

## Associations between police-recorded ethnic background and being sentenced to prison in England and Wales.

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### Summary and Aims

This research demonstrated that there was an association between being from a Black, Asian, or Minority Ethnic (BAME) background (compared with being from a White background) and being sentenced to prison (compared with being sentenced to a community order or another type of punishment) in England and Wales, for offenders convicted of recordable<sup>1</sup> offences in 2011. The effect was small but statistically significant.

The aim of this research was to investigate whether defendants who were recorded (by police officers) as being from a BAME<sup>2</sup> background were more likely to be sent to prison than those who were recorded as being from a White background. This analysis was undertaken because offenders from BAME backgrounds are overrepresented within the Criminal Justice System. BAME<sup>3</sup> offenders were sentenced to custody at a higher rate than White offenders between 2008 and 2011, for indictable<sup>4</sup> offences, according to Courts data (MoJ, 2015).

Explanations for this include the suggestion that BAME offenders may commit more serious offences than White offenders. In this analysis, twelve broad offence groupings were used, allowing comparison between defendants from different ethnic backgrounds within these groups. However, there remains a range of offence seriousness within the groupings (e.g. murder and common assault are both Violence against the person offences). Future analyses could include more detailed measures of offence seriousness to provide more certainty of an ethnicity effect (if it exists). Nevertheless, the use of logistic regression allowed age, gender and criminal history to be taken into account, alongside offence group; any remaining association between ethnicity and being sentenced to prison was independent of these factors.

### Approach

This research used an extract from the Police National Computer (PNC) recording the sentence given to all offenders<sup>5</sup> convicted or cautioned for an offence in 2011 plus previous criminal history (414,066 offenders).

Logistic regression models were built to explore whether any independent associations were observed between main offence group, criminal history, gender, age, nationality, ethnicity, and being sentenced to prison, compared with being sentenced to a community order or another type of disposal.<sup>6</sup> These models have not taken into account<sup>7</sup> all factors which were used in making sentencing decisions, such as mitigating and aggravating circumstances, the plea (guilty or not guilty) or the stage in the trial process when the plea was entered. However, this approach shows

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<sup>1</sup> Offences recorded on the Police National Computer (PNC). This excludes lower-level offences which are likely to attract only a fine.

<sup>2</sup> Ethnicity was recorded using the five categories: White, Black, Asian, Other, and Unknown. Black, Asian, Other, and Unknown were combined to make the 'BAME' category used here. Police officers also record Nationality using over 300 categories.

<sup>3</sup> Ethnicity is self-identified in courts data.

<sup>4</sup> An indictable offence must be tried in a higher criminal court (Crown Court), and not a lower criminal court (Magistrates' Court).

<sup>5</sup> All persons – companies were excluded.

<sup>6</sup> For example: discharge, fine.

<sup>7</sup> The analysis relied on the PNC database, and no other information, such as courts data was accessed.

which factors (out of all factors in the model) were independently associated with being sentenced to prison, that is, were not as a result of association with a third factor. For example, imprisonment may result from either a serious crime, or a lengthy criminal record, or a combination of both (and other factors). The model determines where a combination of factors was associated with the outcome and also to what extent each factor made its own, separate contribution.

Ethnicity was observed using PNC data, and may not always be reliable.<sup>8</sup> However, assuming that police-recorded ethnicity is a proxy of self-declared ethnicity (see MoJ, 2015 for a comparison between the two), the results indicate where further investigation may be warranted. Data for this analysis came from 2011, as this was the most recent full year of data available at the time of the research. The analysis should be repeated using more recent data to observe trends over time.

## Results

Details on all offenders convicted or cautioned for any offence in 2011 were extracted from the PNC. The earliest offence in the year was selected when offenders were convicted or cautioned for more than one offence that year. **Table 1** shows the characteristics of male and female defendants by ethnicity.

**Table 1. Descriptive statistics for convicted male and female offenders by ethnicity, 2011, England and Wales.**

Factors		Female			Male		
		Total	White	BAME	Total	White	BAME
<b>Demographics</b>	Mean age at sentence in years (SD <sup>9</sup> )	31.4 (12.0)	31.4 (12.0)	31.0 (12.0)	30.4 (11.8)	30.6 (11.9)	29.5 (11.3)
	Non-UK national <sup>10</sup> %	15.2	10.2	42.6	15.4	10.7	34.3
<b>Offence group %</b>	Violence	7.2	7.2	7.3	8.6	8.7	8.3
	Sexual offences	0.1	0.1	0.1	1.5	1.5	1.5
	Burglary	1.4	1.4	1.5	4.3	4.6	3.0
	Robbery	0.9	0.7	1.9	1.8	1.2	3.9
	Theft/handling stolen goods	25.7	26.1	23.3	14.7	15.7	10.6
	Fraud and forgery	4.2	3.2	9.4	2.4	1.8	4.4
	Criminal damage	1.1	1.2	0.6	1.3	1.5	0.6
	Drug offences	6.0	6.2	4.8	12.0	10.8	17.2
	Other indictable	4.7	4.6	5.6	6.3	6.2	6.8
	Indictable motoring	0.2	0.2	0.3	0.7	0.6	1.0
	Summary offences	30.1	30.5	28.0	30.2	31.5	25.1
	Summary motoring	18.4	18.6	17.0	16.3	16.0	17.6
<b>Offending History %</b>	Previous convictions or cautions	70.6	73.8	53.2	82.3	84.6	72.8
<b>Sentenced to prison %</b>		<b>8.2</b>	<b>7.6</b>	<b>11.4</b>	<b>17.1</b>	<b>16.2</b>	<b>20.7</b>
<b>N</b>		<b>61,066</b>	<b>51,667</b>	<b>9,399</b>	<b>353,000</b>	<b>283,630</b>	<b>69,370</b>

Age at sentence varied, on average from around 29 to 31 years, across all ethnic groups. There were proportionally more non-UK nationals in each of the BAME groups than in the White groups, with non-UK nationals making up just over two-fifths of the BAME female group, and just over one-third of the BAME male group,

<sup>8</sup> The ethnicity of the defendant may have been wrongly recorded by a police officer or administrator. See MoJ (2015) for a comparison of police-recorded and self-recorded ethnicity of defendants.

<sup>9</sup> Standard Deviation, a measure of the spread of values around the mean.

<sup>10</sup> Or unknown: 16 individuals had no nationality recorded in this dataset.

compared with around one in ten of each of the White groups (female and male). Differences in offence groups were observed between males and females: males were more likely than females to be convicted of sexual offences, whilst females were more likely than males to be convicted of theft/handling offences, for example.

The group least likely to have previous convictions or cautions recorded was BAME females (53.2%), followed by BAME males (72.8%), then White females (73.8%), and finally White males (84.6%). At face value, the group most likely to be sentenced to prison was BAME males (20.7%), followed by White males (16.2%), BAME females (11.4%) and White females (7.6%). However, a direct comparison does not take offence group and criminal history into account.

In order to make this comparison more robust, gender, age, nationality, ethnicity, previous convictions and cautions, and type of offence committed were entered into a logistic regression model to test for independent associations between these factors and being sentenced to prison (whilst all other factors were held constant). Age was entered as both a continuous variable, and by age group (seven categories). Previous convictions and cautions were entered as a binary (yes/no) and a continuous variable (number of convictions or cautions). Nationality (either UK or non-UK/unknown) was included to account for the high proportion of BAME defendants who were recorded as non-UK nationals. Offence group was recorded using twelve standard classifications.

**Table 2** shows the results of the logistic regression model. Where comparisons were made between levels within factors, the reference categories are provided in parentheses (). An odds ratio (OR) greater than one<sup>11</sup> shows increased odds of being sentenced to prison, and an odds ratio of less than one shows decreased odds of being sentenced to prison, compared to the reference category. For continuous data (age at sentence and number of previous convictions or cautions), the odds ratio is an estimate of the change in the odds with each unit change (e.g. with each increase in year of age).

Odds ratios are related to probability or likelihood: increased odds means increased probability (of imprisonment). However, odds can take any value greater than zero, whilst probability is restricted to values between 0 and 1 (or 0% and 100%). A 40% increase in odds (OR of 1.4) is considered small, whilst a 500% increase in odds (OR of 5.0) is large, for example. Increases in odds can be translated into increased probabilities of imprisonment (see **Table 4** for worked examples).

The standard error shows how much the estimate varied across cases. The odds ratios have been converted into Cohen's D: a standardised effect size measure, which is interpreted in the 'Effect size' column as Small (S), Medium (M), or Large (L).

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<sup>11</sup> And reaching statistical significance.

**Table 2. Logistic regression model for sentencing to prison decisions**

Factors		Odds Ratio	Standard Error	Cohen's D	Effect size	
<b>Demographics</b>	(White) BAME	1.390***	0.120	0.18	S	
	(Female) Male	1.825***	0.170	0.33	S	
	Age at sentence (Under 18 years old)	0.997	0.002	0.00	n/a	
	18 to 21	4.059***	0.026	0.77	M-L	
	22 to 25	4.510***	0.030	0.83	L	
	26 to 30	4.684***	0.035	0.85	L	
	31 to 40	4.245***	0.045	0.80	L	
	41 to 50	3.523***	0.062	0.69	M-L	
	51 and older	3.502***	0.086	0.69	M	
	(UK national) Non-UK national	1.562***	0.014	0.25	S	
	<b>Offence group</b>	(Violence) Sexual offences	3.347***	0.032	0.67	M
		Burglary	1.692***	0.021	0.29	S
Robbery		4.564***	0.031	0.84	L	
Theft/handling stolen goods		0.323***	0.017	0.62	M	
Fraud and forgery		0.938***	0.025	0.04	S	
Criminal damage		0.424***	0.041	0.47	S-M	
Drug offences		0.335***	0.018	0.60	M	
Other Indictable		0.622***	0.019	0.26	S	
Indictable motoring		0.849***	0.046	0.09	S	
Summary offences		0.143***	0.017	1.07	L	
Summary motoring		0.070***	0.026	1.47	L	
<b>Offending history</b>		Number of previous convictions or cautions	1.037***	0.001	0.02	S
	(No previous convictions or cautions) Previous convictions or cautions	1.233***	0.015	0.12	S	

\*\*\*Denotes statistical significance at  $p < 0.01$ .

### *Ethnicity*

Being recorded by a police officer as coming from a Black, Asian, or Minority Ethnic (BAME) background was independently associated with approximately 39% higher odds of being sentenced to prison, than offenders who were recorded by police officers as coming from a White ethnic background. This effect was small, but statistically significant.

### *Gender*

Males were independently associated with approximately 83% higher odds of being sentenced to imprisonment, compared to females. Again, the effect was small but statistically significant.

### *Age*

Being over 18 years old was associated with at least three times the odds of being imprisoned, compared with being under 18 (juveniles). The effects of age (when grouped) were statistically significant and medium to large, however, this is because the probability of imprisonment for under 18-year-olds is very low. Each increase in

year of age was not associated with a statistically significant change in the odds of imprisonment.

#### *Nationality*

Compared with UK nationals, the odds of non-UK nationals being sentenced to prison were approximately 56% higher. This may be due to the perceived greater absconding<sup>12</sup> risk that non-UK nationals present compared with UK nationals, and because the previous criminal history of non-UK nationals may be unknown,<sup>13</sup> thus limiting practitioners' ability to conduct valid risk assessments. This effect was small, but statistically significant.

#### *Offence group*

Sentencing guidelines are clear about the sentences expected for particular crimes. Compared with violence against the person offences, each of: sexual offences; burglary; and robbery were independently associated with increased odds of being sentenced to prison. This may seem counter-intuitive, but the violence against the person category contains some of the most serious offences, such as murder. However, murder is very infrequent, and the category also contains less serious offences such as common assault. Theft/handling stolen goods, fraud and forgery, criminal damage, drug offences, other indictable<sup>14</sup> offences, indictable motoring offences, summary offences excluding motoring, and summary motoring offences were each independently associated with decreased odds of being sentenced to custody, compared with violence against the person offences. Many of the effects observed were medium and large and were all statistically significant, demonstrating the importance of offence group as a predictor of imprisonment.

#### *Previous convictions or cautions*

The odds of imprisonment were approximately 23% higher for offenders with previous convictions or cautions compared with those without. This effect was small but statistically significant. Each previous conviction or caution was associated with an approximate 4% increase in the odds of imprisonment. Although this effect was statistically significant, it was small, but increased cumulatively with each previous conviction or caution recorded.

#### *Interactions between ethnicity and gender*

Some offender characteristics may have interactive, or heightened effects on typical sentencing outcomes. In this analysis, the interactions between ethnicity and gender were of interest, because of the observation that women are underrepresented at different points in the CJS, and because previous research has demonstrated that men are more likely to be imprisoned than women for breach of a community order, under similar criminal circumstances (Hopkins et al., 2014). An interaction between gender, ethnicity and being sentenced to prison was observed (**Table 3**).

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<sup>12</sup> Foreign Nationals may be at risk of leaving England and Wales and not completing a community order, for example.

<sup>13</sup> There is no routine international data sharing of criminal history records. Therefore, the criminal history of some Foreign Nationals may be obscured.

<sup>14</sup> An indictable offence must be tried in a higher criminal court (Crown Court), and not a lower criminal court (Magistrates' Court).

**Table 3. Ethnicity effects on sentencing to prison by gender (whilst all other factors were held constant)**

Ethnicity effect	Female (OR)	Male (OR)
(White)		
BAME	1.291***	1.402***
Standard Error	0.042	0.013
Cohen's D	0.14	0.19
<b>Effect size</b>	<b>S</b>	<b>S</b>

\*\*\*Denotes statistical significance at  $p < 0.01$ .

The relative odds of imprisonment were higher for BAME male offenders than for BAME female offenders (1.402 compared with 1.291, respectively). This means the odds of BAME male offenders being sentenced to prison were around 40% higher than for White male offenders, and for BAME female offenders the odds were around 30% higher than for White female offenders. Belonging to a BAME ethnic group was therefore more strongly associated with an outcome of imprisonment for males compared to females. The ethnicity association with custodial sentences is therefore greater for males than for females (although the effect is small), or, alternatively, the gender association is greater for BAME than for White defendants. In other words, BAME males were the group most likely to receive an outcome of imprisonment, even after factors such as offence group and previous criminal history were taken into consideration. Of all groups, White females were the least likely to be sentenced to prison.

#### *Predicted probabilities*

The logistic regression formula can be used to calculate the probabilities of imprisonment for example offenders. In **Table 4**, example offenders of UK nationality, convicted of theft/ handling stolen goods or robbery, aged 25 and with two previous convictions or cautions was used to calculate the likelihood of imprisonment for males and females, and BAME and White offenders.

**Table 4. Predicted probabilities of being sent to prison for convicted male and female White and BAME defendants (UK nationals), aged 25, with two previous convictions or cautions,**

Offence group	Defendant Group	Probability of being sent to prison (%)
<b>Theft/handling stolen goods</b>	White Male	12.9
	White Female	7.5
	BAME Male	17.2
	BAME Female	10.2
<b>Robbery</b>	White Male	67.7
	White Female	53.5
	BAME Male	74.5
	BAME Female	61.6

For offenders convicted of theft/handling stolen goods, BAME males were more than twice as likely as White females to be sent to prison, under the same circumstances: each being UK nationals aged 25, with two previous convictions or cautions (17.2% probability of imprisonment compared with 7.5%). For defendants convicted of robbery, the probability of being sent to prison increased from around half (53.5%) for White females to around three-quarters (74.5%) for BAME males, under the same criminal circumstances.

## Conclusion

This analysis showed that amongst a large sample of offenders convicted in England and Wales in 2011, police-recorded ethnicity was independently associated with being sentenced to prison when offence group, criminal record, and other characteristics were held constant, although the effect was small. BAME offenders (particularly male BAME offenders) were more likely to be sentenced to prison than White offenders (particularly White female offenders), under similar criminal circumstances.

Offence group was a stronger predictor of imprisonment, with offenders convicted of violence against the person offences, sexual offences, burglary, and robbery the most likely to be imprisoned. Criminal history was also important: having previous convictions or cautions was associated with increased odds of imprisonment, with the likelihood increasing with each previous conviction or caution recorded. Nationality was also independently associated with imprisonment: non-UK nationals were more likely to be sentenced to prison than UK nationals.

This research could be repeated with more recent data, and with more factors added to the model (including more information on the seriousness of the offence committed). Additional factors which influence sentencing decisions, such as the plea (guilty or not guilty) and aggravating and mitigating circumstances, would enable a more accurate estimation of the 'ethnicity effect' on imprisonment.

## References

Hopkins, K, Light, M, and Lovbakke, J. (2014) **Analysis of Gender as a Factor associated with Custodial Sentences for Breach of a Court order**. Published as part of: **Statistics on Women and the Criminal Justice System 2013**, A Ministry of Justice publication under Section 95 of the Criminal Justice Act 1991. Available at: [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/380090/women-cjs-2013.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/380090/women-cjs-2013.pdf)

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