Rape Monitoring Group digests

Data and Methodology

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Crime codes

Data on recorded crime, sanction detections and 'no crime' are provided for both adult and child rape for the 12 months to 31 March during 2009 to 2013 for each of the 43 Home Office funded forces in England and Wales. Note that, in all cases, the British Transport Police is excluded. The following crime codes have been used:

Adult rape: 19C and 19F (rape of a female aged 16 years and over, and rape of a male aged 16 years and over).

Child rape: 19D, 19E, 19G and 19H (rape of a female child under 16, rape of a female child under 13, rape of a male child under 16, and rape of a male child under 13).

Please note that, in 2008/09 only, additional codes of 19A and 19B were used to record a very small number of rapes. It is not possible, however, to distinguish which of these related to an adult or child rape or if they had also been recorded under another rape code. For this reason, these data have been omitted.

Crime rate

The recorded crime rate is calculated as the number of rapes of adults/children recorded by the police, compared to the population of adults/children. Specifically, it is calculated as the number of adult/child rapes recorded by the police divided by the adult/child population (from the 2011 Census). This is multiplied by 100,000 to give the number of rapes per 100,000 head of population. The police record the crime in the year that it is reported to them, which is not necessarily the year the offence took place.

Please note that, in other crime publications, it is common practice to use a multiplier of 1,000 instead. In the digests, however, the number of crimes has been multiplied by 100,000 due to the relatively small numbers of recorded offences.

Sources:

Home Office – Police recorded crime open data Police Force Area tables from 2007 to 2008 onwards.

https://www.gov.uk/government/publications/police-recorded-crime-open-data-tables

Office for National Statistics – 2011 Census: Age by single year, local authorities in England and Wales

http://www.ons.gov.uk/ons/rel/census/2011-census/population-estimates-by-single-year-of-age-and-sex-for-local-authorities-in-the-united-kingdom/index.html

Sanction detection rate

The sanction detection rate is the proportion of recorded rapes of adults/children solved by the police where a formal sanction has been applied to the offender. Thorough definitions are included in Annex A of the digests. Specifically, it is calculated as the number of adult/child sanction detections divided by the number of adult/child rapes recorded in the same time period. Importantly, this does not necessarily mean that all the crimes detected are those recorded in the same period as there may be a time lag between the recording of the crime, subsequent investigation and the detection being made.

Formal sanctions (punishments) include things like being charged or cautioned. Please note that some forces also record non-sanction detections, however, for rape these account for a very small percentage of all the detections and so have not been included here.

Source:

Home Office – Detected crime open data Police Force Area tables and Police recorded crime open data Police Force Area tables from 2007 to 2008 onwards.

https://www.gov.uk/government/publications/police-recorded-crime-open-data-tables

'No crime' rate

A crime can be 'no-crimed' where additional verifiable information determines that no crime has been committed or for administration reasons (i.e. it is a duplicate crime for one already recorded). The proportion of 'no crimes' does not, in itself, infer high or low compliance with the overall requirements of the Home Office Counting Rules. Levels of 'no criming' are influenced in particular by local recording practice and the IT systems in use. A high level of 'no crimes' may indicate a local process that records all reports as crimes at the first point of contact and before any further investigation has taken place to consider the full facts.

The 'no crime' rate refers to the number of rapes of adults/children which have been recorded and then later 'no crimed', compared with the total number of rapes initially recorded. It is calculated as the number of adult/child 'no crimes' recorded divided by the number of adult/child rapes recorded during the same time period and the number of 'no crimes' added together. Again, this does not necessarily mean that, in a given year, the same crimes recorded are the ones that are 'no crimed.'

Given the relatively low number of recorded crimes and 'no crimes' for child rape, small changes to the data could have a large impact on forces' 'no crime' rates. While the data are used to give some descriptive context to each force's position, a bar chart showing the rate for all forces is not shown because direct comparisons are not statistically valid.

Source:

Home Office - Number of offences initially recorded, recorded and 'no crimed' by police force area 2012/13 (note that this does not break the data down by age and is for 2012/13 only)

https://www.gov.uk/government/publications/no-crimes-data

Averages

Where given, averages are calculated as the simple average of all forces' values excluding the City of London Police.[1] For example, the average 'no crime' rate is the average of all forces' 'no crime' rates and not the total 'no crime' rate for England and Wales. This is so that the values of larger forces do not disproportionately affect the average.

To indicate whether forces' values are in line with, or different from the average, the standard deviation[2] is calculated on all forces' values except the City of London Police. For each measure, if the force's value is within one standard deviation of the average, its value is reported as being in line with the average. If it is more than one standard deviation from the average, it is considered to be above or below the average.

When, instead, the digests identify similar forces, the following criteria is used: For the force in question, another force is considered to be similar for each measure if its value is within half a standard deviation of that force's value. A stricter definition is used here than when comparing to the average as it is more helpful to identify fewer forces which share similar characteristics in the data.

Note that the above calculations have been used as a means of producing a description of which forces have approximately comparable figures which is intended as a guide for readers only.

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[1] The City of London's data are excluded since it has a relatively small residential population, yet a large transient one (where the adult/child split is unknown), and a very small number of rapes recorded.

[2] The following formula used where $\bar{x}$ is the sample mean and n is the sample size:
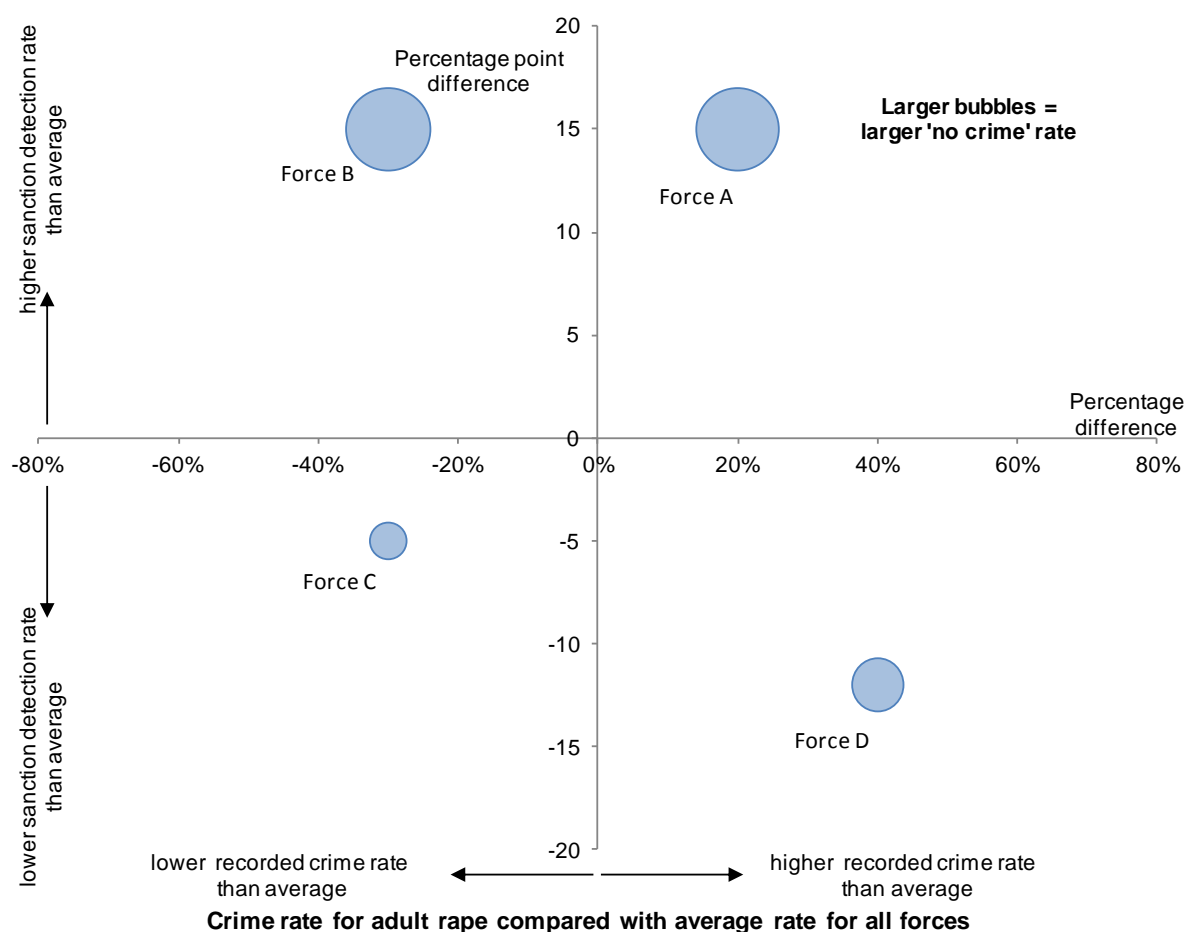
$$\sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

Figures 1 and 8 – 'Bubble' figures.

Figures 1 and 8 show the relative recorded crime rate, sanction detection rate and 'no crime' rate for the 12 months to the end of March.

The horizontal distance from the central line (measured from the centre of the bubble) shows how the force's recorded crime rate compares with the average of all forces (given as a percentage difference). A bubble to the right of the central line indicates an above-average value and to the left of the line, a below-average value.

The vertical distance from the central line (measured from the centre of the bubble) shows how the force's sanction detection rate compares with the average of all forces (given as a percentage point difference). A bubble above the central line indicates an above-average value and one below the line, a below-average value. The size of the bubbles indicates the size of the 'no crime' rate; with larger rates giving larger bubbles. An example is given below:

Force A's recorded crime rate is approximately 20% greater than average and its sanction detection rate is approximately 15 percentage points above average. Its 'no crime' rate is similar to Force B and larger than forces C and D.

Force B's recorded crime rate is approximately 30% below average and its sanction detection rate is very similar to Force A's being approximately 15 percentage points above average.

Force C has the lowest 'no crime' rate of the four forces (indicated by it having the smallest bubble). Its crime rate is about 30% less than average (similar to Force B's) and its sanction detection rate is approximately five percentage points below average.

Force D has the highest crime rate (about 40% higher than average), yet its sanction detection rate is approximately 12 percentage points lower than average – the lowest of all four forces.

One of the particular strengths of these charts is that they enable forces to be compared on all three indicators at once. For example, forces B and C have comparable recorded crime rates but force B has a much higher 'no crime' rate and sanction detection rate which might be worthy of a more in-depth explanation.