

Technical Paper on the methodology used by the paper "Is violent crime increasing or decreasing?"

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This technical paper is intended to support the paper "Is violent crime increasing or decreasing? A new methodology to measure repeat attacks making visible the significance of gender and domestic relations", which has been published by the *British Journal of Criminology* (<http://bjc.oxfordjournals.org/content/early/2015/12/31/bjc.azv131.full.pdf+html>). It details the meta-data and technical details such as samples sizes and number of Victim Forms in each sweep of the Crime Survey for England and Wales (CSEW), and provides data tables of the estimates of violent crime which underpin the trend analysis presented in the BJC paper.

Crime Survey for England and Wales

The data comes from the Crime Survey for England and Wales (CSEW). The CSEW is an annual victimisation survey of a representative sample of (adult – 16 years and over) permanent household residents in England and Wales. The sampling frame thus excludes anyone who is residing temporarily within a household, for example with friends or family, in communal or institutional accommodations, or who is homeless. Thus the sampling frame excludes women in refuges. With a decreasing number of beds available in refuges (Walby and Towers 2012) it could be supposed that more of these women would be captured by the sampling frame since they are not living in a non-residential household. However, if they have left their permanent residence and are staying temporarily with friends or family, they will still be excluded from the survey. Further, work on the profile of respondents to the Intimate Violence module suggests that disclosure of intimate violence is overwhelmingly from those who have left violent relationships, not those who are currently in a violent relationship (80% of respondents disclosing intimate partner abuse in the previous year in 2008/9 had left the relationship at the point they were surveyed).

The survey is conducted in peoples' homes by professional interviewers. There are several parts to the survey, including a face-to-face Main Questionnaire which collects demographic and socio-economic information and which includes a series of 'gateway' questions about a range of events which could be criminal victimisations, for example 'have you experienced force or violence by a household member in the past 12 months'. All respondents complete the Main Questionnaire. Anyone answering 'yes' to any of the gateway questions is directed to complete a 'Victim Form' (see below).

The CSEW records violence, gender-based violence and violence against women in a number of different ways, including in the face-to-face main questionnaire Victim Form module, as well as in a self-complete special module on 'Intimate Violence' (annually since 2004).

Data: Victim Form module

The Victim Form, through a series of open and closed questions, captures information about possible criminal victimisation events. After the interview an expert coder, based in the

survey company and quality checked by the Home Office, assesses this information and judges whether this event passes the criminal threshold and if it does, which offence type it should be allocated to, for example serious wounding.

Respondents can complete up to six Victim Forms (only five in 1994). On the rare occasions when a respondent has had more than six different victimisation events during the past 12 months, the priority for recording is for more serious events to take precedence (ONS 2013: 13), so little interpersonal violence is lost by this restriction.

The Victim Form can record either a 'single' or a 'series' event. A single event is a one-off. A series event is defined as 'the same thing, done under the same circumstances and probably by the same people' (ONS 2013: 15). In the case of a series event, a respondent can report any number of incidents within this event.

The data available for analysis from the Victim Form module thus includes both the number of victims and the number of crimes which have occurred in the past 12 months. The number of crimes in series incidents available in the dataset is the reported number in the event between two and 96, or the code '97' is applied: the code 97 is defined as 'more than 96/too many to count'. We use a count of 60 for this 'too many to count' category. This method was used in the ONS endorsed Home Office study (Walby and Allen 2004) on domestic violence using the CSEW self-complete module data. The count of 60 was derived from a review of the secondary literature, including on women in refuges. This count of 60 for '97' coded Victim Forms has been supported in later studies using the CSEW (Farrell and Pease 2010 and 2007). There is also a code of '98' which is used when respondents 'do not know' or 'refuse' to say the number of incidents in a series event. Following the ONS convention a count of two is used for these Victim Forms.

[Note that there is no robust data on the number of violent crimes available from the self-complete module on Intimate Violence; this module only contains prevalence data and thus is unsuitable for analysis which aims to compare and contrast the trend in prevalence and incidents of violent crime].

Violent Crime: Definition

Data from the Victim Form module has been independently verified as passing the criminal threshold, thus we can define this as 'crime'.

We define 'violent' crime as 'violence against the person' plus 'sexual offences', following Walby, Towers and Francis (2014). The majority of the category concerns 'violence against the person', which includes serious and other wounding, and common and attempted assault. We include sexual offences (rape, attempted rape and sexual assault) since they are widely understood to be violence. The crimes of serious wounding with sexual motive and other wounding with sexual motive are included. We follow ONS practice in not including threats of violence or robbery (ONS 2014: 2).

The relationship between victim and offender is disaggregated into three categories: domestic, acquaintances, and strangers, following the CSEW classification published in ONS official statistics. Domestic perpetrators are current and ex-intimate partners and also family and other household members. Acquaintances are: workmate or colleague; client or

member of the public met through work; friend or acquaintance; neighbour; local child, child in the neighbourhood, young people in the local area; tradesman, builder, contractor (since 2003/4); ex-husband, wife or partner of someone in the household (since 2007/8); or other person known at least by sight. Strangers are those who are unknown, even by sight.

In order to make comparisons over time we use rates, establishing the number of violent crimes or victims per 1,000 of population. This takes into account the growth in the UK population (see Table 2 for ONS population estimates).

Measuring crime victimisation in the population

For each respondent, we take the aggregate number of crimes reported over all their Victim Forms and disaggregated by relationship between victim and perpetrator (domestic, acquaintance, or stranger) and by sex of the victim. We multiply the weighted population for each individual by the number of crimes they report to the survey. This is then summed over all respondents.

The individual weights take account of the multi-stage cluster design of the survey, and also the underrepresentation of some categories of respondent in the achieved sample: technical specifications of the sampling design and the construction of the individual weights are available in the survey technical papers. The estimates are then adjusted to meet the ONS mid-year population estimates (ONS 2013: 67-69).

The ONS (and previously the Home Office) do not currently use all reported crimes in their crime estimation statistics. Concern over the volatility between survey sweeps generated by relatively small numbers of respondents reporting high frequencies of victimisation mean that a 'capping' procedure is in use. The ONS currently counts up to a maximum of five crimes per Victim Form in its estimation statistics. [For a more detailed explanation of this and an analysis of the impact of this capping procedure in violent crime see Walby, Towers and Francis (2014)].

We repeated our estimation procedure to also obtain estimates for capped crimes and for victims. In estimating capped crimes we followed the ONS procedure of capping each Victim Form, rather than each respondent, at a maximum of five.

Finally, in addressing the volatility issue of using all reported crimes, we additionally produced estimates for each of the 12 violent crime types using all reported crimes over a three year rolling average. We aggregate the target year estimate with that of the previous and following year and take the mean of these three. [The issue of dealing with the volatility for trend analysis is fully explored in the BJC paper, with technical details in the paper's appendix].

This gives estimates of violent crime based on data captured by the CSEW Victim Form module for three units of measurement (all reported crimes, capped crimes and victims) across twelve crime types (all violent crime; domestic violent crime; acquaintance violent crime; and stranger violent crime – with each of these four crime types also being disaggregated by gender (female and male victims)). These estimates are presented in Tables 1a to 1d at the end of this paper.

‘Valid’ and ‘invalid’ offences: Geography and timing

In analysing the Victim Form module data, the ONS and previously the Home Office only count those offences which occurred in England and Wales, although the survey process records offences which have been perpetrated against respondents outside of this geographical area. However, given that the sampling frame excludes anyone who is not a permanent household resident in England and Wales, including residents of households in other countries, but who were a victim of crime in England or Wales, this results in an underestimation of the number of crimes which have occurred within the geographical boundaries of the two countries.

In our analysis we use an alternative boundary - of crimes experienced by those who are permanent residents of households in England or Wales – thus our estimates include those crimes which occurred outside of England or Wales but were experienced by permanent residents of England or Wales.

The ONS also has a complicated ‘valid’ and ‘invalid’ time period for each sweep of the CSEW because of its continuous, rolling interview process. As we are using data from sweeps which include two different sampling processes in terms of the ‘valid’ reporting periods we have included all offences recorded by each sweep of the CSEW. We are not producing estimates of individual years but rather comparing the trend over a long time period, thus we have opted to use a consistent methodology of counting all reported offences for each sweep.

Table 1a: All violent crime: Estimated number of crimes and victims disaggregated by gender of victim

	Against both women and men			Against women			Against men		
	ALL REPORTED CRIME	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS
1994	-	4,043,032	2,229,322	-	1,913,038	956,593	-	2,129,991	1,272,729
1996	6,004,653	4,445,241	2,447,882	2,762,247	1,796,305	918,504	3,242,407	2,648,937	1,529,378
1998	5,513,295	3,613,418	2,144,525	2,407,569	1,592,531	873,805	3,105,726	2,047,888	1,270,721
2000	4,631,271	3,599,164	1,991,052	2,223,652	1,584,134	834,249	2,407,624	2,015,028	1,156,803
2001/2	4,236,367	2,712,410	1,639,377	2,034,770	1,171,358	611,408	2,201,601	1,541,064	1,027,970
2002/3	3,915,420	2,815,972	1,665,959	1,783,616	1,105,402	616,787	2,131,800	1,710,665	1,049,160
2003/4	3,685,386	2,518,605	1,604,704	1,540,703	875,210	551,117	2,144,648	1,643,395	1,053,587
2004/5	3,589,356	2,284,460	1,411,172	1,656,711	964,420	539,929	1,932,614	1,320,021	871,244
2005/6	3,574,118	2,297,491	1,392,564	1,612,229	958,954	560,980	1,961,844	1,338,536	831,583
2006/7	3,424,640	2,407,230	1,528,764	1,598,606	924,978	567,571	1,826,007	1,482,261	961,193
2007/8	3,208,673	2,141,519	1,383,340	1,358,939	929,684	544,013	1,849,678	1,211,822	839,327
2008/9	2,904,622	2,046,016	1,384,684	1,243,986	725,964	484,450	1,660,938	1,320,040	900,233
2009/10	3,173,103	1,969,102	1,248,277	1,347,813	739,270	409,805	1,825,605	1,229,839	838,522
2010/11	3,185,699	2,285,167	1,459,797	1,403,167	959,940	543,426	1,782,882	1,325,232	916,371
2011/12	3,773,332	1,983,798	1,308,901	1,997,582	839,204	526,416	1,775,742	1,144,579	782,485
2012/13	3,579,204	2,004,983	1,210,922	1,963,737	926,400	486,249	1,615,453	1,078,583	724,674
2013/14	-	1,523,681	984,177	-	544,179	405,875	-	866,742	578,302

Source: CSEW 1994 to 2013/14.

All reported crimes are three year moving averages; Capped crimes: year-by-year; Victims: year-by-year.

All violent crime is an aggregate category which includes violent crime perpetrated by domestic relations; acquaintances; and/or strangers.

Table 1b: Violent crime by perpetrator relationship: Estimated number of crimes and victims

	Domestic violent crime against both women and men			Acquaintance violent crime against both women and men			Stranger violent crime against both women and men		
	APP REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS
1994	-	1,404,628	548,761	-	1,589,186	950,030	-	1,049,218	760,531
1996	2,005,976	1,129,289	478,654	2,615,817	1,949,210	1,026,217	1,382,861	1,366,742	943,011
1998	1,640,590	977,039	412,308	2,395,739	1,680,243	997,151	1,476,967	956,136	735,066
2000	1,333,958	896,374	394,552	1,987,035	1,462,141	857,362	1,310,279	1,240,649	739,138
2001/02	1,179,801	721,310	290,504	1,712,443	961,901	603,297	1,344,123	1,029,199	745,576
2002/03	980,525	620,677	279,379	1,607,491	1,062,112	623,084	1,327,404	1,133,183	763,496
2003/04	811,245	467,850	249,813	1,514,797	990,605	584,784	1,359,344	1,060,150	770,107
2004/05	737,880	452,790	213,717	1,571,044	933,820	535,131	1,280,433	897,850	662,324
2005/06	744,755	426,055	207,189	1,437,854	929,957	530,223	1,391,509	941,479	655,152
2006/07	764,457	435,075	233,618	1,399,599	921,701	557,755	1,260,584	1,050,454	737,391
2007/08	650,219	394,403	184,968	1,292,790	886,052	545,699	1,265,663	861,064	652,673
2008/09	581,353	324,014	173,515	1,265,499	774,124	508,171	1,057,771	947,878	702,998
2009/10	619,940	328,378	146,301	1,343,620	776,524	441,455	1,209,543	864,200	660,521
2010/11	648,543	464,911	214,980	1,401,318	800,585	496,468	1,135,838	1,019,671	748,349
2011/12	998,241	349,412	187,485	1,592,026	803,146	518,638	1,183,065	831,240	602,778
2012/13	882,313	460,694	200,983	1,404,240	764,471	441,547	1,062,129	779,818	568,392
2013/14	-	331,303	157,609	-	549,708	362,277	-	642,670	464,291

Source: CSEW 1994 to 2013/14.

All reported crimes are three year moving averages; Capped crimes: year-by-year; Victims: Year-by-year.

Table 1c: Violent crime against women disaggregated by perpetrator relationship: Estimated number of crimes and victims

	DOMESTIC VIOLENT CRIME			VIOLENT CRIME AGAINST WOMEN ACQUAINTANCE VIOLENT CRIME			STRANGER VIOLENT CRIME		
	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS
1994	-	1,064,264	412,248	-	659,094	368,082	-	189,680	176,263
1996	1,467,937	828,894	339,331	1,022,357	622,377	321,776	271,953	345,034	257,397
1998	1,288,312	723,567	300,209	829,700	637,897	387,666	289,557	231,067	185,930
2000	1,088,498	682,796	269,790	901,386	663,609	371,058	233,768	237,729	193,401
2001/02	996,904	597,405	221,833	814,054	348,680	194,908	223,811	225,273	194,667
2002/03	815,074	445,105	183,654	705,456	459,886	264,972	263,086	200,411	168,161
2003/04	637,981	319,000	164,612	591,183	335,083	193,477	311,539	221,127	193,028
2004/05	594,869	359,271	166,528	730,775	391,068	211,523	331,066	214,081	161,878
2005/06	612,031	346,332	162,087	638,259	375,407	209,843	361,939	237,216	189,050
2006/07	659,149	338,567	164,082	631,345	309,769	207,293	308,112	276,642	196,196
2007/08	548,645	335,628	144,555	513,185	386,222	226,837	297,109	207,834	172,621
2008/09	482,046	254,672	139,371	540,381	303,594	206,500	221,560	167,698	138,579
2009/10	487,349	242,390	101,731	602,074	293,337	145,302	258,390	203,543	162,772
2010/11	491,241	345,500	140,850	649,537	345,349	202,255	262,389	269,091	200,321
2011/12	856,288	245,955	136,082	834,921	368,017	216,548	306,373	225,232	173,786
2012/13	763,377	371,003	145,950	723,117	354,857	190,033	246,720	200,540	150,266
2013/14	-	185,385	107,925	-	215,637	165,904	-	143,157	132,046

Source: CSEW 1994 to 2013/14.

All reported crimes are three year moving averages; Capped crimes: year-by-year; Victims: Year-by-year.

Table 1d: Violent crime against men disaggregated by perpetrator relationship: Estimated number of crimes and victims

	VIOLENT CRIME AGAINST MEN								
	DOMESTIC VIOLENT CRIME			ACQUAINTANCE VIOLENT CRIME			STRANGER VIOLENT CRIME		
	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS	ALL REPORTED CRIMES	CAPPED CRIMES	VICTIMS
1994	-	340,361	136,513	-	930,092	581,948	-	859,538	554,268
1996	538,038	300,396	139,323	1,593,461	1,326,833	704,441	1,110,908	1,021,708	685,614
1998	352,278	253,472	112,099	1,566,038	1,042,347	609,485	1,187,410	752,069	549,137
2000	245,460	213,577	124,762	1,085,652	798,532	486,304	1,076,512	1,002,919	545,737
2001/02	182,898	123,905	68,672	898,391	613,231	408,389	1,120,312	803,928	550,909
2002/03	165,441	175,573	95,725	902,040	602,322	358,100	1,064,320	932,770	595,335
2003/04	173,229	148,842	85,199	923,615	655,527	391,308	1,047,804	839,026	577,080
2004/05	142,975	93,504	47,189	840,269	542,751	323,608	949,370	683,766	500,447
2005/06	132,679	79,723	45,103	799,591	554,546	320,379	1,029,573	704,267	466,101
2006/07	105,286	96,520	69,535	768,247	611,928	350,463	952,474	773,813	541,195
2007/08	101,546	58,775	40,412	779,599	499,822	318,863	968,533	653,225	480,052
2008/09	99,305	69,337	34,143	725,444	470,529	301,671	836,190	780,174	564,419
2009/10	132,589	85,996	44,571	741,881	483,183	296,153	951,135	660,660	497,798
2010/11	157,308	119,409	74,130	752,123	455,239	294,213	873,451	750,584	548,028
2011/12	141,934	103,462	51,403	757,116	435,112	302,090	876,693	606,005	428,992
2012/13	118,916	89,693	55,033	681,129	409,611	251,514	815,407	579,279	418,127
2013/14	-	64,883	49,684	-	302,347	196,373	-	499,512	332,245

Source: CSEW 1994 to 2013/14.

All reported crimes: three year averages; Capped crimes: year-by-year; Victims: Year-by-year.

Table 2: Crime Survey for England and Wales 1994 to 2013/14: Technical Details

Date of sweep	SAMPLE SIZE			Population estimate (16 years and over)	Number of Victim Forms
	All	Females	Males		
1994	16,550	8,152	8,398	40,531,168	5
1996	18,955	10,445	8,510	40,686,264	6
1998	14,947	8,472	6,475	40,965,878	6
2000	19,411	10,584	8,827	41,325,106	6
2001/02	32,824	18,302	14,522	41,864,752	6
2002/03	36,479	20,200	16,279	42,132,242	6
2003/04	37,931	20,928	17,003	42,407,061	6
2004/05	45,120	24,957	20,163	42,730,518	6
2005/06	47,796	26,400	21,396	43,141,956	6
2006/07	47,203	25,882	21,321	43,494,740	6
2007/08	46,983	25,636	21,347	43,871,881	6
2008/09	46,286	25,445	20,841	44,235,434	6
2009/10	44,638	24,542	20,096	44,554,480	6
2010/11	46,754	25,678	21,076	44,926,172	6
2011/12	46,031	25,008	21,023	45,278,539	6
2012/13	34,880	19,135	15,745	45,641,072	6
2013/14	35,371	19,195	16,176	45,282,427	6

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