target response rate of 70% and an ineligible component within the sample frame of nine per cent. Those values were amended slightly to become multiples of 16 in the clustered (rural) strata, as 16 addresses were issued in each clustered point (and 32 in each urban point).

## **2.6 Sample selection**

### **2.6.1 Un-clustered sample**

Various geographic indicators were appended to the addresses. They included PFA, CJAA, LA, intermediate geography area, data zone, output area and urban / rural classification.<sup>19</sup> The addresses for the un-clustered (urban) sample were first combined into groups of contiguous data zones which formed the final strata within PFA. In those strata, addresses were ordered by postcode within output area within data zone.

The target number of addresses to be sampled for the un-clustered sample in the LA was allocated to the strata in proportion to the total addresses they contained. Sampling intervals were calculated as total addresses divided by the target and the selected addresses were determined using a fixed sampling interval from a random start point. In detail this requires the selection of a random number less than the sampling interval to determine the first address to be selected; the repeated addition of the sampling interval determined the remaining addresses selected.

The selected addresses were grouped into sets of approximately 32 addresses to form interviewer assignments.

### **2.6.2 Clustered sample**

For the clustered (rural) sample, data zones were used as the primary sampling units. These were ordered by the census codes for the data zones within intermediate geography area and selected with probability proportional to their populations. The addresses in the selected data zones were ordered by postcode within output area and selection was conducted by a random start and sampling interval method similar to that used for the un-clustered sample selection given above. 16 addresses were selected from each data zone to be sampled. Each batch of 16 formed an interviewer assignment.

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<sup>19</sup> Geographical indicators down to LA level were included in the SCJS SPSS datasets. Geographies below this level are not published due to the disclosure risk that would result.

## **2.7 Allocation of assignments by month**

The allocation of fieldwork assignments to calendar months was a multi-stage process:

- Classification of assignments into types. These were the combination of urban / rural (un-clustered / clustered), and relative crime levels determined from the crime component of the 2006 SIMD);<sup>20</sup>
- Calculation of target numbers by month for each assignment type;
- Determination and allocation of months to be used for each assignment type within every LA;
- Allocation of specific assignment in each LA to the selected months.

Each of these steps is described below.

### **2.7.1 Classification of fieldwork assignments**

Data for the SIMD are published at the data zone level. Every data zone in Scotland was assigned a crime level quartile according to its ranking in the crime component of the 2006 SIMD. Quartile values were then assigned to each fieldwork assignment.

Assigning quartiles was a simple step for clustered assignments as the selected addresses in each were from single data zones. However, the un-clustered assignments contained addresses selected from several data zones. In those cases the numbers of addresses in each quartile were obtained and an average value derived. Those average quartile levels were then allotted to the assignments.

Therefore, every assignment was classified into one of eight types, (two urbanisation by four crime quartile levels).

### **2.7.2 Calculation of monthly targets**

Targets for each assignment type were calculated by month as for the overall targets as described in section 2.2. Those calculations allowed for front loading of original first-issue sample to yield similar numbers of interviews each month by assignment type.

### **2.7.3 Months used for each local authority**

The determination of the months used for the assignments in each LA was a complex procedure. The aim was to spread the assignments as far as possible across different months by assignment type and overall. The latter was for fieldwork practicality and efficiency. For example, it would not be practical from an interviewer workload perspective to have several assignments in an LA in one month and none for the next few months. The

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<sup>20</sup> Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/>.

use of one assignment per month would allow interviewers to work consistently across the fieldwork period.

The procedure made use of the selection of random numbers to determine the selected months.

For LAs with fewer than twelve assignments,  $n$  random (integer) numbers were selected in the range one to 12 (representing the twelve months), where  $n$  was the number of assignments in the LA. This ensured the spread across months. In LAs with more than twelve assignments, the first twelve were allocated one per month. The excesses over twelve were determined as for LAs with fewer than twelve assignments.

As the selections built up, the numbers allocated neared the target total values. When the target number of assignments had been reached for a month, no further selections for that month were made. This is a further 'without replacement' restriction. As the process continued the possible allocations become more constrained as the total allocations approached the overall target.

#### **2.7.4 Allocation of specific assignments**

Random numbers were selected and appended to each assignment within assignment type (urban or rural) in each LA. The assignments were then ordered by the values of those random numbers. The assignment with the lowest number was then allocated to the first month selected for that type for the LA. The assignment with the second lowest number was allocated to the second selected month and so on until every assignment was allocated to a month.

### **2.8 Selection of individuals / dwellings**

Only one adult was interviewed in each household. The majority of households contain more than one adult. Hence to avoid any bias in selection the respondent to be interviewed was determined by a random method. That random selection was implemented using an algorithm in the CAPI script. Age and gender details for all household members were collected by interviewers and one eligible adult was randomly selected as the respondent by the CAPI machine generating a random number corresponding to the adult to be interviewed.

Once a selection was made, no substitutions were permitted under any circumstances (for example, if the selected person completely refused to do the interview but another household member volunteered instead, the interviewer could not interview them and the address outcome was coded as a refusal and no interview was conducted at the address).<sup>21</sup>

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<sup>21</sup> However, the address (and details of the respondent who had been selected) may have been re-issued to another interviewer at a later date. The selected person remained selected at the re-issue stage.

In the rare instances where an interviewer found more than one dwelling unit at an address the CAPI software randomly selected one unit for interview.

## 3 Questionnaire Content and Development

### 3.1 *Structure and coverage of the questionnaire*

The SCJS questionnaire has a complex structure, but basically consists of three elements:

- The **main questionnaire** consists of a set of core modules asked of the whole sample, including demographics; and a set of **full and quarter-sample modules**, containing questions on a variety of topics;
- A **victim form** which collects details about the separate incidents a respondent may have experienced during the reference period. This victim form can be repeated up to five times. The number of victim forms completed depends on the number and nature of incidents respondents experienced;
- A **self-completion questionnaire** covering sensitive issues. All respondents were asked to complete a self-completion questionnaire, but had the option to refuse this due to the sensitive nature of the questions.

Each of these three elements contain various sections (for example, the self-completion questionnaire covers illicit drug use, partner abuse and sexual victimisation). The questionnaires are also linked (for example, incidents which have been mentioned already in the victim form are not recorded in as much detail in the self-completion questionnaire as those that have not been – section 5.4). Within some sections there is further filtering so that questions are only asked of sub-samples (for example, those who have had contact with the police in the last 12 months). It is therefore recommended that data users read the following section on the questionnaire carefully before starting analysis and should also refer to the specific questions being analysed in the actual questionnaire itself.

The SCJS 2009/10 questionnaire consisted, in order, of the following questionnaires / sections / modules:

**Main questionnaire** (16,036 respondents):

- General views on crime and social issues;
- Victim form screener.

**Victim form** (repeated up to five times, based on information collected in the victim form screener section):

- Incident details;
- Support and advice wanted / received;
- Perception of the incident;
- Experience of criminal justice system organisations (police contact, prosecution, information and assistance relating to the investigation, Procurator Fiscal);
- Attitudes towards offender prosecution and sentencing.

**Full sample modules** (16,036 respondents):

- Community sentencing;
- Local community;
- Criminal justice system.

**Quarter-sample modules** (c.4,000 respondents each):

**Module A:**

- Fear of crime;

**Module B:**

- Police;
- Road safety cameras;

**Module C:**

- Fraud (card and identity);
- Civil law;

**Module D:**

- Crime scenarios;
- Procurator Fiscal.

**Main questionnaire continued** (16,036 respondents):

- Demographics.

**Self-completion questionnaire** (completed by 13,418 respondents):<sup>22</sup>

- Illicit drug use;
- Stalking and harassment;
- Partner abuse;
- Sexual victimisation.

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<sup>22</sup> Respondents were given the option to refuse the self-completion questionnaire so not all 16,036 respondents to the main survey completed it (section 4.6.1).

The main differences between the 2008/09 and 2009/10 survey questionnaires are presented in section 3.7.1.

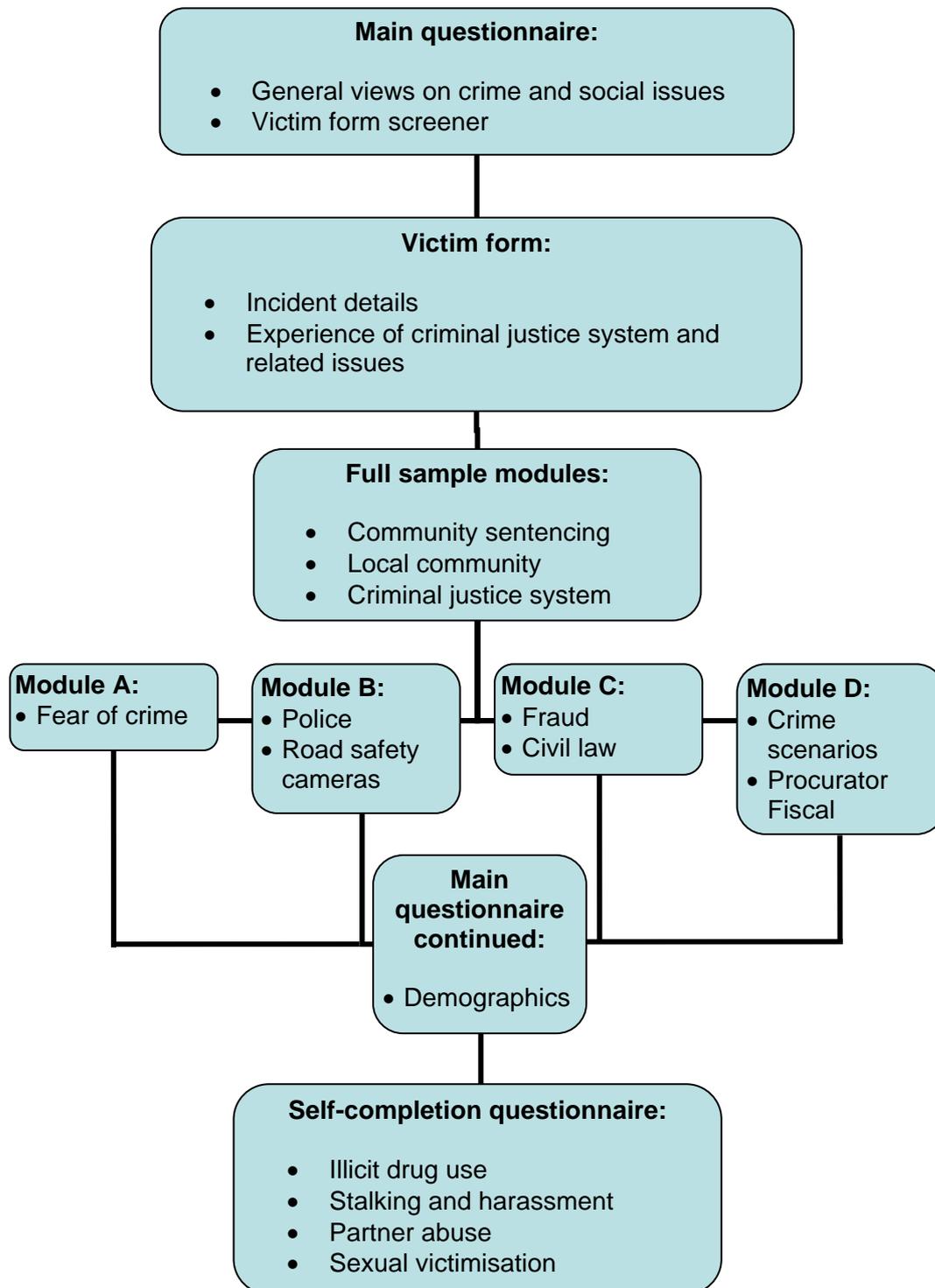
Before the main questionnaire starts, a series of screener questions are asked on the age and gender of each of the household members at an address. These questions are asked to allow the CAPI software to make a random selection of a household member (aged 16 or over) for interview (see section 2.8). They also instruct the interviewer to ask parental permission if the selected household member is aged 16 or 17 old. The NIPO CAPI software and tablet PCs which TNS-BMRB interviewers use on the survey allows the retention of this screener data for use in the actual interview.

The basic structure of the questionnaire is shown in Figure 1 below. The complete questionnaire can be found on the survey website and UK Data Archive as a separate document.<sup>23</sup>

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<sup>23</sup> Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

Figure 1: Questionnaire structure



The structure and content of the SCJS questionnaire is explored below, providing users with a fairly comprehensive overview of the questionnaire contents. However, data users should also refer to the full questionnaire before conducting analysis.

## **3.2 Main questionnaire content**

### **3.2.1 General views on crime and social issues**

The survey begins with a series of attitudinal questions on how important various social issues, including crime, are in Scotland. This is followed by questions about the local area, including how long the respondent has lived in the local area; how much the crime rate has changed locally and in Scotland overall; and how safe the respondent feels, either at home or going out alone after dark. The next questions ask respondents how worried they are that specific crimes will happen to them and their views on how likely they are to be a victim of these crimes. The majority of this section of the questionnaire is asked of all respondents.

### **3.2.2 Victim form screener questions**

Respondents are asked whether they have experienced certain incidents since the beginning of the reference period (section 5.1).

These screener questions are separated into three broad groups:

- **Vehicle related incidents**, including theft of vehicle, theft from vehicle, damage to vehicle and bicycle theft;
- **Household property incidents**, including whether the home or outbuildings were broken into and things stolen or damaged, or an attempt was made to do so, or whether any property outside of the home was stolen or damaged;
- **Personal incidents**, including whether any personal property was stolen, or an attempt was made to do so, whether any personal property was damaged, and whether the respondent had been a victim of force or violence (including from another household member) or threats.

All respondents are asked a maximum of 17 victim form screener questions.<sup>24</sup> The wording of the screener questions has been kept consistent with past Scottish crime surveys. They are designed to ensure that all incidents within the scope of the SCJS, including relatively minor ones, are mentioned. The screener questions deliberately avoid using terms such as burglary, robbery, or assault, all of which have a precise definition that respondents would not be

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<sup>24</sup> Questions relating to vehicle incidents are only asked if the household has had use of the relevant vehicle in the reference period, and the question relating to violence from another household member is only asked if there has been more than one adult (aged 16 or over) resident in the household within the reference period.

expected to know. This is consistent with the design of the British Crime Survey (BCS) questionnaire.

The focus of the victim form screener questions switches between incidents experienced by the household and those experienced by the individual respondent:

- All vehicle and household property incidents are classified in the questionnaire as **household incidents**. Respondents are asked about whether anyone currently residing in the household has experienced any incidents within the reference period. A typical example of a household incident is criminal damage to a car (owned or used by someone in the household). It is assumed that the respondent will be able to recall these incidents and provide information even in cases where they were not present when the incident happened because it involves household property;
- **Personal incidents** refer to all crimes against the individual and are only asked about incidents that have happened to the respondent personally (for example a personal assault), and *not* to any other people in the household.<sup>25</sup>

The distinction between household and personal incidents also affects how the data is analysed (section 7.2).

The questions are also designed in a way that avoids the respondent mentioning the same incident more than once (though this does happen in a small number of cases – section 7.1.4).<sup>26</sup>

At the end of the victim form screener questions, the interviewer is shown a list of all incidents recorded. The interviewer checks this list with the respondent to ensure that all incidents they / their household have experienced in the reference period have been recorded and nothing has been counted twice. If this is not the case, the information is corrected before proceeding. Responses to the screener questions then trigger the victim form questionnaire if a respondent has experienced at least one incident.

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<sup>25</sup> To illustrate, if the respondent and another household member were the victims of a combined assault from an offender in the same incident, the details of what happened to the other household member would not be recorded (for example they may have been injured in the assault while the respondent was not). The offence would be coded according to the crime experienced by the respondent (which may not be the same as the experience of the other household member).

<sup>26</sup> It is possible that two or more types of incident may occur at the same time (i.e. actually be the same incident), for example, an incident of where something is taken from a victim may also involve the offender using force or violence against the victim. All screener questions are therefore prefaced with “*Apart from anything you have already mentioned*” to avoid duplication as far as possible.

### **3.3 Victim form questionnaire structure**

Up to five incidents identified by the victim form screener questions are followed through in much more detail in the victim form questionnaire. The victim form questionnaire is designed to elicit *all* of the relevant details of an incident, irrespective of what incident the victim form was triggered by.<sup>27</sup> This then allows the coders to assign the correct offence code to the incident, regardless of what type of incident in the screener section triggered the victim form (see section 6.1 for details of the offence coding process).

Respondents are asked to report all incidents that they / their household experienced in the reference period. However, regardless of the number of incidents the respondent reports, the survey only collects detailed information on up to five of these. Incidents are covered in a specific priority order as explained below. This priority order is consistent with previous surveys and the BCS.

#### **3.3.1 Identification and ordering of incidents for victim forms**

Where a respondent had experienced more than one incident in the reference period, the CAPI programme automatically determines which of the incidents are followed up with a detailed victim form questionnaire, and the order in which the incidents are asked. Neither the interviewer nor the respondent have any choice about which incidents are followed up with the victim form questionnaire (with the exception of incidents of domestic violence)<sup>28</sup> or which order they are asked in. The priority ordering used by the computer is as follows:

1. **According to incident type:** Victim forms are asked in reverse order to the victim form screener questions. Broadly speaking this means that all personal incidents are asked before household incidents. Within household incidents, property-related incidents are asked before vehicle-related incidents.
2. **Chronologically within each type of crime:** If a respondent reports more than one incident of the same type, victim forms are asked in chronological order with the most recent incident first.<sup>29</sup>

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<sup>27</sup> For example, if a respondent has answered yes in the screener section to having experienced an incident where something they were carrying was stolen and as part of that same incident they were also deliberately hit by the offender, then the victim form would collect detail about the theft and assault.

<sup>28</sup> In the case of the incidents of violence from another household member, the interviewer has an option to suspend the victim form if there is another person present in the room. This is to prevent forcing the respondent to divulge personal and sensitive information which may embarrass or endanger them in front of someone else. In the 2009/10 survey there were nine cases of a victim form being skipped for this reason.

<sup>29</sup> Chronological ordering is only used where respondents have experienced more than one of the same type of incident and it is applied only after the incident type ordering has been applied.

If a respondent has experienced five or fewer incidents identified at the victim form screener section, then a victim form questionnaire is asked for all incidents (with the order based on the priority ordering above). If the respondent has experienced more than five incidents in the reference period, only five victim forms are asked (with the incidents and order based on the priority ordering above). As a result the survey does *not* collect details about all incidents which a respondent experienced in these cases.

The priority ordering means that the incidents which are not asked about are likely to be incidents that tend to be more common. For example, criminal damage to vehicles is the lowest priority in the victim form order, but one of the most common crimes (motor vehicle vandalism had the highest prevalence of all the groupings of crime used in the SCJS 2009/10 Main Findings Report – Table A1.5).

Section 5.2 provides information on the numbers of victim forms that were completed by respondents.

### 3.3.2 Series of incidents

The victim form screener section also determines how many times the respondent has experienced a particular incident within the reference period. Most victim forms represent a single incident. However, in a minority of cases a respondent may have experienced the same type of incident (i.e. one of those asked about in the victim form screener) a number of times in succession. If more than one incident is reported, the respondent is asked whether these incidents represented a 'series' or not. A series is defined as:

*“the same thing, done under the same circumstances and probably by the same people”.*

In common with the BCS, if a respondent regularly experiences incidents where the *same thing* is done under the *same circumstances* by the *same type of people*, this is recorded as a series of incidents (or *series incident*) rather than separate incidents.<sup>30</sup> This most usually happens in a work situation, where groups such as patients or the general public might be involved.

Where a series of incidents is identified, only a single victim form is completed for the series, and this relates to the most recent occurrence.

In common with other victimisation surveys such as the BCS, only asking about the most recent incident where a series of similar incidents has occurred yields three practical advantages:

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<sup>30</sup> To illustrate, a care worker who was regularly threatened and verbally abused by patients as part of their job, would count these as a series incident. If, however, they were also physically attacked, then this would count as a separate incident (as the incident is of a different type to the cases of threats and verbal abuse).

1. Many (although not all) incidents classified as a series tend to be minor incidents (e.g. vandalism). Only asking about the most recent incident avoids asking a respondent the victim form questionnaire several times over when the detail of the incidents recorded will be very similar, therefore decreasing the likelihood that the respondent will terminate the interview or refuse to answer repetitive detailed questions about what can be very similar incidents;
2. It avoids using up the limit of five victim forms on incidents which tend to be less serious;
3. Respondent re-call of the incident details is likely to be more accurate for more recent incidents, and less so with earlier incidents.

In 2009/10 79% (3,827) of all victim forms (4,847) related to single incidents and 21% (1,020) related to a series of incidents.

In rare cases where respondents have experienced a mixture of single incidents and a series of incidents of the same type, the interview program has a complex routine which handles the sequence of individual and series incidents. This allows the priority ordering of the victim forms to be allocated, based on the date of the latest incidents first.

### **3.4 Victim form questionnaire contents**

The victim form contains two basic sections; the first relates to the details of the incident itself (including details of the offender(s) if known), and the second to the follow-up of the incident with regard to victim's experience of the criminal justice system and related issues.

#### **3.4.1 Incident details**

The victim form is key to estimating victimisation in Scotland and collects three vital pieces of information about incidents:

1. When the incident or series of incidents occurred;
2. The respondent's description of the incident;
3. Important details of the incident to allow offence coding.

These are explored in turn below.

#### **1. When the incident or series of incidents occurred.**

For single incidents, where respondents are unsure about the exact month in which an incident happened, they are asked to narrow it down to a specific quarter (e.g. between nine and 12 months prior to the month of interview). If they are unsure about the quarter in which the incident happened, they are asked to confirm if the incident happened in the 12 month reference period (section 5.1).

In some cases, respondents may report an incident in the victim form screener section as having happened within the reference period, which later turns out to be before the start of the reference period (and therefore outside the survey's coverage). In such cases, after this has

been confirmed, the victim form is terminated and the questionnaire moves on to the next victim form (or the next section of the main questionnaire if the respondent has not experienced any further incidents). If the incident is in the month of interview, then details are collected, but the incident is not included in the survey statistics (section 5.1).

For incidents that were part of a series, respondents are asked how many incidents occurred in each quarter of the reference period and the month in which the most recent incident occurred.<sup>31</sup> If the most recent incident in the series occurred in the month of interview the victim form is still completed, but the number of incidents in the series is adjusted accordingly to only include those that happened in the reference period (section 5.1.1). If there are no incidents in the reference period or the month of interview then the victim form is non-valid and terminated in the same way as for single incidents.

In the CAPI questionnaire, reference dates (months, quarters etc) are automatically calculated based on the date of interview and appropriate text substitution is used to ensure that the questions always refer to the correct reference period. Because the 12 month reference period changes throughout the fieldwork year, some date-related questions in the victim form have different text each month to reflect this changing reference period.

## **2. The respondent's description of the incident.**

At the start of the victim form respondents are asked to describe the details of the incident, with the interviewer probing for where it happened, who the victim was, who the perpetrator was and what they did. The interviewer then summarises these in an open-ended text entry. This summary description is vital to the accurate offence coding of incidents when used in combination with the series of pre-coded questions which are also asked about the incident (see section 6.1 for further detail of the offence coding process).

At the end of each victim form, the open-ended description is re-capped, along with the answers to some of the key pre-coded questions. By presenting this information on a single screen, interviewers have the chance to confirm with respondents that the information is correct and consistent. If the respondent and / or interviewer wish to add or clarify any information they have the opportunity to do so at this stage.

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<sup>31</sup> In the same manner as single incidents are treated, if the respondent cannot remember the exact month of the latest incident then they are asked what the corresponding quarter was or to confirm that the incident happened within the reference period.

### 3. Important details of the incident.

Examples of the sort of information collected include where and when the incident took place; whether anything was stolen or damaged and if so, what; whether force or violence was used and if so, the nature of the force used and any injuries sustained.

The scope of the SCJS only includes incidents which happen within Scotland. For incidents occurring on-line to be included, the respondent must be living in Scotland at the time of the incident. If incidents occurred outside of Scotland then the victim form questionnaire terminates and the questionnaire moves on to the next victim form (or the start of the next section of the main questionnaire if the respondent has not experienced any further incidents). The victim form would not be assigned a non-valid offence code. The key questions within the victim form have remained largely unchanged from previous versions of the survey.

As well as details of the incident (along with experience of the criminal justice system and related issues – described below), respondents are also questioned about the characteristics of the offender(s), victim's perceptions of the offender(s) motivation and emotions felt as a result of the incident.

The victim form also contains a number of questions which are designed to help explain inconsistent answers which may arise within the questionnaire (for example, if a victim form was triggered because of an incident of theft in the victim form screener questions but nothing is recorded as having been stolen).

Several questions are included to allow the interviewer to terminate the victim form if the incident being recorded is a duplicate of a previous victim form (section 7.1.4).

#### 3.4.2 Victim's experience of the criminal justice system and related issues

Several sections follow the questions on the details of the incident on various subjects related to the victim's experience of the criminal justice system and related issues:<sup>32</sup>

- **Support and advice wanted / received:** what victims would like to have received after the incident, what they did receive and from whom, and how satisfied they were with it;
- **Perceptions of the incident:** whether anyone other than the offender(s) was responsible for the incident, whether the respondent

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<sup>32</sup> General questions on the criminal justice system are also asked of all respondents in the Scottish criminal justice system full sample module.

themselves used force or was under the influence of drugs or alcohol prior to the incident;

- **Police contact:** how the police came to know about the incident and how satisfied victims were with police handling of the incident;
- **Prosecution:** whether the offender(s) was prosecuted and what sentence they received;
- **Information and assistance relating to the investigation:** what information / assistance was received and from whom (including the police, Victim Support Scotland and the Witness Service), satisfaction with it, reasons for dissatisfaction and what information / assistance victims would liked to have received;
- **Procurator Fiscal:** contact with and type of assistance received, views on the helpfulness of this assistance and satisfaction with contact with the Procurator Fiscal.
- **Attitudes to offender prosecution and sentencing:** whether the offender(s) should have been prosecuted in court, reasons why not, what alternate punishment should be used as an alternative to prosecution in court, whether they should have received a prison sentence and how long this should be, what type of non-prison sentence they should receive and perception of the incident as a crime or not.

### **3.5 Main questionnaire content (continued)**

After the victim form screener (or victim form) has been completed, the main questionnaire continues with three full-sample module sections.

#### **3.5.1 Community sentencing (full sample)**

This section is the continuation of the main questionnaire and all respondents are asked it. Respondents are asked about what community sentences they are aware of, whether these sentences would make an offender less likely to commit a crime in the future, and whether they agree or disagree with a series of statements about community sentences. They are also asked whether they have ever personally been on remand or served a prison sentence in Scotland.

#### **3.5.2 Local community (full sample)**

A new section for the 2009/10 survey, this section asks respondents to imagine a scenario in which a group of young boys are damaging a bus shelter in the respondent's local area. They are then asked how likely it is that they themselves would take a series of actions (for example, speaking to the boys parents). Respondents are then read a list of statements about people in their local area and asked how far they agree or disagree with each statement (for example, 'people in this local area pull together to prevent crime'), before being asked how many people they know in the local area.

### 3.5.3 Scottish criminal justice system (full sample)

The criminal justice system in Scotland is defined to respondents as:

*“the shared name for all the organisations in Scotland that deal with finding offenders and arresting them, then taking them through the court system and deciding what sentence they are given if they are found guilty”.*

Questions are asked of respondents’ level of awareness of the system as a whole and confidence in it via a series of statements about it.<sup>33</sup> Respondents are then asked which of the component organisations that make up the criminal justice system they have heard of, and which they have personally been in touch with. Finally, some of the responsibilities of local police forces are read out and the respondent is asked to say how confident they are in their local police forces’ ability to fulfil them. All respondents are asked the questions in this section.

### 3.5.4 Quarter-sample modules (A-D)

Addresses are randomly allocated to one of four modules at the sampling stage. Allocations are equal so that one quarter of addresses are allocated to each module. In the final achieved sample this percentage varies slightly due to small differences in response rates between modules (see Table 3.1).

**Table 3.1: Quarter-sample module sample sizes**

Source: SCJS 2009/10.

Base: All respondents (16,036).

Module	Sample size (n)	Sample (%)
A	3,995	25
B	4,010	25
C	3,984	25
D	4,047	25

### 3.5.5 Module A: fear of crime

**Fear of crime:** The short section on fear of crime includes questions about how common respondents think various crimes are and where they have got this impression from. All of these are with reference to the respondent’s local area (that is within a 15 minute walk of the respondent’s home). Respondents are asked whether they have changed anything in their everyday lives as a result of these issues, and if so what (new questions for the 2009/10 survey).

<sup>33</sup> The questions in this section are asked of the *all* respondents, irrespective of whether they have completed any victim forms.

### 3.5.6 Module B: police and safety cameras

**Police:** The new section for 2009/10 begins with questions about police visibility in the local area, including how important it is to the respondent to know a community police officer who patrols the local area, how frequently patrols are seen and in what form, and opinions on police presence and why these are held. Respondents are then asked about their level of agreement / disagreement with a series of statements about the police in their local area (for example, 'they can be relied on to be there when you need them'). Finally a series of questions are asked of those who have been stopped by the police in the 12 month reference period, including whether a reason was provided for being stopped; what this was; whether the respondent thinks this was the real reason; whether a search took place; how the respondent viewed the contact with the police and how satisfied they were with it.

**Safety cameras:** Road safety cameras are defined as both speed cameras and red traffic light safety cameras. Respondents are asked how far they agree with the use of each, and whether they agree or disagree with a battery of statements about them.

### 3.5.7 Module C: fraud and civil law

**Fraud:** The fraud section of the questionnaire focuses on two types of fraud; card fraud and identity theft. The section is included to provide a measure of the extent of both card and identity fraud, as incidents of these crimes are not specifically included in the victim form screener questions, and hence would not necessarily be recorded by the survey.

**Card fraud:** This covers both the unauthorised use of credit and bank cards to buy or pay for things or withdraw cash, and the use of card details for the same purposes. Respondents who experience this during the 12 month reference period are asked where the cards / details were used, and, if they were used online, where they were living at the time. If the use of cards / details occurred outside of Scotland or the respondent was not living in Scotland at the time the cards / details were used then follow-up questions are not asked.

Various follow-up questions were included to find out more about the incident and, where appropriate, contact with the police in relation to the incident.

**Identity fraud:** These questions relate to someone pretending to be the respondent or using their personal details (including name, address, date of birth or National Insurance number). The section covers their use to do things such as obtain credit, open a bank account, apply for a mobile phone contract or state benefits or for official documents such as a driving licence or passport or to commit some other kind of fraud. If the fraud was not perpetrated in Scotland then the follow-up questions are not asked. The follow-up questions broadly follow the same format as those for card fraud.

**Civil law:**<sup>34</sup> This section relates to problems and disputes that the respondent may have experienced in their everyday life in the last three years that can be settled in court.<sup>35</sup> The section is carefully introduced to the respondent due to both the extension in the re-call period and the shift towards incidents which relate to civil law rather than criminal law:

*“I am now going to ask you some questions about different kinds of problems or disputes you might have had in the past three years. These are problems that are not directly related to crime but to other issues you might have to deal with in your everyday life. Of course, everyone has problems in their lives from time to time which they deal with. We are particularly interested in problems or disputes you had that you found difficult to deal with or that you could not solve easily.”*

Civil law issues are grouped into four specific types:

1. Those concerning **home, family or living arrangements** (neighbours, family, housing and immigration);
2. Those concerning **health and well-being** (injury because of an accident or medical negligence and mental health issues);
3. Those concerning **money, finances or any purchased good or service** (debt, benefits and faulty goods and services);
4. Those concerning **unfair treatment** (discrimination, unfair treatment by the police and employment related issues).

Respondents are asked how important it was that they solve the problem, and which is the most important (if they have had more than one). For the most important or only problem respondents are asked whether it was resolved or not; if they have solved or are trying or planning to solve the problem they are asked if they used / are using help and advice from others; if the problem has been solved then they are asked how satisfied they are with the results. Three new questions were added to the 2009/10 survey: if they used / are using help and advice from others then they are asked who from, and if they are not then they are asked why not. Finally, those who are not planning on trying to resolve the issue are asked why not.

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<sup>34</sup> This section was entitled ‘civil justice’ in the 2008/09 survey and was asked in two quarter-sample modules.

<sup>35</sup> The date of the start of the three year period is confirmed to the respondent by an automated calculation in the CAPI software. As with the reference period used in victim forms, the date changes every month.

### 3.5.8 Module D: crime scenario and Procurator Fiscal

**Crime scenario:** This is a new section for the 2009/10 survey. Respondents are presented <sup>36</sup> with an imaginary scenario where a crime is committed and asked their opinion of the punishment that the offender(s) should receive (if any). The amount of information respondents are in possession of about the incident is then incrementally increased over five stages; after each new piece of information is provided they are asked if they would change their opinion of the punishment the offender(s) should receive (if any).

**Procurator Fiscal:** this short section includes questions on awareness of the Procurator Fiscal's role, contact with them and satisfaction with this contact.

### 3.5.9 Demographics section

A variety of demographic information is collected from all respondents (many using Scottish Government harmonised questions),<sup>37</sup> including:

- Newspaper readership;
- Age, gender, marital status, ethnicity, religion and health status;
- Tenure and property type;
- Employment status, including questions to allow Office for National Statistics Socio-Economic Classification (NS-SEC) coding;<sup>38</sup>
- Household income and ability to afford an unexpected expense.

Age and gender of other persons in the household are collected at the interview screening stage (see section 3.1 for details). This information is used to establish the household reference person (HRP).<sup>39</sup> This standard classification is used on most government surveys and is based on the following criteria:

- The HRP is the member of the household in whose name the accommodation is owned or rented, or is otherwise responsible for the accommodation. In households with a sole householder, that person is the HRP.

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<sup>36</sup> Interviewers read out the scenario and supporting information to respondents.

<sup>37</sup> Information on harmonised questions can be found on the Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/About/SurveyHarm>.

<sup>38</sup> These questions are asked about the respondent only, regardless of whether that person is the household reference person (HRP) or not. This means that the NS-SEC coding refers to the respondent only and not to the HRP.

<sup>39</sup> Variable WHRP in the respondent file SPSS data file records which member of the household is the HRP.

- In households with joint householders (for example, two people's name on the mortgage) the person with the highest income is taken as the HRP.
- If both householders have exactly the same income, the older is taken as the HRP.

At the end of this section respondents are asked whether they are willing to provide their contact details and survey answers to the Scottish Government or research organisations who are acting on their behalf for the purpose of further research.

### **3.6 Self-completion questionnaire contents**

The self-completion questionnaire is asked of all members of the sample after the demographics section of the main questionnaire has been completed – there are no upper age restrictions.<sup>40</sup> Respondents could, however, refuse to answer the self-completion questionnaire:<sup>41</sup> 84% of respondents to the main survey completed the self-completion questionnaire (section 4.6).

The self-completion questionnaire covers the following topics:

- **Illicit drug use** and availability;
- **Stalking and harassment;**
- **Partner abuse** (including both psychological and physical abuse by a partner);
- **Sexual victimisation.**

Details of stalking and harassment, partner abuse or sexual victimisation incidents recorded in the self-completion questionnaire are *not* included in the statistics 'all SCJS crime' (see section 7.1.5 for details) *unless* the incident is also mentioned by respondents in the victim form and assigned an offence code in the normal way. Incidents reported only in the self-completion questionnaire could not be assigned offence codes in the same way as those collected in the victim form as only a limited number of follow-up questions were asked about incidents (reflecting an ethical decision based on potential respondent distress at having to disclose detailed information on very sensitive incidents).

Section 5.8 provides further information on the administration of the self-completion questionnaire.

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<sup>40</sup> This is in contrast to the BCS where the self-completion questionnaire, containing similar topics, is only asked of those aged less than 60. The SCVS 2006 self-completion questionnaire was also only asked of those aged 16 – 59. The decision was taken for the SCJS to include those aged 60 and over on equalities grounds.

<sup>41</sup> Respondents could, of course, refuse to answer any of the individual questions in the survey.

### 3.6.1 Illicit drug use

Respondents are asked whether they have ever used 16 illicit drugs. While under-reporting of illicit behaviour by respondents is by far the main concern on a survey such as this, it is also recognised that some people may report taking particular drugs when they have not actually done so for reasons of bravado or other reasons. Respondents are therefore asked if they have ever taken ‘semeron’, a fictitious drug. Respondents who have said that have taken semeron are then excluded from the final data outputs and reporting for the drugs section of the questionnaire.<sup>42</sup> There were nine cases of respondents reporting that they had ever taken semeron.

Those respondents who have taken drugs in the past are then asked a series of follow-up questions, including:

- Whether they have taken the drug in the last 12 months. Those that have are asked whether they have taken the drug in the last month and, if so, which one they have taken most and how hard it is to get hold of it;
- What drug was the first ever taken; at what age they first took drugs, and what methods of drug taking they have ever tried;
- Whether they have ever mixed the drug they had used most often in the last month with either alcohol or other drugs, and in the case of the latter which drugs they have mixed with it;
- Whether, in the *last month*, they have felt dependent on the drug taken *most often in the last month* and have tried to cut down but were not able to do so.

The questions are asked in a loop (i.e. “*Have you ever taken <drug name>?*”) rather than by selection from a single list of drugs. This approach has been shown to improve survey estimates of illegal drug-taking (Mayhew, 1995).

### 3.6.2 Stalking and harassment

This section begins with a screener section collecting information about respondents’ relationship history and sexual orientation.<sup>43</sup>

Respondents are then asked about whether they have experienced any of four forms of stalking and harassment in the 12 month reference period. As measured by the SCJS stalking and harassment included:<sup>44</sup>

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<sup>42</sup> These respondents are, however, retained in the rest of the dataset, including the remainder of the self-completion section.

<sup>43</sup> The sexual orientation question is asked in the stalking and harassment section of the self-completion questionnaire due to the sensitive nature of the question.

<sup>44</sup> Therefore the survey does not provide measures of the prevalence of all possible forms of stalking and of harassment, but rather of four types of behavior that could be construed as forms of stalking and harassment.

- Receiving obscene or threatening correspondence, such as letters, emails, text messages or cards;
- Receiving obscene, threatening, nuisance or silent telephone calls;
- Having someone waiting outside a home or workplace on more than one occasion;
- Being followed around and watched on more than one occasion.

If they have, they are asked (for the most recent incident of each form of stalking and harassment if they had experienced more than one) who the offender(s) was and what their relationship to the respondent was. The respondent is also asked whether the police came to know about the incident, and if not, why not.

### 3.6.3 Partner abuse

This section is only asked of those who have had a partner at any time since they were 16. It is introduced carefully to ensure that respondents are clear on the coverage of the questions:

*“We would now like to ask you some questions about your own relationships with any partners you may have had since you were 16. By partner we mean a boyfriend, girlfriend, husband, wife or civil partner.”*

Two questions present a list firstly of types of **psychological abuse** and secondly types of **physical abuse**; respondents were asked if they had experienced any of these since they were aged 16, and if so, how many partners perpetrated these acts. If any of these types of abuse have taken place within the 12 month reference period, a series of follow-up questions are asked, the majority about the most recent / only incident in that time, including:

- Where they happened (in Scotland or elsewhere) and how many incidents happened since the beginning of the 12 month reference period;
- Whether any children were in the household, whether they saw or heard what happened or were involved or hurt in the incident;
- What physical and psychological consequences they experienced;
- What people or organisations, if any, the respondent informed of the incident;
- Whether the police came to know about the incident and follow-up questions including: satisfaction with the way police dealt with the incident; why they did or didn't report the incident to the police; whether it was reported as a crime; if the report resulted in a prosecution and whether there was a conviction; satisfaction with the police handling of the incident;

- Whether the perpetrator was living with the respondent at the time of the incident and whether they are living with them at the time of the interview;
- Whether the respondent considered what happened to be a crime or not.

At the end of this section, all those who have had a partner since they were 16 are asked whether they consider themselves to have ever been a victim of domestic abuse. The term domestic abuse is not defined to the respondent.

### **3.6.4 Sexual victimisation**

The questionnaire asks about all types of sexual offences. These are categorised into two groups, which are termed serious sexual assault and less serious sexual assault.<sup>45</sup> Less serious sexual assault includes:

- Indecent exposure;
- Sexual threats;
- Touching sexually when it was not wanted.

Serious sexual assault includes:

- Forcing someone to have sexual intercourse when they did not want to;
- Attempting to force someone to have sexual intercourse when they did not want to;
- Forcing someone to take part in other sexual activity when they did not want to;
- Attempting to force someone to take part in other sexual activity when they did not want to.

Respondents are reminded that they may skip such sensitive questions via using the 'Don't wish to answer' button at the top of the screen.

Different follow-up questions are asked of respondents depending on the nature of the incident(s) they have experienced (i.e. whether they are classified as less serious or serious sexual assault) and when they experienced them (in the last 12 months or since the age of 16).

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<sup>45</sup> The terms 'less serious sexual assault' and 'serious sexual assault' are adopted throughout this report to distinguish between the two types of sexual assault which were asked about separately in the questionnaire. This is consistent with the practice adopted by the Home Office in reporting of the BCS. The terms do not relate to the seriousness of the impact on the individual experiencing an incident, as this may vary according to the particular circumstances of an incident.

### **Less serious sexual assault**

Victims of less serious sexual assault are asked the following questions for each of the four forms they have been the victim of:<sup>46</sup>

- When the incidents(s) happened (in the last 12 months, longer ago or both); and how many times they occurred during the 12 month reference period;
- What the relationship was between the respondent and the offender(s) and the gender of the offender(s) for all incidents in the 12 month reference period and the latest incident in the reference period, as well as for incidents longer ago than the last 12 months but since the age of 16;
- For the latest incident in the 12 month reference period: whether it happened in Scotland; whether the police came to know about the incident: how it was reported or if it was not, then the reason why.

### **Serious sexual assault**

Respondents who have experienced each form of serious sexual assault are asked additional follow-up questions about the incident(s) compared to the follow-up questions for less serious sexual assault. In addition, the time-period which some of the follow-up questions reference was increased compared to the 2008/09 survey from incidents occurring in the 12 month reference period to incidents occurring since the age of 16. This amendment to the questionnaire was made to increase the number of cases available as numbers in 2008/09 were insufficient to allow robust analysis (see Box 3).

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<sup>46</sup> Readers should note that the questions in the questionnaire are asked in a different order to that listed here.

**Box 3: Serious sexual assault – time periods covered**

The 2008/09 survey reported very few cases of serious sexual assault in the 12 months before interview (less than 50 cases across all four types combined). Therefore, a decision was made to increase the time-period to which the follow-up questions referred in order to increase the number of cases available for analysis.

The follow-up questions in the 2008/09 survey followed the same pattern as the questions for less serious sexual assault with respect to the time period, asking only about the latest incident within the 12 month reference period (questions <FS,AFS,OS,AOS>\_WHR through to \_12i).

In the 2009/10 survey some of the follow-up questions for serious sexual assault are asked referring to the latest incident the respondent has experienced *since the age of 16* (i.e. rather than the latest incident *within the last 12 months*).

The potential draw back of this approach is that respondent re-call error could be increased. For this reason, only the more factual of the follow-up questions are asked for the latest incident since the age of 16 (such as whether the police came to know about the incident. These include:

- Whether the incident happened in Scotland or elsewhere;
- Physical injuries sustained;
- Whether the police came to know about the incident, how it was reported and if not then the reason why;
- Whether the incident was reported as a crime and if so, whether there was a prosecution and conviction.

Analysts should be careful when making comparisons between the 2008/09 and 2009/10 data due to the differing time periods covered.

Although time-periods differ, and with the exception of some additional questions that are asked, a broadly similar set of follow-up questions are asked for each form of serious sexual assault the respondent has experienced compared with those asked for less serious sexual assault. These include:

- When the incidents(s) happened (in the last 12 months, longer ago or both); and how many times they occurred during the 12 month reference period and ever (since the age of 16);

- What the relationship was between the respondent and the perpetrator(s) and the gender of the perpetrator(s) for all incidents and the latest incident both for those happening in the 12 month reference period and those happening prior to the 12 month reference period (since the age of 16);
- For the latest incident (irrespective of when this was), whether it happened in Scotland; what physical injuries were sustained as a result of the assault, whether the police came to know about the incident, how it was reported or if it was not, then the reason why, whether it was reported as a crime and if so, whether there was a prosecution and conviction;
- For the latest incident in the 12 month reference period, the location of the assault, the psychological impacts, whether the respondent perceived the incident as a crime or not, satisfaction with police handling of the matter and reasons for dissatisfaction (where applicable), people or organisations informed of the assault, and whether the respondent or the offender(s) were under the influence / had been given drugs or alcohol at the time of the assault.

### ***3.7 Questionnaire changes and piloting***

The 2009/10 survey questionnaire remained to a large extent the same as the 2008/09 questionnaire. A number of changes were made (section 3.7.1), principally to the quarter sample modules, as a result of an internal Scottish Government consultation with policy colleagues with an interest in the survey as well as advice from the survey Technical Advisory Group (TAG).

These new modules and selected other questions underwent cognitive testing (section 3.7.2) before a limited CAPI pilot was conducted (section 3.7.3).

### 3.7.1 Questionnaire changes

The major changes to the questionnaire between the 2008/09 and 2009/10 survey are summarised below.

#### Main questionnaire:

##### Full sample modules:

- **Local community:** section added.

##### Quarter sample modules:

- **Module A:**
  - **Workplace violence:** section removed.
- **Module B:**
  - **Insulted / pestered / intimidated:** section removed;
  - **Police:** section added.
- **Module D:**
  - **Civil justice:** section removed (but retained in quarter sample module C);
  - **Crime scenario:** section added.

#### Self-completion questionnaire:

- **Sexual victimisation:** reference period for incidents of serious sexual assault extended to cover the last incident experienced since the age of 16 – see section 3.6.4).

The content of questionnaire sections is summarised in section 3.2 onwards. A list of questions that have been added, deleted and amended is provided in Annex 6. Copies of the 2008/09 and 2009/10 survey questionnaires are available from the survey website.<sup>47</sup>

### 3.7.2 Cognitive question testing

Cognitive testing uses probing techniques to try and understand the thought processes that a respondent uses in answering a survey question. It is designed to see whether the respondent understands the question, or specific words and phrases contained within the question; what sort of information the respondent needs to retrieve in order to answer the question; and what decision processes the respondent uses in coming to an answer

Cognitive testing was undertaken for some of the questions in the local community (full sample module) and the police sections (module B), all of the questions in the crime scenario (module D) and some other additional questions, including some which were not added to the final questionnaire. 20 questions were tested in total using two questionnaires. Other new questions did not undergo cognitive questions, either because they were from, or based

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<sup>47</sup> Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

on, existing questions from other surveys or were simple factual questions (such as those used in the victim form for offence coding purposes).

The process of cognitive interviewing is similar to conducting a semi-structured, depth interview, and employs both qualitative and quantitative interviewing techniques. The interview involved:

- Selected questions asked of respondents, replicating conditions of the actual interview as far as possible (e.g. asking some questions that did not need testing but set the context of those that did);
- Respondents verbalising their thoughts (thinking-aloud) while answering questions;
- Researchers using different probes and prompts to encourage provision of more in depth / different information.

Research staff from TNS-BMRB conducted 32 interviews with members of the general public in two locations, one in Glasgow and the other in Edinburgh in January / February 2009. Members of the public were selected on the basis of quotas by age, gender and social grade. The purpose of this selection was to achieve a breadth of respondents' views from across the range of different types of individuals that would be interviewed in the actual survey.

The results were presented to the Scottish Government in a summary report containing a series of recommendations relating to the tested questions (TNS-BMRB, 2009).

### **3.7.3 CAPI pilot**

Once the final questionnaire had been agreed, a small scale technical CAPI pilot was conducted by two TNS-BMRB interviewers testing the CAPI questionnaire to ensure that the questionnaire script functioned correctly and that the links between the questions and modules were operational. It also allowed early inspection of raw data to check questionnaire routing as well as testing the data collection, performance monitoring and management systems and offence coding systems.

## 4 Fieldwork

Fieldwork for the SCJS 2009/10 was continuous and took place between the 1<sup>st</sup> of April 2009 and the 31<sup>st</sup> of March 2010. This chapter documents all aspects of the data collection process, focusing on:

- Interviewer briefings;
- Quality control procedures;
- The management of fieldwork across the survey year;
- Fieldwork procedures and materials;
- Survey response rates for the main and self-completion questionnaires.

### 4.1 Briefing of interviewers

Interviewers working on the survey attended a full-day survey briefing before the fieldwork started. In total, three full briefings were held in Edinburgh, Glasgow and Aberdeen. All briefings were attended by TNS-BMRB researchers and field staff working on the survey, and the Edinburgh and Glasgow briefings by Scottish Government staff. All interviewers also received training developed originally in conjunction with Victim Support Scotland (VSS) on how to handle sensitive situations where respondents had been the victim of crime.<sup>48</sup>

Each briefing covered the following topics:

- Background to the SCJS and how the information is used by the Scottish Government and associated stakeholder agencies;
- Details about sampling and fieldwork procedures and advice on how to obtain high response rates;
- Instructions on how to carry out the doorstep household screening and respondent selection procedures;
- An explanation of the self-completion questionnaire and means of encouraging respondents to complete this;
- A re-cap of the questionnaire structure and details of new questionnaire sections and amended questions compared to the 2008/09 survey questionnaire. This was followed by a run-through of the questionnaire using CAPI machines to familiarise interviewers with it. This section provided key pointers on how to collect accurate and comprehensive information from the victim form screener questions and victim form.

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<sup>48</sup> Victim Support Scotland (VSS) is a voluntary organisation dedicated to supporting victims of crime: <http://www.victimsupportsco.org.uk/page/index.cfm>.

In addition to this comprehensive face-to-face briefing, interviewers were also required to carry out at least two practice interviews before starting their assignments.

## **4.2 Supervision and quality control**

In addition to the survey briefings, several methods were used to ensure the quality and validity of the data collection operation:

- Each interviewer was accompanied by a field supervisor at least once in the year as part of the TNS-BMRB performance and development review procedures;
- A minimum of 10% of addresses where a successful interview was obtained were re-contacted ('back-checked') to verify that the interviewer had conducted the interview and that key details they had collected were correct.

In total, 1,961 addresses where an interview was achieved (12%) were re-contacted for validation purposes. Addresses were randomly selected on the basis of TNS-BMRB's overall field quality procedures whereby all interviewers have their work checked at least twice a year.

Validation was carried out mainly by telephone by trained TNS-BMRB validators. The checking included asking a small selection of questions from sections of the main questionnaire (for example, how long a respondent had lived in the area) as well as seeking confirmation of what questions were asked in order to ensure that no part of the questionnaire was missed (for example, if the respondent was asked to complete the self-completion questionnaire). If validation checks produced discrepancies then these were flagged and action taken according to the degree of the discrepancies. In cases where serious discrepancies were raised then interviews were deleted.

Where no telephone number was available, a short postal questionnaire was sent to the address to collect the same information.

Checks were also made to ensure that interviewers had interviewed the household member which the CAPI script had randomly selected for interview (see section 2.8).

## **4.3 Fieldwork dates and fieldwork management**

Survey fieldwork was managed on a monthly basis, with fresh addresses released on this basis. Across the fieldwork period 1,164 first-issue assignments of c.32 (urban) or c.16 (rural) addresses were issued to interviewers. These assignments were issued at the start of each month, with fieldwork starting on the first day of the new month and closing on the last day.

Interviewers were encouraged to start their assignment as early as possible in the month to allow early identification of invalid addresses (second homes, business addresses, vacant properties etc). Interviewers had until the end of the calendar month to cover all the addresses in their assignment, making a

minimum of six or more calls at each address where no contact with householders or selected respondents has been made.

Following standard practice on large social surveys, addresses with non-productive outcomes (where an interview was not obtained but could be in future) were re-issued. As a general rule all non-productive addresses (non-contacts, refusals, broken appointments, etc.) were re-issued unless there was a specific reason not to or it was considered not to be cost effective (see Annex 7 for CAPI outcome codes and re-issue criteria).<sup>49</sup> Re-issued addresses were called at a minimum of twice. Once the first re-issue period had been completed a decision was taken about whether to re-issue addresses that were still non-productive for a second or third time.

In total across the year, 7,511 addresses were re-issued, which represented 30% of the original sample (25,256 addresses – Table 4.1). Of all the addresses re-issued, 1,818 (24%) were converted into successful interviews. All interviews were conducted in the financial year from the 1<sup>st</sup> of April 2009 to the 31<sup>st</sup> of March 2010.

## **4.4 Fieldwork procedures and documents**

### **4.4.1 Advance letter and leaflet**

All selected addresses were sent a letter from the Scottish Government in advance of an interviewer calling at the address. Interviewers were responsible for posting the letters a few days in advance of starting their assignment. The letter explained a little about the survey, why the address had been selected and informed the occupiers that an interviewer from TNS-BMRB would be calling in the next few days. The letter also provided a Scottish Government telephone number and email address and a TNS-BMRB telephone number for people to contact to find out more about the survey, to make an appointment for an interviewer to call, or to opt out of the survey. Over the course of the whole year 430 people (two per cent of addresses issued – Table 4.1) opted out of the survey by contacting either TNS-BMRB or the Scottish Government.

Included with the advance letter was a leaflet from the Scottish Government which provided people with further details about the survey, including some example findings from the 2006 survey. The leaflet also tried to answer some questions that potential respondents might have such as issues relating to confidentiality.

Where the household member randomly selected for interview was aged 16 or 17 interviewers were also issued with a different version of the advance letter to hand to a responsible adult in the household. The letter asked for permission to approach the young person selected for interview. Copies of the advance letters and leaflet can be found in Annex 8.

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<sup>49</sup> For example, if there were only one or two addresses available to re-issue in an assignment in a remote rural area.

Interviewers were also provided with a Victim Support Scotland (VSS) leaflet which provided information about and contact details for VSS and other organisations that provide support for victims of crime.

The interview was not incentivised in any way, and participation was entirely voluntary.

#### **4.4.2 Address contact record**

The NIPO CAPI software and tablet PCs used by TNS-BMRB interviewers allow the electronic collection and storage of the address contact record.<sup>50</sup> This dispenses with the need for the traditional paper-based contact sheets, improving fieldwork management and efficiency, and allowing more effective real-time management and monitoring of the sample.

The primary functions of the address contact record are as follows:

- To automatically record the days and times that the interviewer called at an address, enabling them to tailor their calling strategy based on this;
- To provide a record of all the outcomes achieved at the address, both at first-issue and re-issue;

Interviewers updated the relevant address record every time they made a call to the address, reporting an outcome of each call. This information is crucial in allowing interviewers to manage their own calling strategies for each address and field management staff to manage the survey overall.

#### **4.5 Response rate and reasons for non-response**

The full response rate analysis for the issued sample is shown in Table 4.1.

Just under one in ten issued addresses (nine per cent) were identified as not being eligible residential addresses (known as ‘deadwood’). The most common type of deadwood was empty or vacant residential properties, which accounted for nearly four per cent of all issued addresses.

Interviewers made contact with either the selected respondent or a responsible adult at 19 in every 20 eligible addresses (95%), meaning a non-contact rate of five per cent. There were three types of non-contact. The most common (five per cent of eligible addresses) was where no contact was made with anyone at the address despite repeated calls over a lengthy fieldwork period.<sup>51</sup> It is possible that some of these addresses were actually empty or vacant and so should have been coded as deadwood. However, the impact that this would have on the overall response rate is minimal. The remaining

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<sup>50</sup> Information about the software used is available from: <http://www.niposoftware.com/>.

<sup>51</sup> The fieldwork period could be up to 12 calendar months for addresses issued at the start of the fieldwork period in April 2009, though in practice this was rare.

addresses classified as non-contact were where contact had been made with someone at the address, but no contact was made with the person selected for interview (less than one per cent of eligible addresses) or where no contact was made with a responsible adult in order to obtain permission to interview a household member aged 16 or 17 (less than one per cent of eligible addresses).

Where contact at an address was made, refusals were the most common reason for not obtaining an interview, accounting for 19% of all eligible addresses. The most common type of refusals was where no information about the household was given, meaning that the person selection could not be carried out (nine per cent), and where the person selected for interview refused to take part in the survey (six per cent). Refusals directly to the Scottish Government or to the TNS-BMRB office or proxy refusals (someone refusing on behalf of the selected respondent) were less common (under two per cent respectively).

A further six per cent of eligible addresses were categorised as other unsuccessfuls, including broken appointments, people who were ill or away during the period of the survey and people who had inadequate English to complete the survey.

Combining all the different types of unproductive addresses gave a final adjusted response rate of 70%.

**Table 4.1: Response rate and non-response outcomes**

SCJS 2009/10.

Base: issued sample (25,256).

<b>Outcome / summary</b>	<b>Sample (n)</b>	<b>% issued</b>	<b>% eligible</b>
<b>TOTAL INELIGIBLE ADDRESSES</b>	<b>2,254</b>	<b>8.9</b>	<b>N/A</b>
Addresses not traced / inaccessible	363	1.4	N/A
Not built / does not exist	27	0.1	N/A
Derelict / demolished	167	0.7	N/A
Empty / vacant	878	3.5	N/A
Second home / not main residence	388	1.5	N/A
Business / industrial	294	1.2	N/A
Institution / communal establishment	68	0.3	N/A
Other deadwood	69	0.3	N/A
<b>TOTAL ELIGIBLE ADDRESSES</b>	<b>23,002</b>	<b>91.1</b>	<b>100.0</b>
<b>TOTAL NON-CONTACT</b>	<b>1,243</b>	<b>5.0</b>	<b>5.4</b>
No contact with anyone in household	1,132	4.5	4.9
No contact with selected respondent	95	0.4	0.4
No contact with responsible adult (aged <18)	16	0.1	0.1
<b>TOTAL REFUSAL</b>	<b>4,254</b>	<b>16.9</b>	<b>18.5</b>
Office refusal	430	1.7	1.9
Refused all information	2,085	8.3	9.1
Personal refusal	1,387	5.5	6.0
Proxy refusal	344	1.4	1.5
Parental permission refused (aged<18)	8	0.0	0.0
<b>TOTAL OTHER UNSUCCESSFUL</b>	<b>1,469</b>	<b>5.8</b>	<b>6.4</b>
Broken appointment	372	1.5	1.6
Temporarily ill / incapacitated	91	0.4	0.4
Physically or mentally unable	194	0.8	0.8
Away / in hospital	317	1.3	1.4
Inadequate English	47	0.2	0.2
Other unsuccessful	448	1.8	1.9
<b>TOTAL UNPRODUCTIVE</b>	<b>6,966</b>	<b>27.6</b>	<b>30.3</b>
<b>ACHIEVED INTERVIEWS</b>	<b>16,036</b>	<b>63.5</b>	<b>69.7</b>
<b>TOTAL SAMPLE ISSUED</b>	<b>25,256</b>	<b>100.0</b>	<b>N/A</b>

## **4.6 Self-completion response rate and reasons for non-completion**

The final part of the interview involved a self-completion questionnaire containing four sections (see section 3.6):

- Illicit drug use;
- Stalking and harassment;
- Partner abuse;
- Sexual victimisation.

Due to the sensitive nature of these topics respondents were given the opportunity to refuse the entire self-completion questionnaire. The response rate, profile of respondents completing or not-completing and the reasons for non-completion are explored below.

### **4.6.1 Response rate and respondent profiles**

13,418 (84%) respondents to the main survey answered the self-completion questionnaire. Table 4.2 compares the profile of respondents who answered the self-completion section of the questionnaire (including those who did so with help from the interviewer) and those who did not answer it:

- Equal percentages of males and females answered the self-completion section (84%);
- The percentages of respondents who answered the self-completion section decreased as age increased (for example, 88% of 16-24 year olds answered the self-completion section compared with 79% of those aged 60 or over);
  - Percentages of males and females within age groups answering the self-completion section were similar;
- A lower percentage of those living in the 15% most deprived areas answered the self-completion section compared with those living in the rest of Scotland (78% and 85% respectively);<sup>52</sup>
- There were only minor differences between those who had been a victim of crime, as identified by the SCJS 2009/10 and those who had not (85% and 83% respectively).

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<sup>52</sup> Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/>.

**Table 4.2: % of respondents overall and in selected subgroups who did and who did not answer the self-completion section** <sup>53</sup>  
SCJS 2009/10.

Base: All respondents (16,036).

<b>Subgroups</b>	<b>Self-completion %</b>	<b>No self-completion %</b>
<b>AGE</b>		
16-24	87.7	12.3
25-44	86.7	13.3
45-59	86.0	14.0
60+	78.7	21.3
<b>MALE (TOTAL)</b>		
	<b>83.7</b>	<b>16.3</b>
16-24	86.8	13.2
25-44	86.4	13.6
45-59	85.3	14.7
60+	79.8	20.2
<b>FEMALE (TOTAL)</b>		
	<b>83.6</b>	<b>16.4</b>
16-24	88.5	11.5
25-44	87.0	13.0
45-59	86.6	13.4
60+	77.9	22.1
<b>VICTIM STATUS</b>		
Victim	85.2	14.8
Non-Victim	83.4	16.6
<b>DEPRIVATION</b>		
15% most deprived	77.9	22.1
Rest of Scotland	84.5	15.5
<b>ALL</b>	<b>83.7</b>	<b>16.3</b>

<sup>53</sup> Data displayed in the table are unweighted.

### 4.6.2 Reasons for non-completion

Table 4.3 shows the reasons given by respondents either for refusing the self-completion questionnaire or for asking the interviewer to enter their answers for them as well as for these groups combined. This shows that a dislike of computers was the most common reason why respondents asked the interviewer to enter their answers for them (mentioned by 66%), while running out of time was the most common reason given for respondents refusing to complete it (mentioned by 52%). Only six per cent of respondents refused to complete the self-completion questionnaire because of worries about confidentiality.

**Table 4.3: Reasons for self-completion refusal / interviewer completion**<sup>54</sup>  
SCJS 2009/10.

Base: All respondents who refused to complete self-completion or where interviewer completed on respondent's behalf (7,123).

Variable name: *WHYREF*.

Reason	Refused %	Int. comp. %	Total %
Didn't like computer	16.0	65.9	47.6
Ran out of time	52.3	9.7	25.4
Couldn't be bothered	10.0	19.5	16.0
Eyesight problems	5.7	11.5	9.4
Respondent adamant never taken drugs / experienced abuse	15.7	0.0	5.8
Other disability	4.6	5.5	5.2
Children present / tending to children	3.5	2.0	2.5
Worried about confidentiality	5.5	0.4	2.3
Other people present in room	3.5	1.3	2.1
Objected to study	4.6	0.1	1.8
Language problems	2.5	0.8	1.4
Could not read / write	0.6	0.5	0.6
Other	8.6	4.4	5.9

Note: 'Other' includes all other reasons where the total percentage was under one per cent for each separate reason.

<sup>54</sup> Data displayed in the table are unweighted.

## 5 The Interview

Interviews were conducted face-to-face in-home and were administered by specially trained professional interviewers working for TNS-BMRB using Computer Assisted Personal Interviewing (CAPI).

This chapter provides information on the following elements of the survey:

- The survey reference period;
- Computer Assisted Personal Interviewing (CAPI);
- Interview length;
- Presence of others during the interview.

### 5.1 Survey reference period

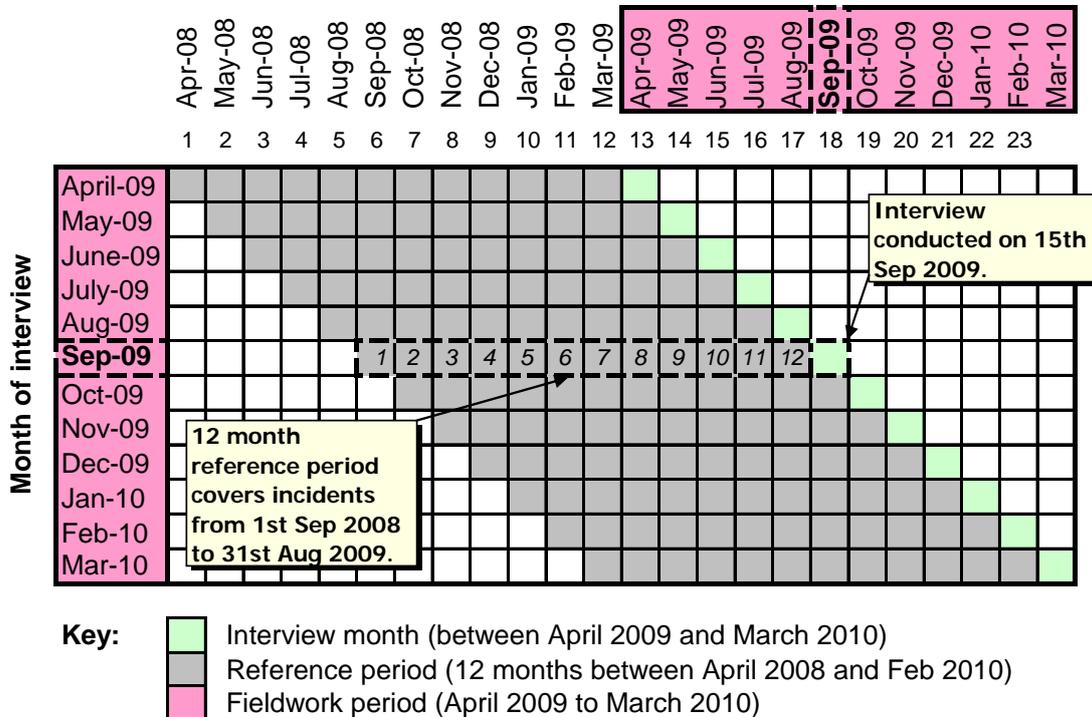
Respondents were asked about their experience of crime within a defined period of time known as the 'reference period'. Questions about exactly when incidents happened were asked at the start of the victim form (section 3.4.1). The survey statistics are based only on incidents which happened in the 12 calendar months prior to the month of interview. For example, in an interview conducted on the 15<sup>th</sup> of September 2009, the survey statistics would include incidents which the respondent had experienced between 1<sup>st</sup> September 2008 and the 31<sup>st</sup> August 2009. The reference period therefore covered an equal length of time (12 calendar months) for each respondent, irrespective of when they were interviewed during the 12 month fieldwork period. Incidents which fall outside this reference period are not included in crime counts.

Incidents which happened in the month of interview (in the example above, incidents happening in the 15 days between the 1<sup>st</sup> and the 15<sup>th</sup> of September 2009) are *not* included in the reference period (and therefore any of the data reported in the Main Findings report). However, both for the sake of simplicity with regard to the administration of the interview and for ethical reasons, respondents are asked about incidents which happened in the period of time since the *start* of the reference period; the victim form screener questions are phrased in the following way "*Since the 1<sup>st</sup> of September 2008, have ...*", where '*1<sup>st</sup> September 2008*' is the start of the reference period in this example (the reference period dates change based on what month the interview is conducted in – see below). Full details of incidents occurring in the month of interview are retained in the SPSS data files for use by analysts if necessary (though the incident weight is set to zero – section 8.9.1).

Due to continuous interviewing across the 12 month fieldwork period, the reference period 'rolled' forward for each consecutive fieldwork month. Compared to the example above, respondents interviewed on the 15<sup>th</sup> of October 2009 were asked about incidents which occurred in the reference period 1<sup>st</sup> October 2008 to the 30<sup>th</sup> of September 2009. The total reference period for interviews conducted from April 2009 through to the end of March 2010 is therefore a 23 month period from April 2008 through to February 2010. This is illustrated in Figure 2 below.

March 2009 is the only month to be included in the reference period for all 16,036 respondents and the incidents collected centre around this month.

**Figure 2: Survey reference period**



In 2002, the British Crime Survey (BCS) similarly moved from a fixed reference period with a sample size of 20,000 to a rolling reference period with a sample size of 40,000. The initial findings of an assessment of the impact of the change in methodology on estimates of crime concluded that:

*“the new methodology is not giving rise to crime estimates any greater than those achieved under the old methodology. Indeed, for some categories the change in methodology appears to generate lower estimates”* (Kershaw et al, 2001).

### 5.1.1 Series incidents and the reference period

Where respondents had experienced series incidents, if the most recent incident in the series occurred in the month of interview (that is outside of the reference period), the number of incidents in the series (capped at five – section 8.9.2) was reduced by the number of incidents that occurred in the month of interview.<sup>55</sup>

<sup>55</sup> Variables NSERIES and NUMINC (uncapped count of series incidents and capped respectively) in the victim form file (VFF) data file are calculated based on the number of incidents in the 12 month reference period only and do not include incidents which happened in the month of interview.

## 5.2 Numbers of victim forms completed

One fifth (20.4%) of all respondents reported at least one incident: 14.0% of respondents completed a single victim form only, while under one per cent (0.4%) completed five victim forms (the maximum allowed). Among those who completed at least one victim form, just over two thirds (68.8%) completed only one and two per cent completed five. In total 4,847 victim forms were completed by 3,271 respondents (Table 5.1).

**Table 5.1: Numbers of respondents who completed victim forms**

SCJS 2009/10.

Base: All respondents (16,036).

Numbers of victim forms completed	Number of respondents	Number of victim forms	% all respondents	% all with at least one victim form
None	12,765	N/A	79.6	N/A
1	2,250	2,250	14.0	68.8
2	676	1,352	4.2	20.7
3	201	603	1.3	6.1
4	78	312	0.5	2.4
5	66	330	0.4	2.0
<i>Base (n)</i>	16,036	4,847	16,036	3,271

## 5.3 Computer Assisted Personal Interviewing

CAPi interviewing has a number of advantages over paper-based interviewing and presents various opportunities for improving the quality of data collected and the efficiency of the survey, including:

- Plausibility and consistency checks;
- Automated text substitution and calculation (especially important for using the correct reference period);
- Automated links between questionnaire sections (allowing post-interview data forcing).

The use of tablet PCs and NIPO CAPi software also allows:

- The replacement of the bulk of the traditional paper show cards required for CAPi interviewing;
- The electronic collection and storage of the address contact record (section 4.4.2);
- Automated random respondent selection (and dwelling selection where necessary – see section 2.8).

### **5.3.1 Plausibility and consistency checks**

CAPI has the advantage over paper-based interviewing of allowing plausibility and consistency checks to be incorporated into the interview process, improving data quality. A full list of plausibility and consistency checks are provided in Annex 9.

### **5.3.2 Text substitution and date calculations**

Text substitutions and date calculations were used extensively throughout the questionnaire. **Text substitution** is where different text is read out by the interviewer or displayed on screen at a question depending on answers given to previous questions. **Date calculations** were made automatically by the CAPI script for the reference periods and other questions where a specific time period was required (for example, the civil law questions in module C asked about the three years prior to the month of interview). All of the date variables in the SPSS data files (for example, DATESER variables, QTRRECHIN, and MTHINC2 in the VFF file) are given values according to the actual month / time period in question.

### **5.3.3 Don't know and refused codes**

Almost every question in the CAPI questionnaire for the SCJS has a 'Don't know' and 'Refused' option. These are displayed at the top of the screen as separate buttons, and therefore not shown to respondents explicitly as part of the pre-code list of answers at each question.

At the start of the self-completion questionnaire, the interviewer specifically showed the respondent where these buttons were located on the screen. The refused option used in the main part of the survey was re-worded as 'Don't wish to answer'.

## ***5.4 Repetition of incident details in the self-completion questionnaire***

There are a number of sections in the self-completion questionnaire which ask about specific types of incidents that respondents may have already provided detail of in the victim form. This applied to incidents of the following types in the self-completion questionnaire:

- Stalking and harassment;
- Partner abuse;
- Less serious sexual assault (including indecent exposure, sexually threatening behaviour, touching sexually when not wanted);
- Serious sexual assault (including forced / attempted forced sexual intercourse and forced / attempted forced other sexual activity).

The CAPI questionnaire is programmed with links between the victim forms and the self-completion questionnaire. At the start of each of the sections above, the respondent is asked if they have already told the interviewer about the incident being recorded earlier in the interview. If they have, then the respondent is asked in which victim form the incident was previously

mentioned. The CAPI questionnaire in the self-completion section then automatically skips questions where the relevant information has already been provided in the victim form. This acts to reduce the interview length and prevent frustration on the part of the respondent at having to answer questions they have already been asked. Data is ‘forced’ into the relevant questions from the victim form at the data processing stage.

### **5.5 Use of show cards**

Traditionally in CAPI interviewing, for pre-coded questions where respondents are asked to select an answer from a list, interviewers handed respondents a booklet of numbered or lettered ‘show cards’ on which the pre-coded answers to questions were printed. However, the small and lightweight tablet PCs which TNS-BMRB interviewers used allowed interviewers to easily show respondents the screen rather than using show cards. This helps to improve the accuracy and flow of the interview, ensuring that respondents can concentrate on listening to the interviewer rather than being distracted by reading the show cards or flicking back and forwards through them during the interview.

Show cards are retained for a few types of question including the following:

- Repetitive questions using the same pre-codes (e.g. QWORR, a battery of questions on fear of crime);
- Questions with long or complicated pre-code lists (e.g. QDETH asking ethnicity);
- Questions which are not read out by the interviewer because they are on a sensitive topic (e.g. HHLDVIO asking whether the respondent has experienced physical violence from another household member);
- Particularly sensitive questions in the self-completion section if the interviewer reads them out for the respondent (e.g. the questions on experience of sexual victimisation).

### **5.6 Length of interview**

Automatic ‘time stamps’ were placed throughout the CAPI script to allow timing of questionnaire sections. Due to various technical issues associated with CAPI systems, it is not always possible to derive meaningful time stamps from every interview.<sup>56</sup>

Since the calculation of interview times is based on automatic time stamps in the CAPI script (rather than an interviewer estimate), they represent the elapsed time from the first question to the last question. They do not include the time during which the interviewer completes the address contact record, introduces the survey or closes the interview.

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<sup>56</sup> For example, if an interviewer has to temporarily stop or suspend an interview for an hour or so and fails to come out of the questionnaire in the intervening period (simply powering down the computer instead) the time stamps can show an interview of four to five hours.

The average (mean) total interview length, including the self-completion section, across all 16,036 respondents was 37 minutes.

Whether the respondent had been a victim of crime (and therefore whether a victim form was completed or not) was a major factor in total interview length. The average total interview length (including the self-completion section) for non-victims was 35 minutes compared to 47 minutes for victims (those who completed one *or more* victim forms). The average total interview length by number of victim forms is shown in Table 5.2.

**Table 5.2: Average interview length by number of victim forms** <sup>57</sup>

SCJS 2009/10.

Base: All respondents.

No. of victim forms	Av. time (mins)	No. of resps	% of resps
<b>ANY VICTIM FORMS</b>	<b>47</b>	<b>3,271</b>	<b>20.4</b>
1	43	2,250	14.0
2	52	676	4.2
3	59	201	1.3
4	62	78	0.5
5	63	66	0.4
<b>NONE</b>	<b>35</b>	<b>12,765</b>	<b>79.6</b>
<b>ALL RESPONDENTS</b>	<b>39</b>	<b>16,036</b>	<b>100.0</b>

Table 5.3 shows that the time taken to complete the first victim form was longer than following ones, suggesting that respondents speed up as they go through each victim form. This pattern is also evident in the BCS.

**Table 5.3: Average victim form length**

SCJS 2009/10.

Base: All respondents.

No. of victim forms	Av. time (mins)
1	9
2	7
3	6
4	5
5	3

<sup>57</sup> Including the self-completion questionnaire.

### **5.7 Presence of others during the interview**

Interviewers aimed to conduct the interviews in private with only the respondent present. This generally helps to make the interview run more smoothly, but it may also encourage some respondents to mention certain incidents or events which they might be embarrassed or worried about talking about in front of others.

Although it is preferable for the interview to be conducted with no-one else present, there are also some situations where the presence of other members of the household might improve the accuracy of the information collected. This is particularly the case in incidents of household crime (section 3.2.2, for example, vehicle crime or property crime), where the respondent may not have been personally present at the time of the incident, or may not have reported the incident to the police, etc.

Information on the presence of others during the interview was recorded for the interview overall, and specifically for the victim form screener section and the self-completion section.<sup>58</sup>

### **5.8 Self-completion interview**

The questionnaire is completed by respondents on the interviewer's tablet PC (Computer Assisted Self-completion Interviewing – CASI). This ensures confidentiality when answering sensitive questions or those on illicit behaviour (section 3.6). The respondent was asked to follow the instructions on the screen of the tablet PC and enter their answers using a special pen to tap the touch screen appropriately. A series of practice questions are included before the start of the self-completion module to allow the interviewer to show the respondent the different functions of the computer and screen layouts and formats (including an explicit demonstration of the 'don't wish to answer' button reflecting the sensitive nature of the topics in the questionnaire). If the respondent is unable or unwilling to complete the questionnaire using the computer, but is happy to answer the questions, the interviewer administers the questionnaire on their behalf, showing the respondent the screen and then selecting the answer accordingly.

84% of respondents completed the self-completion section; 66% of them entered their answers directly in to the tablet PC themselves and 34% asked the interviewer to administer the questionnaire for them (section 4.6 provides further information on the self-completion response rate and reasons for non-completion).

During interviews where another person (other than the interviewer and the respondent) was present in the room during the self-completion section, interviewers tried to 'arrange' the room whenever possible so that the respondent had a degree of privacy. Thus, for example, interviewers might try

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<sup>58</sup> This data is available in the SPSS data files on the UK Data Archive (variable names OTHRPERS, WHOPRES and SCOTHPER respectively).

to ensure that the respondent was sitting with the screen facing a wall or was in such a position that no-one else in the room could read the computer screen. It was not common for others to become involved in answering the self-completion questions. In 91 per cent of interviews no-one else in the household looked at / read / helped fill in or discussed any part of the self-completion section with the respondent during the interview.

The average questionnaire length for the self-completion section was 10 minutes.

## 6 Data Processing

All data processing was undertaken by TNS-BMRB, including offence coding, standard coding and data checking. This chapter looks at these processes in turn. Information on the offence codes themselves is provided in Chapter 7 and details of data outputs themselves are provided in Chapter 9.

### **6.1 Offence coding process**

The SCJS offence coding system is based on that developed for the 1982 British Crime Survey (BCS), but tailored for the Scottish justice system. The system is designed to match as closely as possible the way incidents would be classified by the police to aid comparison between statistics from the SCJS and police recorded crime statistics.

All victim forms are reviewed by trained coders in order to determine whether what has been reported in the interview represents a crime or not and, if so, what offence code should be assigned to the crime. All data for the survey was coded consistently using agreed principles set down in the SCJS Offence Coding Manual (available from the survey website).<sup>59</sup>

Every victim form has an offence code assigned to it. The SCJS Offence Coding Manual has a 'priority' ladder which determines what offence codes are assigned if the incident involves multiple aspects. For example, if an incident involves an offender breaking into someone's house, beating up the occupants, stealing the car and breaking some valuable belongings), the offence coding process needs to sort out which of these offences takes priority (i.e. should the crime be coded as housebreaking, assault, theft of a car or vandalism?).

The priority ladder (with those codes that take priority towards the top) is generally:

- Rape or Serious Assaults
- Robbery
- Housebreaking
- Theft
- Minor Assault
- Vandalism
- Threats

Further information is available in the offence coding manual available from the survey website.

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<sup>59</sup> Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

The offence coding system consisted of the following steps:

1. For each victim form details of the responses to key questions in the victim form and other relevant parts of the questionnaire were presented to the coder electronically using Ascribe coding software.<sup>60</sup>
2. The coder reviewed the answers to the questions in the coding system and, consulting the coding manual, assigned an offence code. The coder also completed a certainty record for each victim form showing whether they were certain or uncertain that the code assigned was correct (for example in cases where there was no specific guidance in the offence coding manual or the information in the victim form was inconclusive).
3. A coding supervisor checked all codes that the original coder marked as uncertain, as well as completing an additional certainty record for the code assigned.
4. Researchers at the Scottish Government (see section 6.1.1) checked:
  - Any codes that TNS-BMRB coders or supervisors were uncertain about, or where a code could not be assigned;
  - 10% of all original coder codes marked as certain as part of a quality control check;
  - All cases of duplicate victim forms (where the same incident was mentioned in two separate victim forms – section 7.1.4).
5. After any necessary discussion between TNS-BMRB supervisors and Scottish Government researchers, the offence coding records were finalised and exported from the Ascribe system for inclusion in the final datasets.

As a result of this process every victim form had a final offence code assigned to it, as well as a record of any codes assigned at the intermediate steps as outlined above.

### **6.1.1 Scottish Government offence coding validation**

As noted in section 6.1, all cases where the TNS-BMRB coders (including supervisors) were uncertain about the correct code to assign were referred to the Scottish Government. In addition, 10% of all codes which the original TNS-BMRB coders were certain about were sent to the Scottish Government for quality control checking.

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<sup>60</sup> Ascribe is a Windows-based coding software package which is commonly used on CAPI surveys. The standard Ascribe software was amended to deal with the requirements of the SCJS offence coding system.

Data to be checked by researchers at the Scottish Government were sent in Excel format each calendar month after fieldwork and offence coding was completed. Scottish Government researchers received two files:

- An output of the questions in the coding system for the relevant victim forms being checked and;
- A separate summary file containing the coding history (original coder code, certainty record and notes and, where applicable, the supervisor code, certainty record and any notes added about why the code assigned was recorded as uncertain or where clarification was needed).

Researchers at the Scottish Government then ‘blind coded’ each of the victim forms (without referring to the separate coding history summary file) and added their code and comments to the coding history summary file. This was returned to TNS-BMRB coding supervisors who reviewed the file and entered information into the Ascribe coding system. Coders were then briefed on why a particular code had been assigned where codes had been changed.

Where TNS-BMRB coders did not agree with the Scottish Government code assigned a further dialogue was opened until a conclusion was reached. A log of queries and corresponding decisions and why they were taken was retained and referred to on an ongoing basis. These were used to set precedents for future decisions, and formed the basis of clarification added to the 2010/11 offence coding manual.

In total, 1,024 victim forms were sent to the Scottish Government for checking, representing 21% of all victim forms (4,847).

### **6.1.2 Offence code history**

The SPSS data files delivered to the Scottish Government include all the offence codes that have been assigned to each victim form at each stage of the offence coding process.<sup>61</sup> This allows a complete history of each case to be viewed.

The final offence code is derived using a priority ordering system, whereby the Scottish Government code takes priority over the TNS-BMRB coding supervisor, who takes priority over the original TNS-BMRB coder (where applicable). The variables in the VFF data file which detail this are:

- VOFFENCE: code assigned by the original coder;
- SOFFENCE: code assigned by the supervisor;
- FINLOFFC: code assigned by the Scottish Government research team;
- OFFENCE: final offence code assigned.

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<sup>61</sup> This information is available in the final SPSS data files lodged on the UK Data Archive: <http://www.data-archive.ac.uk/>.

The final offence codes for each victim form are also contained in the RF data file in the VICFORM variables (one for each victim form completed).

## **6.2 Standard and open-end coding**

In addition to the survey specific offence coding, coders also looked at all questions where an ‘Other SPECIFY’ had been given as an answer to a pre-coded question. The aim of this exercise was to see whether the answer given could actually be coded into one of the original pre-coded response options. If it could not then a new code could be created and other similar ‘other – specify’ answers could also be added into this new code. If the coding supervisor felt an extra code was needed, this was confirmed with researchers who approved any changes before they were implemented.

Open-ended questions, with the exception of those required for Standard Occupational Classification (SOC) and National Statistics Socio-Economic Classification (NS-SEC) coding, were treated in the same way, with code frames developed by coders and coding supervisors for these questions before being checked by researchers.

Coding was undertaken in Ascribe, a Windows based coding package. It should be noted that no ‘other – specify’ questions were present in the self-completion questionnaire as this would place an additional burden on respondents.

## **6.3 Coding of occupation and socio-economic classification**

Occupation details were collected for all respondents, either relating to their current job or to their last job if the respondent was not currently employed but had worked at some time in the past four weeks.

Occupations were coded using the Standard Occupational Classification 2000 (SOC2000). All occupational coding was done centrally by specialist coders once the data were returned by interviewers. Coding was done using Computer Assisted Structured CODing Tool (CASCOT),<sup>62</sup> a package widely used to code SOC, with coders using the SOC manuals for reference.

While full SOC codes were assigned, the SPSS data files only contain a two-digit SOC code to remove the risk of individual respondents being identified in the datasets (disclosure risk).

As well as occupation codes, National Statistics Socio-Economic Classification (NS-SEC) were assigned to all respondents.<sup>63</sup> NS-SEC categories were derived using documentation provided by the Office for National Statistics (ONS). Both the NS-SEC operational categories and the

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<sup>62</sup> See University of Warwick website:

<http://www2.warwick.ac.uk/fac/soc/ier/publications/software/cascot/>.

<sup>63</sup> It should be noted that information to allow NS-SEC coding was only collected for respondents, and not specifically the Household Reference Person (HRP).

NS-SEC analytical categories were derived. Details of the NS-SEC categories can be found on the ONS website.<sup>64</sup>

#### **6.4 Data checking**

In addition to the plausibility and consistency checks which were programmed as part of the CAPI script (see section 5.3.1), a number of other checks were undertaken as part of the data processing:

- The raw CAPI data was checked against the unedited data in Quantum (the data processing and tabulation software used by TNS-BMRB) to make sure that no data was missing;
- The unedited data was checked against the data specifications;
- Data was checked before and after coding data was added to ensure consistency;
- Data was checked before and after data forcing to ensure consistency (see section 5.4);
- Data was cross referenced for logic consistency (for example, all victim forms included in the analysis of 'all SCJS crime' had to have an in-scope offence code, occur within the reference period and within Scotland).

The offence coding process included a separate validation process – see section 6.1).

The SPSS data files also had a number of checks carried out on them which were undertaken by the UK Data Archive as part of the deposit process.<sup>65</sup>

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<sup>64</sup> NS-SEC coding based on SOC 2000 was used. For further information, see the ONS website: <http://www.ons.gov.uk/about-statistics/classifications/current/ns-sec/index.html>.

<sup>65</sup> For more information, see the UK Data Archive website: <http://www.data-archive.ac.uk/>

## 7 Offence Codes, Survey Statistics and Crime Groups

The offence coding process assigns offence codes to each victim form completed by a respondent (see section 6.1). This chapter examines the offence codes which are used in the analysis and reporting of the survey, and how they are grouped and defined.

### 7.1 Crime types / offence codes covered by the survey

A list of all of the offence codes which can be assigned to a victim form, including in-scope codes and out-of-scopes codes is provided in Annex 10. The following section also looks at what is not covered by the survey.

#### 7.1.1 Offence codes

The offence coding manual for SCJS 2009/10 contained 66 offence codes (Annex 10). An offence code is assigned to every victim form which is triggered as a result of the victim form screener section (3.2.2). These can be split into two groups: in-scope and out-of-scope codes:

- **In-scope codes:** 33 offence codes were used in the calculation of ‘all SCJS crime’ (section 7.1.5) and therefore the incidence and prevalence statistics from the survey;
- **Out-of-scope codes:** these can be grouped into two categories;
  - **Sexual offence or threat codes:** 12 offence codes related to sexual offences or threats which were not included in the ‘all SCJS crime’ statistics produced by the survey (see section 7.1.3);
  - **Non-valid codes:** the offence coding manual also contained 21 offence codes for classifying incidents recorded in the victim form which were not within the scope of the survey (outside of Scotland or the reference period, duplicate incidents), where not enough information was collected to make an accurate classification, where the respondent or household was not the victim or the victim form was skipped (section 3.3.1). These 21 codes were not included in the ‘all SCJS crime’ statistics produced by the survey.

Details of the offence codes and the incidents that they cover are provided in the SCJS Coding Manual.<sup>66</sup> The variables OFFENCE in the victim form file (VFF) data file and the VICFORM variables in the respondent file (RF) data file show the offence code assigned to each victim form.

#### 7.1.2 A note on crime types not covered

The SCJS only collects information about incidents which occurred within Scotland (or, if an incident happened online, if the respondent was living in Scotland at the time) and within the reference period (see section 5.1).

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<sup>66</sup> Available from the Scottish Government survey website:

<http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

In addition, the SCJS does not collect data about *all* types of crime occurring in Scotland and has notable exclusions:

- Crimes against adults living in circumstances other than private households (for example, adults living in institutions, such as prisons or hospitals, or other shared accommodation, such as military bases and student halls of residence – section 2.3.3);
- Crimes against children and young people (aged under 16);<sup>67</sup>
- Crimes against businesses;<sup>68</sup>
- ‘Victimless’ crimes, such as speeding, or crime where the victim cannot be interviewed, such as homicide.

### 7.1.3 Sexual offences and threats

The SCJS victim form collected information on threats and, where respondents provided information, sexual offences. Coders assigned offence codes to incidents of these crimes in the normal way. However, the ‘all SCJS crime’ statistics (section 7.1.5) produced from the survey, including the estimates of incidence and prevalence, do not include these crimes for the reasons outlined below.

#### Sexual offences

The victim form screener did not include questions specifically on sexual assault for two reasons:

1. Victims are often reluctant to disclose information on these sensitive crimes in a face-to-face interview and therefore that surveys using face-to-face data collection rather than self-completion tend to under-represent them.
2. On ethical grounds, a decision was taken that it was important to identify respondents’ experiences of sexual assault (and to gather limited key information about them) in as sensitive a way as possible without putting them in an uncomfortable position (either by asking questions face-to-face or asking lots of detailed questions).

A separate self-completion questionnaire was therefore used to collect information on sexual victimisation.<sup>69</sup> The statistics and analysis from the self-

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<sup>67</sup> The British Crime Survey (BCS) was extended to cover children aged between 10 and 15 in 2008, with experimental statistic published in summer 2010 (Millard and Flatley, 2010). More information can be found on the Home Office BCS website: <http://rds.homeoffice.gov.uk/rds/bcs1.html>.

<sup>68</sup> The Commercial Victimization Survey (CVS) conducted for the Home Office provides data on this for England and Wales, but a separate survey is not conducted in Scotland. More information on the CVS is available from the Home Office website: <http://www.homeoffice.gov.uk/rds/business-crime.html>.

completion survey are reported separately and a separate data file is available on the UK Data Archive.<sup>70</sup>

Details of sexual offences were recorded in the victim form where the respondent did provide details of the incident (for example, as part of the victim form screener question which asks “*Has anyone, including people you know well, deliberately hit you with their fists, or with a weapon of any sort, or kicked you, or used force or violence on you in any other way?*” respondents may have provided details of an incident of sexual assault). However, as the evidence shows that estimates based on this method of data collection for these types of incidents are not reliable, all such incidents were excluded from the ‘all SCJS crime’ statistics.

Incidents reported only in the self-completion questionnaire could *not* be assigned offence codes in the same way as those collected in the victim form as only a limited number of follow-up questions were asked about incidents (reflecting an ethical decision based on potential respondent distress at having to disclose detailed information on very sensitive incidents).

## Threats

Following established practice in previous crime surveys in Scotland, threats, although assigned offence codes, were not included in the estimates of crime due to the difficulty of establishing whether or not a crime actually occurred (Anderson and Leitch, 1996).

### 7.1.4 Duplicate victim forms

Duplicate victim forms can occur where the *same* actual incident is recorded in two separate victims forms or the victim form is part of a series of the same type of incident (section 3.3.2). This can occur for two reasons:

- Firstly, if the incident contains two or more different types of incidents described in the victim form screener section (for example, an incident of where something is taken from a victim may also involve the offender using force or violence against the victim) the respondent may not have understood or misheard the qualifier to the victim form screener question:<sup>71</sup> “*Apart from anything you have already mentioned*”. If the respondent mentions the same incident in two

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<sup>69</sup> Of course it is important to note that self-completion data collection is still likely to underestimate the number of actual sexual offences occurring as, even with a self-completion format, a degree of under-reporting would be expected.

<sup>70</sup> SCJS reports and related publications are available on the Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

<sup>71</sup> Victim form screener questions identify incidents which will be followed up in the victim form (section 3.2.2).

separate victim form screener sections, then this may only become apparent after the victim form has been triggered;

- Secondly, a series of incidents may not be correctly identified / disclosed in the victim form screener section and separate victim forms triggered for very similar incidents.

Duplicate victim forms are marked as 'same duplicate' (code 3) or 'series duplicate' (code 4) according to why the duplicate form has been marked. The 2009/10 survey included a set of questions which were added in order to allow interviewers to better record where this was happening. However, of all victim forms (4,847) only two per cent (103) were coded as duplicates.

### **7.1.5 List of in-scope offence codes**

The list of the 33 in-scope SCJS offence codes (crimes) which were included in the 'all SCJS crime' incidence and prevalence statistics produced from the survey is shown in Table 7.1. It also shows the crime groups used in the 2009/10 SCJS Main Findings report into which each in-scope offence code is grouped (also displayed in Annex 10).

For the 2009/10 SCJS the code 'petty assault' was split into 'minor assault with injury' and 'minor assault with no / negligible injury' (however, this latter change does not affect the comparability of any of the crime groups used in the 2008/09 and 2009/10 reports or data files).

**Table 7.1: Offence codes included in the estimates of ‘all SCJS crime’ by crime group**

Code / Description	Crime group
11 Serious assault	Assault
12 Minor assault with injury	
13 Minor assault with no / negligible injury	
14 Serious assault and fire raising	
15 Serious assault and housebreaking	
21 Attempted assault	Robbery
41 Robbery	
42 Attempted robbery	Personal theft (excluding robbery)
43 Snatch theft from the person	
44 Other theft from the person	
45 Attempted theft from the person	
67 Other theft	
73 Other attempted theft	Housebreaking <sup>72</sup>
51 Housebreaking in a dwelling (nothing taken)	
52 Housebreaking in a dwelling (something taken)	
53 Attempted housebreaking in a dwelling	
50 Attempted housebreaking to non-connected domestic garage / outhouse	
55 Theft in a dwelling	Other household theft (including bicycle theft)
56 Theft from a meter	
57 Housebreaking: non-connected domestic garage / outhouse – nothing taken	
58 Housebreaking: non-connected domestic garage / outhouse – something taken	
64 Theft of pedal bicycle	
65 Theft from outside dwelling (excluding theft of milk bottles)	All motor vehicle theft related incidents
60 Theft of car / van	
61 Theft from car / van	
62 Theft of motorbike, motor scooter or moped	
63 Theft from motorbike, motor scooter or moped	
71 Attempted theft of / from car / van	Vandalism
72 Attempted theft of / from motorcycle, motor scooter or moped	
80 Fire raising	
82 Vandalism to a motor vehicle	
84 Vandalism to the home	
86 Other vandalism	

<sup>72</sup> Housebreaking and attempted housebreaking in a dwelling includes connected domestic garages outhouses and sheds.

## 7.2 Survey statistics

The SCJS produces two key measures of crime: *incidence* (the numbers of crimes) and *prevalence* (the *risk* of being a victim of crime or the *victimisation rate*). It also provides data on repeat victimisation. These are all presented in the 2009/10 SCJS Main Findings report.

Incidence and prevalence statistics were estimated for Scotland using data supplied by General Register Office for Scotland (GROS); Estimates of Households and Dwellings, 2009 (2,344,450 households) and Mid-2009 Population Estimates Scotland (4,281,650 adults).<sup>73</sup>

### 7.2.1 Household and personal crimes

All of the 33 in-scope offence codes which are assigned in the SCJS relate either to crimes against the individual respondent (such as assault) or to crimes experienced by the respondent's *household* (such as housebreaking). With regard to crimes against individuals (personal crimes), respondents were asked to only provide information about incidents in which they themselves were the victim. If other household members had experienced personal crimes then this was *not* recorded in the survey (see section 3.2.2).

This important distinction between personal and household crimes affects how the survey statistics were calculated (sections 7.2.2 and 7.2.3) and how the data is analysed (section 8.10). Annex 15 provides detail of which crimes are classified as household crimes and should therefore be analysed using the household weights (section 8.10).

### 7.2.2 Incidence and incidence rate

Incidence is defined as:

*“The number of crimes experienced per household or adult.”*

To calculate incidence, the number of crimes experienced by respondents or their household (section 7.2.1) was aggregated together for each offence code, based on up to five separate victim forms, and on the number of incidents in a 'series' (capped at five – section 8.9.2) recorded in the victim forms.

The incidence *rate* has also been calculated for key crime groups. This is calculated as the gross number of incidents divided by 10,000 to give an incidence rate per 10,000 households (for household crimes) or per 10,000 adults (for personal crimes). The incidence rate enables comparison between areas with differing populations and between data from the SCJS and from the British Crime Survey (BCS) 2009/10.

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<sup>73</sup> Data rounded to the nearest 50 and available from the GROS website: <http://www.gro-scotland.gov.uk/statistics/theme/index.html>.

Incidence and incidence rates were estimated using incidence weights which include a grossing factor based on population estimates for the household and adult populations depending on whether the crime was classified as a household or personal crime.

Incidence variables are present in the respondent file (RF) data file and begin with INC.

### **7.2.3 Prevalence**

Prevalence is defined as:

*“The proportion of the population who were victims of at least one crime in the specified period.”*

Prevalence takes account of whether a household or person was a victim of a specific crime once or more in the reference period, not the number of times they were victimised. These figures were based on information from the victim form which was used to designate respondents and / or their households as victims, or non-victims. The percentage of households or individuals in the population that were victims provides the *prevalence*. This equates to the *risk* of being a victim of crime and is also referred to as the *rate of victimisation*.

Prevalence was estimated using population estimates for the household and adult populations depending on whether the crime was classified as a household or personal crime (section 7.2.1).

Where crimes are grouped together in a way that includes both household and personal crime, prevalence was calculated using the population estimates for adults. This follows the practice adopted by the BCS and includes;

- Property crime;
- Comparable crime;
- ‘All SCJS crime’ (crime overall).

Prevalence variables are included in the respondent file (RF) data file and begin with PREV.

### **7.2.4 Repeat victimisation**

The SCJS classifies a household or adult as classed as a repeat victim if they are the victim of the same crime more than once in the 12 month reference period. If all victims had only been the victim of one crime in the reference period, incidence and prevalence would be the same. Repeat victimisation accounts for differences between incidence and prevalence. Higher levels of repeat victimisation mean there is a relatively lower prevalence compared with incidence.

Repeat victimisation is calculated as a percentage of household or adult victims according to the crime group. Where both household and personal crimes are grouped together, repeat victimisation is calculated as a percentage of the population of adult victims.

Repeat victimisation variables are included in the respondent file (RF) data file and begin with REP.

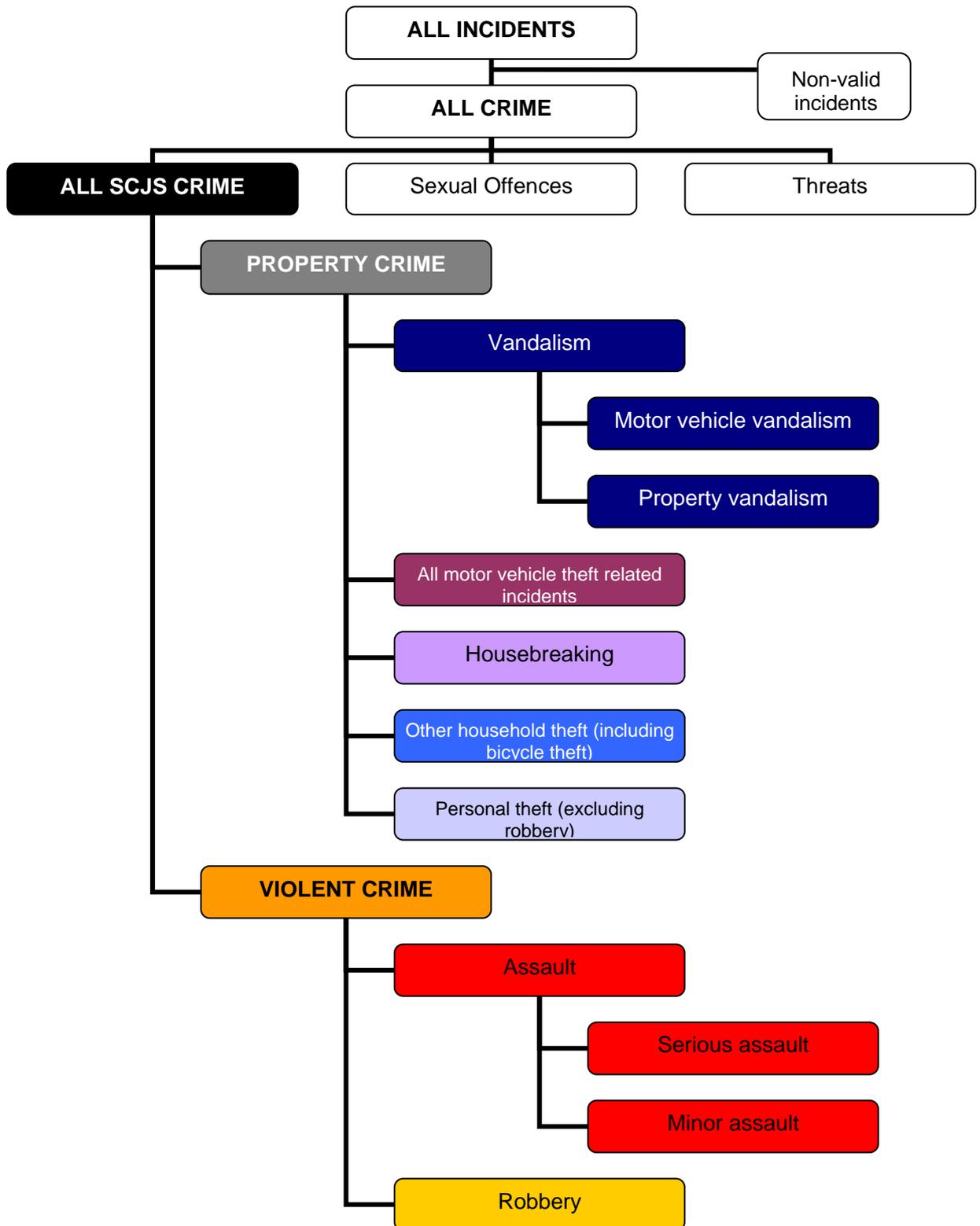
### **7.3 Crime groups**

‘All SCJS crime’ (overall crime) can be broken down into various subgroups for analysis purposes. The two principal crime groups are property crime and violent crime. The level of risk associated with these groups of crimes differs, along with their characteristics, and victims’ experience and perception of them. These two principal groups, used in the analysis in the 2009/10 SCJS Main Findings report, can also be further broken down into seven groups, shown in Figure 3 below. Some further subgroups are also shown for vandalism and assault. All of these crime groups are discussed in more detail below.

As well as these crime groups, the respondent file (RF) data file also includes a number of other crime group variables which have been used or analysis of past Scottish crime surveys.

Each of the crime groups has a variable for incidence and one for prevalence.

Figure 3: Crime groups used in the SCJS 2009/10 Main Findings report



### 7.3.1 Crime group descriptions

The descriptions of the crime groups below follow the basic order of Figure 3 above and the Annex 1 tables in the used in the SCJS 2009/10 Main Findings report. Descriptions for comparable crime groups are also included (section 7.3.2). Variable names are included in square brackets after the heading for each crime group.<sup>74</sup>

#### **‘All SCJS crime’** [variable *surveycrime*]

‘All SCJS crime’ includes all property crime and all violent crime, but excludes threats and sexual offences (section 7.1.3).

‘All SCJS crime’ is used throughout the Main Findings report and all of the other crime groups are subgroups of ‘all SCJS crime’. Estimates of overall incidence and prevalence of crime in Scotland are calculated using ‘all SCJS crime’. As ‘all SCJS crime’ includes both household and personal crimes, prevalence and repeat victimisation are calculated based on the adult population.

#### **Property crime** [variable *property*]

This crime group includes vandalism; all motor vehicle theft related incidents; housebreaking; other household theft (including bicycle theft); and personal theft (excluding robbery).

Property crime is one of the main crime groups used in the Main Findings report (together with violent crime). As property crime includes both household and personal crimes, prevalence and repeat victimisation are calculated based on the adult population.

#### **Vandalism** [variable *vand*]

Vandalism involves intentional and malicious damage to property (including houses and vehicles). In the Criminal Justice (Scotland) Act 1980, vandalism became a separate offence defined as wilful or reckless destruction or damage to property belonging to another. Cases which involve only nuisance without actual damage (for example, letting down car tyres) are not included. Where criminal damage occurs in combination with housebreaking, robbery or violent offences it is these latter crimes that take precedence.

Vandalism is a subgroup of property crime.

#### **Motor vehicle vandalism** [variable *motovvand*]

This crime group includes any intentional and malicious damage to a vehicle such as scratching a coin down the side of a car, or denting a car roof. It does not, however, include causing deliberate damage to a car by fire. These incidents are recorded as fire-raising and therefore included in vandalism to other property. The SCJS only covers vandalism against vehicles belonging to

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<sup>74</sup> Variables in the SPSS data files will be prefaced by INC for incidence variables and PREV for prevalence variables.

private households; that is, cars, vans, motorcycles, scooters and mopeds which are either owned or regularly used by anyone in the household. Lorries, heavy vans, tractors, trailers and towed caravans were generally excluded from the coverage of the SCJS as these are usually the property of an employer and not for personal use.

Motor vehicle vandalism is a subgroup of vandalism.

**Property vandalism** [variable *propvand*]

Vandalism to the home and other property involves intentional or malicious damage to doors, windows, fences, plants and shrubs for example. Vandalism to other property also includes arson where there is any deliberate damage to property belonging to the respondent or their household (including vehicles) caused by fire, regardless of the type of property involved.

Property vandalism is a subgroup of vandalism.

**All motor vehicle theft related incidents** [variable *allmvtheft*]

The SCJS covers three main categories of vehicle theft: 'theft of motor vehicles' referring to the theft or unauthorised taking of a vehicle, where the vehicle is driven away illegally (whether or not it is recovered); 'theft from motor vehicles' which includes the theft of vehicle parts, accessories or contents; and 'attempted thefts of or from motor vehicles', where there is clear evidence that an attempt was made to steal the vehicle or something from it (e.g. damage to locks). If parts or contents of the motor vehicle are stolen in addition to the vehicle being moved, the incident is classified as theft of a motor vehicle. Included in this category are cars, vans, motorcycles, scooters and mopeds which are either owned or regularly used by anyone in the household. Lorries, heavy vans, tractors, trailers and towed caravans were generally excluded from the coverage of the SCJS as these are usually the property of an employer and not for personal use.

All motor vehicle theft related incidents are a subgroup of property crime.

**Housebreaking** [variable *housebreak*]

In Scottish law, the term 'burglary' has no meaning although in popular usage it has come to mean breaking into a home in order to steal the contents. Scottish law refers to this as 'theft by housebreaking'.

Respondents who reported that someone had broken into their home with the intention of committing theft (whether the intention was carried out or not) were classified as victims of housebreaking. Entry must have been by forcing a door or via a non-standard entrance. Thus, entry through unlocked doors or by using false pretences, or if the offender had a key, were not housebreaking (they would fall into 'other household theft'). The definition of housebreaking used in this report is the same as the definition used in the 2003, 2006 and 2008/09 reports but differs from the definition used prior to that. The definition was changed in 2003 to mirror more accurately the Scottish police recorded crime definition of domestic housebreaking by including housebreakings to

non-dwellings (such as sheds, garages and out-houses) which are directly connected to the dwelling.

Housebreaking is a subgroup of property crime.

**Other household theft (including bicycle theft)** [variable *otherhousetheftcycle*]

This crime group includes actual and attempted thefts from domestic garages, outhouses and sheds that are *not* directly linked to the dwelling. The term also includes thefts from gas and electricity prepayment meters and thefts from outside the dwelling (excluding thefts of milk bottles etc. from the doorstep). 'Thefts in a dwelling' are also included in this group; these are thefts committed inside a home by somebody who did not force their way into the home, and who entered through a normal entrance (examples include guests at parties, workmen with legitimate access, people who got in using false pretences, or if the respondent left a door open or unlocked). Theft of a bicycle is also included.

Other household theft (including bicycle theft) is a subgroup of property crime.

**Personal theft (excluding robbery)** [variable *perstheft*]

This group of crime includes actual and attempted 'snatch theft', 'theft from the person' where the victim's property is stolen directly from the person of the victim but without physical force or threat of force and 'other personal theft' which refers to theft of personal property outside the home where there was no direct contact between the offender and the victim.

Personal theft is a subgroup of property crime.

**Violent crime** [variable *violentf*]

The coverage of violent crime consists of actual and attempted minor assault, serious assault and robbery. Sexual offences are not included (section 7.1.3).

Violent crime is one of the main crime groups used in the Main Findings report (together with property crime).

**Assault** [variable *assaultf*]

In the SCJS, the term assault refers to two categories:

- Serious assaults, comprising incidents of assault which led to an overnight stay in hospital as an in-patient or which resulted in specific injuries regardless of whether or not the victim stayed in hospital overnight;
- Minor assaults, which are actual or attempted assaults resulting in no or negligible injury.

Assault is a subgroup of violent crime.

### **Serious assault** [variable *serassault*]

An assault is classified as serious if the victim sustained an injury resulting in an overnight stay in hospital as an in-patient or any of the following injuries whether or not they was detained in hospital: fractures, internal injuries, severe concussion, loss of consciousness, lacerations requiring sutures which may lead to impairment or disfigurement or any other injury which may lead to impairment or disfigurement.

Serious assault is a subgroup of assault.

### **Robbery** [variable *rob*]

This term refers to actual or attempted theft of personal property or cash directly from the person, accompanied by force or the threat of force. Robbery should be distinguished from other thefts from the person which involve speed or stealth.

Robbery is a subgroup of violent crime.

## **7.3.2 Comparable crime group descriptions**

Comparable crime groups are used to compare SCJS data with police recorded crime statistics (section 11.1).

### **Comparable crime** [variable *comparcrime*]

Only certain categories of crime covered by the SCJS are directly comparable with police recorded crime statistics (section 11.1). These categories are collectively referred to as comparable crime. Comparable crime can be broken down into the following three crime groups:

- Acquisitive crime: comprising housebreaking, theft of a motor vehicle and bicycle theft;
- Vandalism: including both vehicle and property vandalism;
- Violent crime: comprising assault and robbery.

Section 7.3.1 provides definitions of vandalism and violent crime. Acquisitive crime is defined below.

### **Acquisitive crime** [variable *acquis*]

Acquisitive crime consists of three crime groups / offence codes: housebreaking, theft of a motor vehicle and bicycle theft. Housebreaking is defined in section 7.3.1 and theft of a motor vehicle is part of the all motor vehicle theft related incidents crime group (section 7.3.1). Bicycle theft is defined as theft of a bicycle from outside a dwelling. Almost all bicycles were stolen in this way. Bicycle thefts which take place inside the home by someone who is not trespassing at the time are counted as theft in a dwelling (a subgroup of other household theft including bicycle theft); and thefts of bicycles from inside the home by a trespasser are counted as housebreaking.

## 8 Weighting

### 8.1 Introduction

The rationale for weighting, a description of the methodology used and the weighting characteristics are provided in the sections below.

The SCJS, like the British Crime Survey (BCS), technically consists of two highly related, but separate surveys; at various times in the survey the respondent provides information on behalf of the household as a whole and on behalf of themselves as an individual.

There are three main units of analysis used on the SCJS:

- Households;
- Individuals;
- Incidents of victimisation.

Different weights are used depending upon the unit of analysis (and what data file is being analysed):

- Household weights were constructed for use with variables where the household is the main unit of analysis. Some crimes are considered household crimes (e.g. burglary, vandalism to household property, theft of and from a car – see section 7.2.1 and Annex 15 for a full list) and therefore the main unit of analysis is the household. Similarly, analysis for certain questions in the survey is also conducted at the household level (for example, accommodation type). In these cases the household weight would apply. The household weight is present in the respondent file (RF) data file.
- Individual weights were constructed for use with variables where the individual is the main unit of analysis. The individual weight would also be used when analysing personal feelings of safety when walking alone after dark in the local area and other questions where the respondent is asked for their personal opinion or information about themselves. Analysis of crimes which are considered personal crimes (assault, robbery, sexual offences etc. – see section 7.2.1) is undertaken using the individual weight. The individual weight is present in the RF data file.
- Incident weights are used when analysing the characteristics of types of crime. The incident weight is only present in the victim form file (VFF) data file. The incident weight is based on the corresponding household and individual weight (depending on whether the crime is classed as a household or personal crime) and additionally incorporates an expansion factor reflecting whether incidents in the victim form reflect a single or a series incident (see section 3.3.2). The incident weights are used for all analysis conducted on the VFF data file if 'all SCJS crime' is being analysed or any of the published statistics are being analysed.

The questionnaire included a self-completion section (sections 3.6 and 5.8). However, not all respondents to the main part of the questionnaire completed the self-completion section (section 4.6). Therefore, an additional set of individual weights was necessary for use when analysing this sub-sample.<sup>75</sup> The self-completion weights were calculated in a similar way to the main individual and household weights but were based only on respondents who had answered the self-completion section of the questionnaire. These are described in section 8.6.

The variable names used for each weight and their descriptions are presented in section 8.10.

## **8.2 Rationale for weighting**

There are a number of reasons why weights are calculated for the SCJS sample. These include:

1. Correction of the sample for **unequal probabilities of selection** that arose from various aspects of the sample design. These included:
  - The requirement for a final sample in each Police Force Area (PFA) equivalent to a simple random sample of 1,000. Consequently, PFAs with smaller populations were over-sampled relative to other PFAs;
  - The requirement for a final sample in each Local Authority (LA) equivalent to a simple random sample of 250 (with the exception of Orkney, Shetland and Western Isles). Consequently, LAs with smaller populations were over-sampled relative to other LAs;
  - The number of dwellings at an address differed from the number on the Postcode Address File (PAF) sample frame, despite the fact that PAF was expanded by the multiple occupation indicator (MOI).<sup>76</sup> This resulted in an unequal probability of selection;
  - Since only one adult respondent (aged 16 or over) was selected from each household, the selection probability differed according to the number of adults in the household.

These corrections are known as *design weights* (or *design correction weights*).

2. **Differing response rates by subgroups within the sample.** Response rates can differ by household type, age, and gender (for example, a young adult male living alone may be less likely to respond to the survey than one living with a partner and child).

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<sup>75</sup> When analysing the self-completion file (SCF) data file, only the individual weights are required as all of the variables relate to information about the respondent themselves and not any other member of their household.

<sup>76</sup> The MOI indicator on PAF identifies addresses with more than one household (section 2.3).

Correction for this is often referred to as *non-response corrections* or, more recently, as *calibration weighting*.

3. The results from the survey are **reported in terms of the population** of Scotland. Therefore, an *expansion factor* is required to gross up the sample data to allow the results to be expressed as population values.

### **8.3 Weighting method**

A two-stage approach to weighting was used for the SCJS. The first stage calculated a set of design weights that corrected for the unequal probabilities of selection due to an inaccuracy in the PAF MOI for the household weights. For the individual level weights, the product of the adult household size and the household weight were used. These design weights were used as pre-weights, or initial weights, at the start of the calibration weighting. Correction for disproportional sampling by PFA was achieved within the calibration weighting.

Calibration weighting is a relatively new name for a practice that has been employed for many years. In outline, the method is to weight sample data to population estimates across a number of variables. This, in effect, corrects for non-response bias and in the SCJS grosses the results up to population levels in the same operation.

A procedure often employed to do this, and used for SCJS, is usually known as 'rim weighting'. The population data are entered as targets for a series of 'rims', each rim relating to a variable or combination of variables, and the sample is weighted to each set of targets in turn. The weights after weighting to the targets of one rim are then input to weighting the next rim. The process continues to weight to each rim in turn until the weights of each component of every rim are consistent within a predefined criterion of the target (population) values. This gives a weighted sample whose profile is the same as the population profile for all of the dimensions included in the weighting rims. It permits weighting to allow for many characteristics when population data are not available for the complete interlinking of the various rim characteristics.

### **8.4 Household weights**

#### **8.4.1 Occupancy Correction – Pre-weight**

In some cases the number of dwellings at an address may differ from that shown by the MOI given on the PAF. In those cases a correction was made for the changed probability of selection. The correction applied was the ratio of the actual number of households at the dwelling to the MOI value. The correction was used as a pre-weight to the rim weighting.

### 8.4.2 Weighting rims

There are two criteria that should be applied to determine the characteristics of rims to be used in calibration weighting:

- They should be characteristics related to the measurement. That is, for the SCJS they should be related to levels and type of crime experienced by both households and individuals;
- Robust and up-to-date estimates of the populations should be available for those characteristics.

Statistical modelling has shown that levels of victimisation and crime are related to household type with single parent households being a particularly important group (Kershaw and Tseloni, 2005). Population data available for households in Scotland are limited, however data are published by General Register Office for Scotland (GROS) for four household types:

- One adult, no children;
- One adult, one or more children;
- Two or more adults, no children;
- Two or more adults, one or more children.

As sub-national data from the SCJS are to be reported at PFA and Community Justice Authority Area (CJAA) levels, the second rim used for household weighting was for the eleven combined PFA / CJAA areas by the household types shown above.

The age group of the head of household has also been shown to be related to levels of crime (Kershaw and Tseloni, 2005). GROS publishes data for households by age of the head of household at the PFA / CJAA level and therefore that classification was used as a rim employed in the weighting.

The 2009/10 design created a disproportional design by Local Authority (LA) within PFA and by urban and rural areas within LA and therefore this was also used as a rim employed in weighting.

Thus, the rims selected for use in the weighting were:

- Household type within PFA / CJAA;
- Age of head of household within PFA / CJAA;
- Urban / rural areas within LA.

The application of these rims in the weighting procedure produced a single household weight for each record. Details of the targets for the components of the household weighting rims, together with their sources, are given in Annex 11.

## **8.5 Individual weights**

### **8.5.1 Variation in selection probabilities – pre-weight**

The probability of selection of an adult respondent varied from household to household according to the number of adults in the household. Respondents in single adult households were certain to be selected whereas those in two adult households would be selected one time in two. Similarly the selection probabilities changed for households containing more than two adults. Weights were applied corresponding to the number of adults in the household to correct for these variations in selection probabilities.

### **8.5.2 Household characteristics – pre-weight**

The characteristics of respondents and their experience of levels and types of crime are related to the characteristics of the households in which they live. For this reason the SCJS household weights were carried forward into the individuals' weighting as part of the individual pre-weights.

The actual pre-weights used in calculating individual weights were the product of an adult's probability of selection and their household weight.

### **8.5.3 Age and gender**

The final stage in calculating individual weights was to ensure that the weighted profile of the adults in the sample was consistent with the population profile for Scotland.

A single age by gender by PFA / CJAA rim was used after applying pre-weights as outlined in section 8.5.2. In surveys prior to the SCJS the age by gender rim was applied at the national level. As with the SCJS 2008/09, weighting at the sub-national level was carried out due to the survey design requirement to produce representative data at the PFA and CJAA level.

This weighting procedure produced a single weight for each adult respondent. Details of the weighting targets for age and gender and the sources are given in Annex 12.

## **8.6 Self-completion weights**

Not all individuals responding to the SCJS survey agreed to complete the self-completion questionnaire. 84% of the respondent to the main survey completed the self-completion (section 4.6.1). If this proportion was uniform across all subgroups within the total sample there would be no need for recalculating weights other than to apply a factor to allow for the smaller sample size and gross up the estimates to the population. However, analysis of response highlighted a difference in response to the self-completion section among different subgroups of respondents, with age demonstrating the greatest difference (section 4.6.1).

In order to correct for this differential response, the individual weights were recalculated using the same approach as the main survey. The weight grosses the survey estimates from the self-completion data to the adult population of Scotland.

### **8.7 Weighting Efficiency**

Weights have been applied to the SCJS data in order to minimise any bias in the data resulting from sample design effects and response bias. The variation in the size of the weights introduces sample inefficiency. This can be illustrated by considering two respondents, the first has a weight of two and the second has a weight of 0.5 where the average weight is one. In this example the second respondent has one quarter the influence as the first. The more the size of the variation in the weights, the lower the weighting efficiency.

The weighting efficiency for the SCJS household based data is 79%. This means that while the total achieved sample size is 16,036, the effective sample size is 12,667.

Similarly the effective sample size for the individual based data is less than the actual achieved sample. The weighting efficiency is 67%, the achieved sample size is 16,036 and the effective sample size is thus 10,820.

The effective sample sizes by PFA for both household and individuals' based data are given in Annex 13. Annex 14 provides the minimum, maximum and mean weights by PFA.

### **8.8 Weighted and unweighted sample profiles**

Table 8.1 and Table 8.2 show the achieved sample profiles for the main and self-completion questionnaires respectively compared to the weighted sample profile. As with all sample surveys, the achieved profile does not exactly match the population profile, despite the strict procedures which are followed to ensure a random sample and respondent selection. Sample surveys are not precisely representative of a cross-section of the population due to a variety of reasons including whether potential respondents were available for interview and their willingness to participate in the survey. In the SCJS 2009/10, the achieved sample under-represented younger adults and over-represented older adults. This pattern is fairly common in large scale social surveys of this type, and calibration weighting was applied to correct for differences in the level of response among groups of individuals on key attributes (section 8.5.3).

**Table 8.1: Main questionnaire unweighted and weighted sample profiles by age and gender**

SCJS 2009/10 &amp; GROS Mid-2009 Population Estimates Scotland (Annex 2).

Base: All respondents (16,036).

	Unweighted sample %	Weighted sample %
<b>Men</b>		
16-24	8.5	15.5
25-34	12.4	15.8
35-44	16.5	17.5
45-54	18.2	17.8
55-64	18.1	15.3
65+	26.2	18.0
<i>Base</i>	<i>7,061</i>	<i>2,048,250</i>
<b>Women</b>		
16-24	8.0	13.7
25-34	12.7	14.4
35-44	17.4	17.4
45-54	17.0	17.5
55-64	17.4	14.7
65+	27.5	22.4
<i>Base</i>	<i>8,975</i>	<i>2,233,400</i>
<b>ALL MEN</b>	<b>44.0</b>	<b>47.8</b>
<b>ALL WOMEN</b>	<b>56.0</b>	<b>52.2</b>
<i>Base</i>	<i>16,036</i>	<i>4,281,650</i>

The differential response of younger and older respondents to the self-completion section of the questionnaire discussed in section 4.6.1 brought the unweighted sample profile for the self-completion questionnaire slightly closer to the adult population profile.

**Table 8.2: Self-completion section unweighted and weighted sample profiles by age and gender**

SCJS 2009/10 & GROS Mid-2009 Population Estimates Scotland (Annex 2).  
Base: All respondents to the self-completion section (13,418).

	Unweighted sample %	Weighted sample %
<b>Men</b>		
16-24	8.8	15.5
25-34	12.6	15.8
35-44	17.3	17.5
45-54	18.6	17.8
55-64	18.5	15.3
65+	24.3	18.0
<i>Base</i>	<i>5,913</i>	<i>2,048,250</i>
<b>Women</b>		
16-24	8.5	13.7
25-34	12.9	14.4
35-44	18.4	17.4
45-54	17.6	17.5
55-64	18.0	14.7
65+	24.6	22.4
<i>Base</i>	<i>7,505</i>	<i>2,233,400</i>
<b>ALL MEN</b>	<b>44.1</b>	<b>47.8</b>
<b>ALL WOMEN</b>	<b>55.9</b>	<b>52.2</b>
<i>Base</i>	<i>13,418</i>	<i>4,281,650</i>

### **8.9 Victim form expansion factor / incident weight**

Most victim forms collect details of only a single occurrence of an incident. However, respondents can also experience series of incidents, where the same thing was done under the same circumstances and probably by the same people (see section 3.3.2). In these cases, only one victim form is completed, collecting details of the latest incident only. However, the number of incidents that occurred in the reference period is recorded and this number, capped at five incidents (see section 8.9.2), is used in the crime statistics produced from the survey.

Weighted incident values were calculated for each victim form. The values are the products of the appropriate household or individual weight and the number of incidents (the incident count), capped at five, represented by that victim

form.<sup>77</sup> This is common practice in other victimisation surveys such as the BCS and National Crime Victimization Survey (NCVS) in the USA.

This weight should be applied when analysing incident details in the victim form file (VFF) data file – for example, when analysing who the offender(s) were for ‘all SCJS crime’ and any subgroups of ‘all SCJS crime’ so that data from series incidents are represented in the correct proportion of incidents overall (section 7.2.2).

### 8.9.1 Calculating the incident counts

Respondents could complete up to five victim forms. The incident count differed according to the characteristics of each victim form:

- Whether the incident detailed in the victim form was assigned an in-scope offence code (i.e. the incident was in Scotland, in the reference period and given one of the 33 offence codes included in the ‘all SCJS crime’ definition – section 7.1.4);
- Whether the victim form represented a single incident or a series of incidents (section 3.3.2);

The following rules were applied:

1. Where the victim form was not assigned an in-scope offence code the household or individual weight was multiplied by zero;
2. Where the victim form was for a single incident the appropriate weight was multiplied by one;
3. Where the victim form represented a series of incidents, the appropriate weight was multiplied by the number of incidents represented, up to a maximum of five.<sup>78</sup>

In the cases where the multiplier was zero, the number of weighted incidents clearly also became zero, effectively removing those cases from weighted analysis of ‘all SCJS crime’. This enabled estimates of the incidence of ‘all SCJS crime’, and of specific types of crimes within that, to be calculated.<sup>79</sup>

### 8.9.2 Capping the incident counts

The restriction to the first five incidents in a series is applied to ensure that survey estimates of incidence are not affected by a very small number of respondents reporting an extremely high number of incidents. The number of incidents reported without the cap can be highly variable between survey years and the inclusion of all of these incidents could undermine the ability to

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<sup>77</sup> Therefore, a respondent can only have a maximum of 25 incidents included in the survey statistics (five victim forms, each recording up to five incidents in a series – section 8.9.2).

<sup>78</sup> The VFF SPSS variable providing the incident count (used to multiply the household or individual weights to produce the incident weight) is NUMINC.

<sup>79</sup> Chapter 7 provides further information on the definition of ‘all SCJS crime’.

measure trends consistently (Smith and Hoare, 2009). On the other hand, the practice of capping series incidents has been shown to underestimate the incidence of survey crime (Farrell and Pease, 2007; Planty and Strom, 2007). The convention of capping does not affect estimates of the risk of victimisation.

In the SCJS 2009/10, two per cent (72) of all in-scope victim forms (3,326) were for a series of more than five similar incidents and one per cent (18) were for a series of more than 10.

### **8.10 Weighting and expansion variables in SPSS data files**

Table 8.3 and Table 8.4 list the weighting variables which are contained in the SCJS 2009/10 SPSS data files.

There are two sets of weights – grossed weights and scaled weights. Grossed weights (Table 8.3) include an expansion factor so that data can be expressed as a proportion of the population of Scotland. When using the gross weight to analyse individual based data for a question asked of the entire sample, the weighted sample size would be 4,281,650 (the total number of adults in Scotland).

**Table 8.3: Gross weighting variables in the SCJS SPSS data files**

<b>Weighting variable</b>	<b>Data File<sup>80</sup></b>	<b>Description</b>
WGTGHHD	RF & VFF	Household weight
WGTGINDIV	RF & VFF	Individual weight
WGTGINC_SCJS	VFF	Gross incident weight for SCJS crimes
WGTGHHD_SC	SCF	Self-completion household weight
WGTGINDIV_SC	SCF	Self-completion individual weight

Scaled weights (Table 8.4) do not include this expansion factor and can be used when undertaking advanced statistical analysis. When using the scaled weight to analyse individual based data for a question asked of the entire sample, the weighted sample size would be 16,036 (the total number of respondents interviewed). The scaled versions of the household and individual weights (including those in the self-completion file) are denoted by the addition of `_SCALE` at the end of the weighting variable names listed in Table 8.3). More information on scaled weights is provided in the SCJS 2008/09 User Guide (available from the survey website).

<sup>80</sup> Respondent file (RF), victim form file (VFF) and self-completion file (SCF) data files – see section 9.1 for details.

**Table 8.4: Scaled weighting variables in the SCJS SPSS data files**

Weighting variable	Data File <sup>80</sup>	Description
WGTGHHD_SCALE	RF & VFF	Scaled household weight
WGTGINDIV_SCALE	RF & VFF	Scaled individual weight
WGTGHHD_SC_SCALE	SCF	Scaled self-completion household weight
WGTGINDIV_SC_SCALE	SCF	Scaled self-completion individual weight

When analysing the respondent file (RF) individual weights should be used as respondents provide details of their own circumstances, experiences, attitudes and opinions. In a small number of cases, respondents are asked to provide information on behalf of the entire household (for example, the way in which the household occupies the accommodation, whether anyone in the household has owned or had regular use of a car, whether there is anyone in the household who requires care etc). These questions / variables are listed in Annex 15 and the household weight should be used when conducting analysis of these questions / variables.

In addition, when analysing incidence and prevalence variables for household crimes or crime groups (section 7.2.1) in the RF data file the household weight should be used. A list of household crimes is provided in Annex 15. Users should note that, following conventions used on the BCS, where crime groups contain both household and personal crimes, the individual weights are used in the calculation of published incidence and prevalence rates.<sup>81</sup>

### 8.10.1 Calculating rates per 10,000

Past surveys have included weights that incorporate a calculation to display incidence statistics as rates per 10,000 households or individuals (and rates per 10,000 are presented in the Main Findings report, Annex 1, Table A1.4). These are not included in the SCJS data files. They can be created by users if necessary by using the following syntax which simply divides the gross weights by the total population (household or individual) divided by 10,000:

```
compute WGTGINDIVRATE=WGTGINDIV/(4255000/10000).
compute WGTGHHD RATE=WGTGHHD /(2331250/10000).
```

---

<sup>81</sup> For example, property crime includes a mixture of crimes committed against households and individuals, and therefore, for example, prevalence data for property crime in the 2009/10 SCJS Main Findings report is quoted as the percentage of *adults* experiencing at least one property crime.

## 9 Data Output

### 9.1 Introduction

The main outputs provided to the Scottish Government are SPSS data files, delivered on an annual basis at the end of the survey. There are three separate SPSS data files provided:

- Respondent file (RF);
- Victim form file (VFF);
- Self-completion file (SCF).

#### 9.1.1 Respondent file

The RF data file is produced at the level of the individual respondent and contains all questionnaire data and associated variables, excluding information that is collected in the victim form or the self-completion questionnaire. The file also contains additional variables such as geo-demographic variables from the sample data and the derived variables for incidence and prevalence measures. Data for all respondents is provided in the RF file, irrespective of whether they were victims or non-victims.

#### 9.1.2 Victim form file

The VFF data file is produced at the level of the individual incident and contains all the data collected in the victim form. Thus, an individual respondent who reported three separate incidents and completed three victim forms would have three separate records in the VFF data file.

All victim forms are included in the file; including cases where the incident occurred outside of the reference period or outside of Scotland. These records were not used for analysis and contain very little information (the victim form questionnaire is terminated in these cases – section 3.4.1), but are retained on the file for use by researchers who may wish to examine this data. Similarly, victim forms which were assigned a non-valid offence code (and therefore were not used in the production of the ‘all SCJS crime’ statistics from the survey) are also retained (section 7.1).

#### 9.1.3 Self-completion file

The SCF data file is produced at the level of the respondent and contains all of the data and associated variables in the self-completion questionnaire (illicit drug use, stalking and harassment, partner abuse and sexual victimisation) as well as the key demographic variables from the RF data file. The file can also be linked to the RF data file for analysis purposes via use of the variable SERIAL.

The questions in illicit drugs section of the SCF data file do not contain responses for respondents who say they have ever taken semeron (a fictitious drug - section 3.6.1). These respondents (nine for the 2009/10 survey) are identified in the variable SEMERON.

## 9.2 Content of SPSS data files

The SPSS data files delivered to the Scottish Government and available on the UK Data Archive contain different types of variables, including:

- **Questionnaire variables** (all files). SPSS variable names correspond to question labels from the questionnaire. Variable names are also repeated in variable labels;
- **Incidence and prevalence variables** (RF and SCF data files – Chapter 7).
- **Geo-demographic variables** (all data files). All cases have a set of pre-specified geo-demographic variables attached to them, including Police Force Area (PFA), Community Justice Authority Area (CJAA), National Criminal Justice Board Area (NCJBA),<sup>82</sup> Local Authority (LA),<sup>83</sup> Health Board Area (HBA), 2009 Scottish Index of Multiple Deprivation (SIMD)<sup>84</sup> and 2007-2008 Scottish Government Urban Rural classification;<sup>85</sup>
- **Coding variables** (RF and VFF data files). On the RF data file, SOC2000 and NS-SEC codes (based on SOC2000) are included for the respondent (see section 6.3).
- **Offence coding variables** (all files). On the VFF data file, a full set of offence codes, including the history, are attached as outlined in section 6.1.2. The RF and SCF data files contain the final offence code assigned to each respondent's victim forms (section 6.1.2);
- **Derived variables** (all files). Many derived variables are also added to the file. There are two main types of derived variables:
  - Flag variables that identify, for example, the date of interview, the month of issue, a partial or full interview, a victim or non-victim etc. On the VFF data file, flag variables include whether an incident was in-scope or non-valid (section 7.1.1), whether it was a series or a single incident (section 3.3.2), whether the respondent had an unmet support need etc;

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<sup>82</sup> For more information on NCJBAs see Scottish Government website: <http://www.scotland.gov.uk/Topics/Justice/legal/criminalprocedure/NCJBWeb>.

<sup>83</sup> Four LAs were grouped to 'LA unspecified' as population values were low enough to present a disclosure risk if the specific Local Authority name was provided. These were Clackmannanshire, Eilean Siar, the Orkney Islands and the Shetland Islands. LA is the lowest level of geography available in the SPSS datasets.

<sup>84</sup> SIMD quintiles (SIMD\_QUINT) and the 15% most deprived (SIMD\_TOP) variables are included in the respondent file (RF) and self-completion file (SCF) data files. Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/>.

<sup>85</sup> Details of the 2007-2008 Scottish Government Urban Rural Classification can be found on the Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification>.

- Classificatory variables derived from the data. These included standard classifications such as banded age groups, household composition, tenure, etc;
- **Interviewer and observational variables** (all files). All interviews had a small amount of observational data collected by interviewers in the CAPI script, such as whether the respondent required any help with the self-completion section of the questionnaire;
- **Weighting variables** (all files). See section 8.10 for further information on what these variables are and how they should be used.

### **9.3 Conventions used in SPSS data files**

Consistency was retained between the SCJS 2008/09 and 2009/10 data files. In the majority of cases, SPSS variable names correspond to question labels from the questionnaire.

#### **9.3.1 Case identifiers**

There are two types of case identifiers in the data files: SERIAL (all files) and VSERIAL (victim form file [VFF] data file).

The unique identifier SERIAL consists of up to six digits and is present in the respondent file (RF) data file (where each individual case or record represents an individual respondent) as well as the VFF data file (where the identifier is no longer unique as respondents can have more than one victim form).

In the VFF, where each individual case or record represents a victim form, the unique case identifier (VSERIAL) is identical to SERIAL, but with the addition of the victim form number (01 to 05) at the end. This gives each victim form a unique identifier.

#### **9.3.2 Don't know and refused values**

Don't know and refused codes are standard on most questions. They have been assigned standard values in SPSS to aid data analysis:

Don't Know: -1  
Refused: -2

For multicode variables in the SPSS data files, the variables relating to the don't know code are named ending '\_dk' and for refused '\_rf'.

#### **9.3.3 Multiple response variables**

Multiple response variables were set up as a set of variables equal to the total number of answers possible (including Don't Know and Refused and any additional codes added in the coding process – see section 6.2). Multiple response variables generally follow the format <question label><\_><01> with the underscore denoting a multiple response variable and the number incrementing with each additional variable. Each variable was then given a value of '1' or '0', depending on whether the respondent gave that particular answer or not.

An example of a multiple response variable where there are seven possible answer categories, and so seven separate variables, is shown below:

**QMAGE: How old were the people who did it? Would you say they were ...** READ OUT. MULTICODE OK.

1. Under school age (QMAGE\_01)
2. Of school age (QMAGE\_02)
3. Aged between 16 and 24 (QMAGE\_03)
4. Aged between 25 and 39 (QMAGE\_04)
5. Aged 40 or over? (QMAGE\_05)
6. Don't Know (QMAGE\_dk)
7. Refused (QMAGE\_rf)

## 10 Confidence Intervals and Statistical Significance

### 10.1 Introduction

SCJS estimates are based on a representative sample of the population of Scotland aged 16 or over living in private households. A sample, as used in the SCJS, is a small-scale representation of the population from which it is drawn.

Any sample survey may produce estimates that differ from the values that would have been obtained if the whole population had been interviewed (the true population value). The magnitude of these differences is related to the size and variability of the estimate, and the design of the survey, including sample size.

It is however possible to calculate a range of values between which the population figures are estimated to lie; known as the confidence interval (also referred to as *margin of error*). At the 95 per cent confidence level, when assessing the results of a single survey it is assumed that there is a one in 20 chance that the true population value will fall outside the 95 per cent confidence interval range calculated for the survey estimate. Similarly, over many repeats of a survey under the same conditions, one would expect that the confidence interval would contain the true population value 95 times out of 100.

Because of sampling variation, changes in reported estimates between survey years or between population subgroups may occur by chance. In other words, the change may simply be due to which respondents were randomly selected for interview.

Whether this is likely to be the case can be assessed using standard statistical tests. These tests indicate whether differences are likely to be due to chance or represent a real difference. In general, only differences that are statistically significant at the five per cent level (and are therefore likely to be real as opposed to chance) are described in the 2009/10 SCJS Main Findings report and the other supplementary SCJS reports.<sup>86</sup>

### 10.2 SCJS confidence intervals

Confidence intervals around SCJS estimates are based on sampling variation calculations which reflect the stratified and, in some areas, clustered design of the survey, and also the weighting applied. They are often referred to as complex standard errors (CSEs). The values for these were calculated using the SAS Surveymeans module (<http://www.sas.com>).

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<sup>86</sup> These cover the subjects of Partner Abuse, Sexual Victimization and Stalking and Illicit Drug Use. All are available on the Scottish Government survey website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>.

Statistical significance for change in SCJS estimates for ‘all SCJS crime’ cannot be calculated in the same way as for other SCJS estimates. This is because there is an extra stage of sampling used in the personal crime rate (selecting the adult respondent for interview) compared with the household crime rate (where the respondent represents the whole household) (sections 7.2.1 and 8.1). Technically these are estimates from two different, although obviously highly related, surveys. The Office for National Statistics (ONS) methodology group has provided an approximation method to use to overcome this problem. This method is also used by the British Crime Survey (BCS).

The approach involves producing population-weighted variances associated with two approximated estimates for overall crime. The first approximation is derived by apportioning household crime equally among adults within the household (in other words, converting households into adults). The second apportions personal crimes to all household members (converting adults into households).

The variances are calculated in the same way as for the standard household or personal crime rates (i.e. taking into account the complex sample design and weighting). An average is then taken of the two estimates of the population-weighted variances. The resulting approximated variance is then used in the calculation of confidence intervals for the estimate of ‘all SCJS crime’. It is then used in the calculation of the sampling error around changes in estimates of ‘all SCJS crime’. This enables the determination of whether such differences are statistically significant.

This method incorporates the effect of any covariance between household and personal crime. By taking an average of the two approximations, it also counteracts any possible effect on the estimates of differing response rates by household size.

If confidence intervals are not provided, then an approximation may be used. The standard error should be calculated assuming a simple random sample and the value multiplied by an appropriate design factor to provide the confidence interval. Design factors will differ for different types of crime and characteristics. Examination of the data indicates that most design factors that have been calculated have values of less than 1.2. This suggests that the use of a design factor of 1.2 would provide conservative estimates of confidence intervals for most estimates from the survey, including the main and self-completion data.

Table 10.1 shows the following for the key crime groups:

- The estimates for incidence rates per 10,000 adults / households;
- The 95% confidence intervals;
- The simple random sample (SRS) standard error;
- The complex, or SCJS sample, standard error;
- The design factor.

**Table 10.1: Rates, confidence intervals, standard errors and design factors for key crime groups (incidence rate per 10,000)**

SCJS 2009/10.

Base: Adults (16,036).

Variable name: incidence variables (see section 7.3 for details).

<i>Crime rates per 10,000</i>	<b>Best est.</b>	<b>Conf. int.</b>	<b>SRS Stand. Err.</b>	<b>SCJS Stand. Err.</b>	<b>Design Factor</b>
<b>ALL SCJS CRIME</b>	<b>3,268</b>	<b>446</b>	<b>96</b>	<b>114</b>	<b>1.18</b>
<b>PROPERTY CRIME</b>	<b>2,646</b>	<b>307</b>	<b>67</b>	<b>78</b>	<b>1.17</b>
<b>Vandalism</b>	<b>1,292</b>	<b>219</b>	<b>50</b>	<b>56</b>	<b>1.11</b>
Motor vehicle vandalism	685	125	32	32	1.01
Property vandalism	607	152	36	39	1.07
<b>All mv theft related incidents</b>	<b>274</b>	<b>80</b>	<b>20</b>	<b>20</b>	<b>1.02</b>
Theft of a motor vehicle	25	21	5	5	1.00
Theft from a motor vehicle	207	62	16	16	0.97
Attempted theft of / from mv	41	33	9	8	0.99
<b>Housebreaking</b>	<b>123</b>	<b>60</b>	<b>15</b>	<b>15</b>	<b>1.05</b>
<b>Other h'hold thefts inc. bicycles</b>	<b>653</b>	<b>140</b>	<b>33</b>	<b>36</b>	<b>1.08</b>
Other household theft	540	129	30	33	1.08
Bicycle theft	113	42	11	11	1.00
<b>Personal theft excl. robbery</b>	<b>304</b>	<b>99</b>	<b>24</b>	<b>25</b>	<b>1.06</b>
Theft from the person	68	38	10	10	1.03
Other personal theft	236	90	21	23	1.07
<b>VIOLENT CRIME</b>	<b>622</b>	<b>182</b>	<b>46</b>	<b>46</b>	<b>1.02</b>
<b>Assault</b>	<b>577</b>	<b>163</b>	<b>41</b>	<b>42</b>	<b>1.01</b>
Serious assault	46	31	8	8	0.96
<b>Robbery</b>	<b>44</b>	<b>59</b>	<b>15</b>	<b>15</b>	<b>1.00</b>
<b>COMPARABLE CRIME</b>					
Vandalism	1,292	219	50	56	1.11
Acquisitive	262	77	19	20	1.04
Violent crime	622	182	46	46	1.02

## 11 Comparing the SCJS with Other Data Sources

### 11.1 Comparison with police recorded crime

The SCJS provides estimates of the level of crime in Scotland. It includes crimes that are not reported to or recorded by the police, but is limited to crimes against adults resident in households, and also does not cover all crime types (section 7.1.2).

Police recorded crime is a measure of those crimes reported to the police and recorded by them as a crime or offence.

In order to compare the estimates of crime from the SCJS and police recorded crime statistics, a comparable subset of crime was created for a set of crimes that are covered by both measures. 67% of 'all SCJS crime' as measured by the SCJS 2009/10 falls into categories that can be compared with crimes recorded by the police. The SCJS 2009/10 estimated 40% of comparable crime to be reported to the police.

It is possible to make comparisons between the SCJS and police recorded crime statistics for three crime groups (Figure 4):

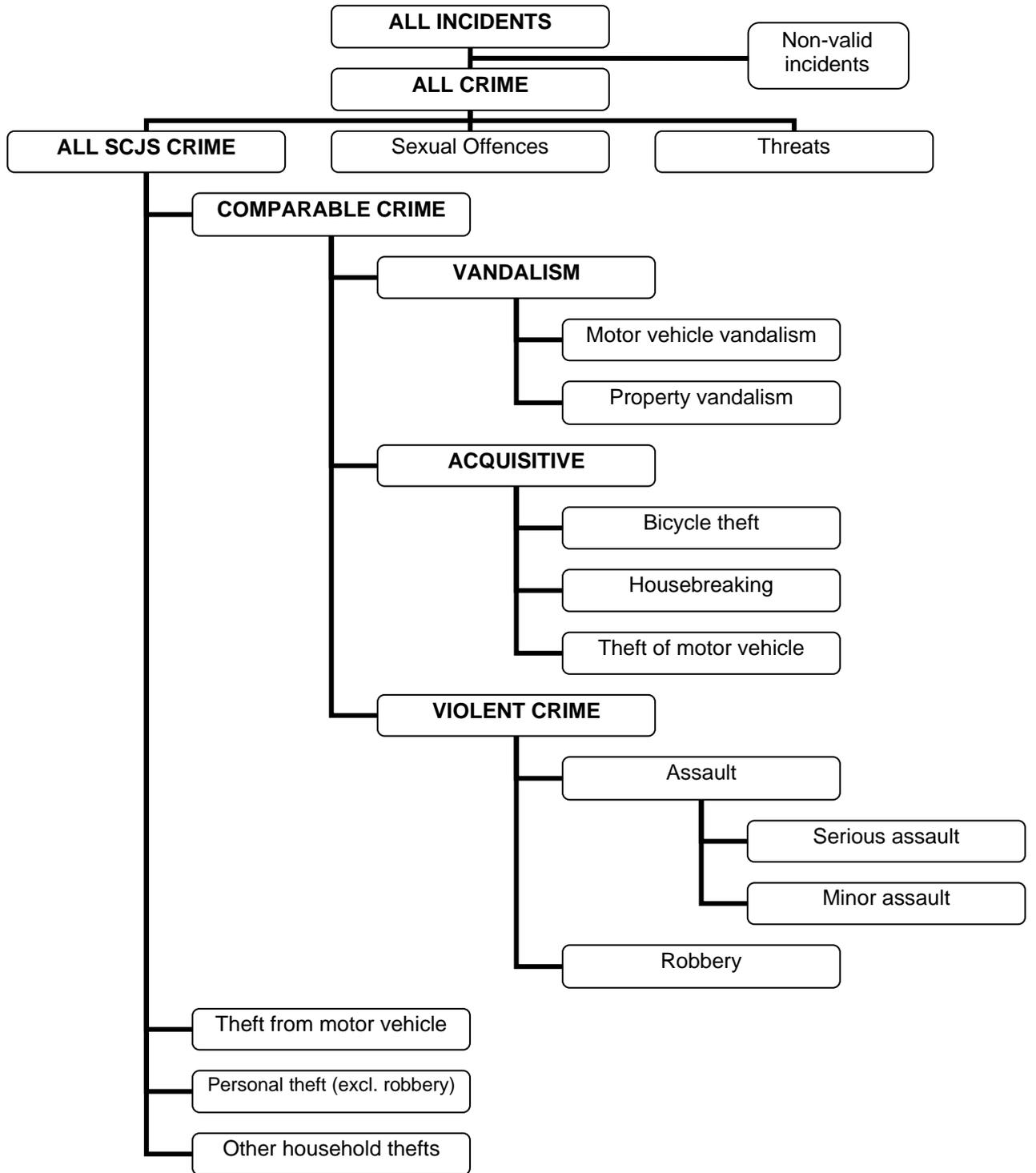
- Vandalism (including motor vehicle vandalism and property vandalism);
- Acquisitive crime (including bicycle theft, housebreaking and theft of motor vehicles);
- Violent crime (including assault and robbery).

Section 7.3.1 provides further information about these crime groups.

To enable comparison, estimates of the total number of comparable crimes in Scotland were obtained by grossing up the number of crimes identified in the SCJS using the General Register Office for Scotland (GROS) estimates (section 7.2).

'All SCJS crime' estimates are based on interviews conducted between the 1<sup>st</sup> of April 2009 and the 31<sup>st</sup> of March 2010. Interviews were conducted continuously through this fieldwork period. Respondents were asked about crimes they experienced in the 12 months prior to the interview (the reference period – section 5.1). The rolling reference period used in the SCJS means that the data collected centres around March 2009, the only month to be included in all respondents' reference period. Averaging over the moving reference period of the SCJS generates estimates that are most closely comparable with police recorded crime figures for the 12 months to the end of September 2009 (about six months behind the 2009/10 recorded crime figures reported in the Main Findings report). The police recorded crime statistics relate to crime recorded by the police in the financial year 2009/10;

**Figure 4: Comparable crime groups**



## **11.2 Police recorded crime**

Police recorded crime statistics used in the 2009/10 SCJS Main Findings report relate to crimes committed in the financial year between April 2009 and March 2010. The figures presented in this volume were published on 07 September 2010.<sup>87</sup>

Various adjustments were made to the recorded crime categories by Scottish Government statisticians to maximise comparability with the SCJS. In previous crime surveys in Scotland the police recorded crime statistics were adjusted further to remove crimes against victims aged 15 or younger and crimes against businesses. However, for the SCJS these adjustments have not been made for the following reasons:

- This further adjustment came from a Strathclyde police survey from 2002 which was before the change to recorded crime practices brought about by the Scottish Recorded Crime Standard so it may not be valid any longer;
- In addition, the adjustment may still be appropriate but given that the data from the SCJS can now be provided at Police Force Area (PFA) level it is not appropriate to use Strathclyde's adjustment across all forces. Information to undertake this adjustment using local police force sources did not exist at the time of publication.

The decision not to adjust police recorded crime statistics is consistent with established practice on the British Crime Survey (BCS).

Details of the Scottish Police Recording Standard are available from the policies section of the Association of Chief Police Officers Scotland (ACPOS) website.<sup>88</sup>

## **11.3 Comparison with the British Crime Survey**

Two issues should be noted when comparing SCJS and BCS data: the different target audience for the self-completion questionnaire<sup>89</sup> and differences in coding crimes (section 11.3.1).

### **11.3.1 Coding of crimes**

The coding of crimes differs between the SCJS and the BCS which reflects the different criminal justice systems in which they operate. These differences should be borne in mind when comparisons are made between SCJS and BCS estimates. One general difference is that the SCJS includes crimes

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<sup>87</sup> The statistical bulletin for police recorded crime in Scotland for 2009/10 is available from the Scottish Government website: <http://www.scotland.gov.uk/Publications/2010/09/07084606/0>.

<sup>88</sup> ACPOS website: <http://www.acpos.police.uk/Policies.html>.

<sup>89</sup> The BCS does not ask respondents aged 60 or over to answer the self-completion questionnaire.

where the offender is mentally ill or a police officer (these crimes are excluded in the BCS estimates).

The SCJS also differs from the BCS in that it prioritises assault over other crimes when coding offences. For example, if an incident includes both vandalism and assault, the assault component will be assumed to be more serious unless it is clear that the damage to property was the most serious aspect of the incident. This is not the case with the BCS where vandalism has priority over assault. In addition, the intent of the offender to cause harm is not taken into consideration in the SCJS and the offence code given relies only on the injuries that the victim received. The intention of the offender is taken into consideration when assigning offence codes for assaults in the BCS.

The definition of burglary in England and Wales as measured by the BCS and the definition of housebreaking in Scotland as measured by the SCJS differ in two ways:

**1. The mode of entry;**

In Scotland, housebreaking occurs when the offender has physically broken into the home by forced entry or come in the home through a non-standard entry point such as a window. Even if the offender pushed past someone to gain entry to the home, this would not be coded as housebreaking in Scotland.<sup>90</sup>

Burglary measured by the BCS in England and Wales does not necessarily involve forced entry; a burglar can walk in through an open door, or gain access by deception.

**2. The intention of the offender;**

Burglary from a dwelling in England and Wales as measured by the BCS includes any unauthorised entry into the respondent's dwelling, no matter what incident occurs once the offender is inside. If the offender does not have the right to enter a home, but does so, this will be burglary.

In Scotland, the SCJS records the incident as housebreaking only if there is evidence of either theft from inside the home or an intention to steal in the case of attempted break-ins.

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<sup>90</sup> If a theft occurred in this instance, it would be included in the other household theft crime group.

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