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Trends in associations between ethnic background and being sentenced to custody for young offenders in England and Wales between 2009 and 2016

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Introduction

Overall volumes of young people, aged 10-17 years, in custody have dropped 70% since the 2007 peak in youth proven offending from 2,909 to 877 in 2016¹. Falls have been seen across all ethnic groups, however the volumes of Black, Asian, and other minority ethnic (BAME) young people have decreased at a slower rate of 47% from 726 in 2007 to 385 in 2016. Therefore, the proportion of BAME young people in custody has increased from 25% to 44% between 2007 and 2016, although the actual number fell.

This study builds on descriptive analysis commissioned by the Lammy Review² that explored custodial outcomes for BAME young people³. It aims to show whether BAME young people were any more or less likely than their White counterparts to be sentenced to custody and whether this association varied over time. In so doing, it aims to address the role of custodial sentencing as a possible driver of historical change in volumes of young White and BAME offenders aged 10-17 in custody.

Unlike previous work³, this analysis controls for several factors that can influence sentencing decisions (i.e. offender age, gender, offence group and criminal history) allowing an assessment to be made between ethnicity and custodial sentencing under similar circumstances. Not all factors were, however, considered in the analysis (e.g. specific offence committed, offender plea or any associated mitigating or aggravating issues) and this must be taken into account when interpreting findings.

Summary of key results

The analysis of data from 2009 to 2016 found:

- Compared to White young people, their Black, Asian and Mixed ethnic equivalents were more likely to be sentenced to custody in 2016 (by 71%, 86%, and 35% respectively);
- Black young people were consistently more likely than their White counterparts to be sentenced to custody over time and for a range of specific offence groups, though the magnitude of disproportionality remained constant over time; and
- The pattern of association between ethnic background and custodial sentencing for other ethnic groups was not consistent over time.

While demonstrating consistent disproportionality in the likelihood of custody for Black and Asian young people, this alone does not appear to account for the change in BAME custodial volumes or proportions. Other factors such as custodial sentence lengths and upstream justice system drivers such as police activity, charging, prosecutions, offender plea and convictions may also play a role in accounting for these historical changes.

¹ Youth Justice Board (2017). Youth Custody Report: September 2017. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/657840/youth-custody-report-september-2017.xls

² Ministry of Justice (2017). Lammy Review: Final report. An independent review into the treatment of, and outcomes for, Black, Asian and Minority Ethnic individuals in the Criminal Justice System. <https://www.gov.uk/government/publications/lammy-review-final-report>

³ Ministry of Justice, Analytical Services (2017). Exploratory analysis of 10-17 year olds in the youth secure estate by black and other minority ethnic groups. <https://www.gov.uk/government/statistics/exploratory-analysis-of-the-youth-secure-estate-by-bame-groups>

Approach

The analysis sample was constructed using data drawn from government management information sources. An extract was obtained from the Police National Computer (PNC) recording all sentences given to each offender aged 10 to 17 convicted or cautioned⁴ along with their criminal history. Self-identified ethnicity was merged onto the PNC data from the Ministry of Justice Court Proceedings Database. There were 306,111 records from the PNC. Merging on Court Proceedings data using Surname, First Initial, Date of Birth and Court Appearance (sentencing) date yielded a match of 77% on these criteria. A bias analysis was then conducted by comparing the distribution of the self-identified ethnicity across both matched and unmatched data which showed a comparable pattern in the distribution of the observed variable. Any biasing effect from unmatched data was considered negligible.

Data were obtained for the years 2007, 2009, 2011, 2013, 2015 and 2016. The 2016 data allowed the analysis of the most recent published calendar year, while the two-year intervals between 2007 and 2015 allowed for comparing the effects to previous years⁵. While the youth custodial population peaked between 2007 and 2008, the self-identified ethnicity data recorded in youth and magistrates' courts was not of sufficient quality or completeness for inclusion in this analysis until the introduction of the LIBRA case management system in 2009. Therefore, the analyses presented here begins in 2009. Missing ethnicity for any matched individual with records from multiple years was directly coded from any year where it was not missing.

Multivariate logistic regression models were built to account for the associations between self-identified ethnicity, sex, age, offence group, previous criminal history, and being sentenced to custody, compared with being sentenced to another type of disposal including community orders, fines, out of court disposals, suspended sentence orders, or discharge. This allowed the associations between ethnicity and custody rates to be assessed under similar criminal circumstances.

Additional logistic models, with interactions between ethnicity and year, were built. These allowed for the examination of whether the probability of being sentenced to custody varied over time within ethnic group.

The ethnicity grouping in this analysis is the five point classification – White, Black, Asian, Mixed, and Chinese or Other. This is derived from the 16-category classification used within the 2001 census, which remains the standard in courts management information systems. This categorisation was used to remain consistent with the ethnicity classification used in other Ministry of Justice statistical publications.

While a number of associations were observed between the likelihood of custodial sentencing and a range of offence / offender characteristics, it is important to note that the current analysis did not take into account all factors which can be involved in making sentencing decisions. For example, the analysis controlled for seventeen broad offence groups, allowing for comparisons between offenders from different ethnic backgrounds within these groups⁶. However, there remains a range of offence

⁴ Where an offender was convicted of more than one offence at the same court hearing, the offence attracting the most severe sentence was considered to be the main offence.

⁵ Two year intervals were selected to provide a snapshot of the time trend.

⁶ These aggregated offence groups were developed drawing on the Police National Legal Database (PNLD) classification that underpins the Youth Offender Group Reconviction Scale (YOGRS).

seriousness within the offence groups⁷. For example, murder and common assault are both violence against the person offences. To partially control for this issue, the analysis separates indictable and summary violence against the person offences, though the range of seriousness in other offence groupings are not included in the modelling and there remains a range of seriousness even within indictable and summary offending.

The offence groups used in this analysis were used to summarise the range of offences young people commit. They are not directly comparable with those recorded in the court appearance data, which are used when custody rates are published in the Criminal Justice Statistics Quarterly and for other related statistics throughout Race and the Criminal Justice System 2016.

Limitations

In the merged dataset, records were dropped where the PNC data on sex⁸, or offence group was missing, or where the self-identified ethnicity from the Courts Proceeding data was not matched with a PNC record⁹. Findings are generalisable only to young people, aged 10-17, sentenced at magistrates' courts or the Crown Court in England and Wales in the years investigated.

Furthermore, while the logistic regression models allowed the associations between ethnicity and custodial sentences to be examined under similar criminal circumstances, these models cannot take into account all factors involved in sentencing. For example, they do not include the specific offence committed, offender pleas¹⁰, or any associated mitigating and aggravating factors¹¹, and this needs to be taken into account when interpreting results.

Descriptive Statistics

Without controlling for any other variables or conditions (i.e. unadjusted), custody rates varied according to a number of offender characteristics. **Table 1** shows the characteristics of sentenced offenders and the unadjusted custody rate by key characteristics across the analysed years.

In 2016, 74% of young offenders self-identified as White, while 14% identified as Black, 5% as Asian, 6% as Mixed, and 1% as Chinese or Other ethnicity. The percentage of offenders identifying as

⁷ In Statistics on Race and the Criminal Justice System 2016, patterns of offending and outcomes varied by ethnicity at the level of specific offences. Variations in the custody rates could therefore potentially reflect variations in the mix of offences across ethnicity.

⁸ 'Sex' is considered here to refer to whether someone is male or female based on their physiology, with 'gender' representing a social construct or sense of self that takes a wider range of forms. Sex rather than gender is used in this paper because this classification better reflects how individuals are generally reported in data related to the Criminal Justice System.

⁹ The proportion of records dropped for this reason in each year is as follows: 2009 18%, 2011 17%, 2013 16%, 2015 16%, 2016 20%. Additional checks for bias were conducted by comparing the distributions of offender characteristics across samples with and without missing ethnicity, sex, and offence group. This showed comparable patterns in the distributions of the observed variables, thus any biasing effect from missing data was judged to be negligible. For this reason, findings reported in this paper are robust to this missing data.

¹⁰ Plea data is largely not included in data extracts obtained from youth and magistrate court records, where the majority of youth cases are heard.

¹¹ The Youth Justice Board collects data on offending-related risks and needs; however, it is not yet technically possible to link to this information to Ministry of Justice data.

White decreased over the observed years from 84% in 2009. The percentage of Black and Asian young offenders increased over the observed years (7% to 14% and 3% to 5% respectively).

The overall rate of immediate custodial sentencing (custody rate) for the cohort of offenders in 2016 was 9%¹². The remaining 91% received another youth justice disposal such as a caution, fine, community sentence, or discharge. In the data across the observed years, custody rates remained between 8-11%, while offence volumes decreased from 2009 onwards.

Without controlling for any other variables or conditions, higher custody rates were observed for BAME young people compared with their White counterparts across all years. The highest rate of custody in 2016 was observed for young people who were Black (13%), followed by Asian (12%). The lowest was observed for those self-reporting as White (8%). Over the same years, custody rates for Black young people remained between 11-15%, while custody rates for their Asian young people remained between 10-13%. Custody rates increased between 2009 and 2011 for all ethnic groups, apart from Chinese or Other. Among the White group custody rates remained relatively stable between 8-10%.

Young people aged 10 to 14 years made up 17% of the offenders in the data for 2016, with the remaining 83% being aged 15 to 17 years. The custody rate for those aged 10 to 14 (4%) was less than half than that for 15 to 17 year olds (10%) in 2016.

Those aged 10 to 14 made up 20% of the offenders in 2009, with this figure decreasing to between 15-17% in the observed years following 2011. The custody rates remained fairly steady across all of the observed years, between 4-6% for offenders aged 10 to 14, and 9-12% for offenders aged 15 to 17.

Between 2009 and 2016, the proportion of offenders who were males increased from 84% to 88%. Custody rates in 2016 for males were five times higher than for females (10% versus 2%), while rates seen in 2009 (9% for males and 4% for females) were broadly similar in the other years.

The most common offences for offenders in the data for 2016 were summary violence against the person offences, at 17%. Possession and supply of drugs offences made up 11%, up from 8% observed in 2009. Possession of weapons also saw an increase over the observed years, from 3% in 2009 to 7% in 2016. Custody rates were highest for Acquisitive violence (30%), Burglary (domestic) (26%), and lowest for Criminal damage (2%). This was true of all the observed years in the data.

More than three-quarters (76%) of the offenders in 2016 had previous convictions or cautions. This decreased from 91% in 2009¹³. The custody rate for this group in 2016 was 11%, while the rate was 3% for those with no prior convictions or cautions. This was similar in all observed years.

¹² Custody rates stated in this report are calculated from full-year PNC data and may differ slightly from other published statistics because of variation in time frame, data source, or analytical approach.

¹³ The reductions in volumes in the youth justice system has been driven by falls in number of 10-17 year old entering the criminal justice system for the first time. For an overview of trends and drivers, see Sutherland, A. et al. (2017) An analysis of trends in first time entrants to the youth justice system. Ministry of Justice. <https://www.gov.uk/government/publications/analysis-of-trends-in-first-time-entrants-to-the-youth-justice-system>

Table 1. Unadjusted characteristics of sentenced young people and their custody rate(%): 2009-2016

		2009		2011		2013		2015		2016	
		Characteristics	Custody	Characteristics	Custody	Characteristics	Custody	Characteristics	Custody	Characteristics	Custody
		%	%	%	%	%	%	%	%	%	%
Self-identified Ethnic Group	White	84	8	80	10	78	10	76	9	74	8
	Black	7	11	10	14	11	15	12	14	14	13
	Asian	3	10	4	13	5	12	5	12	5	12
	Mixed	5	9	6	11	5	13	6	11	6	11
	Chinese or Other	1	14	1	12	1	14	1	17	1	10
Age Group	10 to 14	20	4	17	6	15	6	17	5	17	4
	15 to 17	80	9	83	11	85	12	83	11	83	10
Sex	Female	16	4	15	5	14	5	13	3	12	2
	Male	84	9	85	11	86	12	87	11	88	10
Offence Group	Absconding/bail	1	3	1	4	1	5	1	8	1	5
	Acquisitive violence	5	28	7	29	7	30	5	30	5	30
	Burglary (domestic)	5	26	6	30	5	27	4	24	3	26
	Burglary (other)	3	10	4	15	4	14	3	11	3	13
	Criminal damage	13	2	11	2	11	2	11	2	11	2
	Drug possession/supply	8	3	9	3	10	5	10	7	11	7
	Fraud and forgery	1	6	1	4	1	8	1	9	1	6
	Handling stolen goods	2	8	3	11	3	10	2	11	2	9
	Motoring offences	1	10	1	6	1	7	2	9	3	6
	Other offences	5	6	4	9	4	9	4	9	4	8
	Possession of weapons	3	10	3	12	4	14	6	15	7	16
	Public order and harassment	8	5	7	7	7	6	8	6	7	6
	Sexual offences	1	17	1	16	1	19	2	18	2	16
	Theft (non-motor)	16	5	16	8	15	9	12	7	10	5
	Vehicle-related theft	7	8	6	9	6	10	7	8	7	6
	Violence against the person (indictable)	6	20	5	19	4	23	5	22	5	19
	Violence against the person (summary)	14	4	14	6	15	6	16	5	17	5
One or more prior convictions or cautions		91	9	88	11	85	12	77	12	76	11
No prior convictions or cautions		9	3	12	4	15	4	23	4	24	3
Overall sample size		61,095	8	46,789	10	27,585	11	21,791	10	18,644	9

Percentages within group may not sum to 100 percent due to rounding.

Predicting Custodial Sentencing

In order to make more meaningful comparisons of the custody rate between offenders of different ethnic backgrounds over time, logistic regression models were built to predict receipt of a custodial sentence within year, controlling for ethnicity, age, gender, offence group and offending history¹⁴. This allowed any independent associations between ethnicity and custodial sentencing to be assessed while these other factors were held constant, hence allowing comparisons to be made under similar criminal circumstances.

The results are expressed as 'odds ratios', which are related to probability or likelihood: an odds ratio (OR) greater than one shows increased odds of being sentenced to custody, and an odds ratio of less than one shows decreased odds of being sentenced to custody^{15,16}, as compared to the reference category¹⁷. The odds ratios have been classified by magnitude as being Small (S), Medium (M) or Large (L)¹⁸. Statistical significance was assessed at the 0.01 level expressed as 'p<0.01', which means there is at most a one percent likelihood that the result was due to chance¹⁹.

Table 2 shows the results of the within year logistic regression models. Where comparisons were made between categories within factors, the reference categories are provided in parentheses.

The effects of ethnicity

All self-reported BAME ethnic groups were associated with increased odds of receiving a custodial sentence for young offenders in at least three of the five observed years, compared to the White category.

In 2016, compared with the White category, the Black, Asian, and Mixed groups were associated with 71%, 86% and 35% higher odds of being sentenced to custody respectively. There was no statistically significant difference in the odds of being sentenced to custody for offenders self-reporting as Chinese or Other, in 2016.

¹⁴ Previous convictions and cautions were entered as both a binary (yes/no) and a continuous variable (number of previous convictions or cautions).

¹⁵ Where reaching statistical significance.

¹⁶ Odds Ratios can take any value greater than zero, while 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, while a 500% increase in odds (OR of 6.0) is large, for example.

¹⁷ A reference category is the category (or value) which every other value is compared against e.g. for ethnicity, each BAME ethnicity type is compared with the White category (i.e. the reference group).

¹⁸ Odds ratios were converted into Cohen's D, a score that measures magnitude, and can be classified as Small (< 0.2), Medium (>= 0.2 to < 0.5) and Large (>= 0.5).

¹⁹ This level of significance is appropriate for the size of the samples analysed.

Table 2. Logistic regression model for the likelihood of being sentenced to custody for young people: 2009-2016

	2009		2011		2013		2015		2016	
	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude
(White)										
Black	1.55 *	M	1.65 *	M	1.64 *	M	1.67 *	M	1.71 *	M
Asian	1.50 *	M	1.83 *	M	1.27		1.65 *	M	1.86 *	M
Mixed	1.16		1.25 *	S	1.38 *	S	1.39 *	S	1.35 *	S
Chinese or Other	2.44 *	M	1.96 *	M	1.73		2.27 *	M	1.59	
(Age 10 to 14)										
Age 15 to 17	1.93 *	M	1.42 *	S	1.48 *	M	1.57 *	M	2.12 *	M
(Female)										
Male	1.75 *	M	1.75 *	M	2.06 *	M	2.54 *	L	3.27 *	L
(Violence against the person (indictable))										
Absconding/bail	0.06 *	L	0.09 *	L	0.07 *	L	0.14 *	L	0.09 *	L
Acquisitive violence	1.55 *	M	1.80 *	M	1.41 *	S	1.32 *	S	1.48 *	M
Burglary (domestic)	0.90		1.26 *	S	0.78		0.70 *	S	0.97	
Burglary (other)	0.29 *	L	0.54 *	M	0.32 *	L	0.29 *	L	0.34 *	L
Criminal damage	0.04 *	L	0.06 *	L	0.04 *	L	0.05 *	L	0.05 *	L
Drug possession/supply	0.08 *	L	0.09 *	L	0.10 *	L	0.15 *	L	0.16 *	L
Fraud and forgery	0.20 *	L	0.13 *	L	0.21 *	L	0.25 *	L	0.20 *	L
Handling stolen goods	0.20 *	L	0.33 *	L	0.21 *	L	0.22 *	L	0.17 *	L
Motoring offences	0.25 *	L	0.18 *	L	0.16 *	L	0.22 *	L	0.18 *	L
Other offences	0.10 *	L	0.17 *	L	0.15 *	L	0.15 *	L	0.16 *	L
Possession of weapons	0.39 *	L	0.53 *	M	0.54 *	M	0.52 *	M	0.66 *	M
Public order and harassment	0.13 *	L	0.21 *	L	0.16 *	L	0.15 *	L	0.17 *	L
Sexual offences	1.16		1.15		1.24		1.12		1.30	
Theft (non-motor)	0.13 *	L	0.23 *	L	0.19 *	L	0.15 *	L	0.12 *	L
Vehicle-related theft	0.21 *	L	0.25 *	L	0.21 *	L	0.18 *	L	0.14 *	L
Violence against the person (summary)	0.15 *	L	0.23 *	L	0.18 *	L	0.15 *	L	0.17 *	L
(No previous convictions or cautions)										
Previous convictions or cautions	2.35 *	M	2.99 *	L	2.71 *	L	2.63 *	L	2.91 *	L
Each additional previous conviction or caution†	1.18 *	S	1.16 *	S	1.17 *	S	1.15 *	S	1.16 *	S
Overall sample size	61,095		46,789		27,585		21,791		18,644	

* Denotes statistical significance at $p < 0.01$; Magnitude is shown only for statistically significant effects.

† For continuous data such as 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 additional previous conviction or caution).

Over time, the analysis shows a consistently higher association of Black young people receiving a custodial sentence compared to their White counterparts. The higher odds between 2009 and 2016, range from 55% more likely to 71% more likely respectively. The analysis also finds generally consistent higher odds of custodial sentencing for Asian young people, though the magnitude varies over time and, indeed, there was no effect of being Asian in 2013.

The analysis found associations of small magnitude of having Mixed ethnicity from 2011 onwards. An inconsistent pattern was observed for the Chinese or Other group over time.

The effects of other characteristics

Age

In 2016, offenders aged 15 to 17 were more than two times more likely than 10 to 14 year olds to be sentenced to custody. This effect remained sizeable between 2009 and 2016, though it did drop appreciably in 2011.

Sex²⁰

In 2016, young males were associated with 3.3 times higher odds of being sentenced to custody compared to their female counterparts. The association of sex on custodial sentencing has increased over time between 2009 and 2016. The analysis shows an upward trend in the magnitude from young males having a 75% greater chance of being sentenced to custody in 2009.

Offence group

In 2016, compared to indictable Violence against the Person offences, all but three offence groups had statistically significant lower odds of being sentenced to custody. Burglary (domestic) and Sexual offences had no statistically significant difference, while Acquisitive violence had 48% higher odds. Where the odds were lower, the difference in odds was always large in magnitude, apart from Possession of weapons where it was medium. The odds of a custodial sentence for a Possession of weapons has changed from being 61% less likely than indictable violence against the person offences in 2009 to 34% less likely in 2016.

Previous convictions or cautions

In 2016, the odds of being sentenced to custody were almost three times higher for young offenders with previous convictions or cautions compared with those without. The odds of receiving a custodial sentence increase with the number of prior convictions or cautions; the analysis found that the odds increased by about 16% for each prior conviction or caution. This would translate into a roughly 111% increase in the likelihood of receiving a custodial sentence for someone with five prior convictions or cautions.

²⁰ 'Sex' is considered here to refer to whether someone is male or female based on their physiology, with 'gender' representing a social construct or sense of self that takes a wider range of forms. Sex rather than gender is used in this paper because this classification better reflects how individuals are generally reported in data related to the Criminal Justice System.

Over time, having a previous conviction or caution typically had a large effect on custodial sentencing. Young people with any prior convictions or cautions were about 2.4 times more likely to be sentenced to custody in 2009. Similarly, the association of each additional conviction or caution on the odds of a custodial sentence ranged between 15-18% over time.

Ethnicity and sentencing over time

The change in the probability of receiving a custodial sentence based on ethnicity over the observed years was of particular interest. Therefore, in order to investigate this, logistic regression models including the interaction of ethnicity and year were built. The changes in the effect of each BAME group relative to the White category were explored to identify where changes in successive observed years were significantly different from one another. That is, this set of models test whether the effect of ethnicity on custodial sentencing changed over time. See Annex A for the full set of interaction models described here.

Table 3. Probability of being sentenced to custody for 15-17 year old males with no prior conviction committing a possession of weapons offence by self-defined ethnic group: 2009-2016

	2009	2011	2013	2015	2016
White	3.0%	3.5%	3.8%	3.9%	3.6%
Black	4.5%	5.4%	6.0%	7.0%	6.7%
Asian	4.4%	5.9%	4.6%	6.9%	7.0%
Mixed	3.4%	4.2%	5.1%	5.7%	5.1%
Chinese or Other	6.9%	6.5%	6.2%	8.9%	5.9%

To demonstrate the time by ethnicity effects, the analysis calculated the probability of being sentenced to custody for each ethnic group over time, holding age, gender, offence and offending history at fixed values. The probabilities shown in **Table 3** are for a 15-17 year old male with no prior conviction committing a possession of weapons offence in each of the observed years. These characteristics were selected for example only.

Table 4 shows tests of year-to-year changes in the probability of being sentenced to custody within each ethnic group relative to the white group, as well as the year-to-year changes for the white group itself.

Table 4. Significance of change between years, for probability of being sentenced to custody by self-defined ethnic group: 2009-2016

	2009 to 2011	2011 to 2013	2013 to 2015	2015 to 2016
White	<i>sig. increase</i>	---	---	---
Black*	---	---	---	---
Asian*	---	<i>sig. decrease</i>	<i>sig. increase</i>	---
Mixed*	---	---	---	---
Chinese or Other*	---	---	---	---

Sig. denotes statistically significant change at $p < 0.01$.

* Relative to White group

Results show very little change between years examined in the probability of being sentenced to custody for each ethnic group relative to the White group. White young people experienced a significant increase in the probability of being sentenced to custody between 2009 and 2011. The probability of being sentenced

to custody for the Asian group relative to the White group dropped between 2011 and 2013, before increasing between 2013 and 2015. Given that the likelihood of receiving a custodial sentence on the whole changes little over time, this suggests that the increased proportion of BAME young people in custody may be due to other factors.

Ethnicity and sentencing within specific offence groups

While overall, this analysis found little change over time in the association between ethnicity and custodial sentencing, trends within specific offences may be masked. Therefore, further work was conducted to explore the extent of the association between ethnicity and custodial sentencing within the specific offence groups Violence against the Person (indictable), Drugs – Possession & supply, and Possession of Weapons. These offence groups were chosen as they represent a wide range of youth offending behaviour which can result in custody with reasonable frequency²¹. In each case, a separate logistic regression model was built.

Table 5 shows the results of the specific offence group regression models and the odds of receiving custodial sentences for all BAME groups, compared to White young people, in each observed year, under similar criminal circumstances. That is, after adjusting for age, sex, and previous convictions or cautions. Where statistically significant, the magnitude is also shown. The results show that the association between ethnicity and receiving a custodial sentence varied within the specific offence groups and across the observed years.

Violence against the person (indictable)

In 2016, Black and Asian young people were more likely to be sentenced to custody for indictable violence against the person offences compared to their White counterparts (3 and 4.3 times more likely respectively). These associations are both large in magnitude. There was no statistically significant evidence of difference in odds for the Mixed group. The Chinese or Other ethnic group was removed from the analysis due to a small volume of Chinese or Other ethnic being convicted of indictable violence against the person offences.

Over time, Black young people were associated with higher odds of receiving custodial sentences, compared to their White equivalents, in all of the observed years. In 2009 and 2011, the odds were 2.4 times more likely and 3.8 times more likely, respectively, compared to their White counterparts. The association magnitude remained large from 2011 onwards. The analysis also found Asian young people to have higher odds of receiving custodial sentences compared to the White group in 2011 and 2015. In year-on-year comparisons, shown in **Table 6**²², the analysis found no difference in these odds over time. Indeed, the only significant change was the White ethnic group experiencing a significant drop in the likelihood of a custodial sentence between 2009 and 2011.

²¹ It should be noted, however, that each of the offence groups covers a wide range of offences. In *Statistics on Race and the Criminal Justice System 2016*, patterns of offending and outcomes varied by ethnicity at the level of specific offences. Variations in the custody rates could therefore potentially reflect variations in the mix of offences across ethnicity.

²² Annexes B, C and D contain a full set of offence specific models showing ethnicity by year interaction effects.

Table 5. Effect of ethnicity on custodial sentencing for specific offences by self-defined ethnic group: 2009-2016

	2009		2011		2013		2015		2016	
	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude	Odds Ratio	Magnitude
<i>Violence Against the Person (indictable)**</i>										
(White)										
Black	2.4 *	M	3.8 *	L	3.7 *	L	3.1 *	L	3.0 *	L
Asian	1.3		2.0 *	M	1.7		2.4 *	M	4.3 *	L
Mixed	1.6		1.5		1.9		1.9		1.4	
<i>Drugs - Possession & Supply</i>										
(White)										
Black	3.0 *	L	3.7 *	L	3.1 *	L	2.3 *	M	2.1 *	M
Asian	2.3 *	M	2.7 *	L	3.1 *	L	2.0		1.2	
Mixed	2.5 *	L	2.0		3.1 *	L	2.2 *	M	1.3	
Chinese or Other	3.3		5 *	L	7.7 *	L	4		0.8	
<i>Possession of Weapons**</i>										
(White)										
Black	2.3 *	M	2.1 *	M	2.4 *	M	2.8 *	L	2.7 *	L
Asian	2.0		2.3		1.1		1.8		2.3	
Mixed	2.0		2.5 *	L	1.8		3.2 *	L	2.1	

* Denotes statistical significance at $p < 0.01$; Effect Size is shown only for statistically significant effects

** The Chinese or Other ethnic group was removed from the analysis due to a small volume of Chinese or Other ethnic being convicted of indictable violence against the person and possession of weapons offences.

Table 6. Significance of change between years, for probability of being sentenced to custody for specific offence groups by self-defined ethnic group: 2009-2016*

	2009 to 2011	2011 to 2013	2013 to 2015	2015 to 2016
<i>Violence Against the Person (indictable)**</i>				
White	<i>sig. decrease</i>	---	---	---
Black	---	---	---	---
Asian	---	---	---	---
Mixed	---	---	---	---
<i>Drugs - Possession & Supply</i>				
White	---	---	<i>sig. increase</i>	---
Black	---	---	---	---
Asian	---	---	---	---
Mixed	---	---	---	---
Chinese or Other	---	---	---	---

Sig. denotes statistically significant change at $p < 0.01$.

* Possession of Weapons offences are excluded, as no significant change was observed for any ethnic group.

**The Chinese or Other ethnic group was removed due to a small volume of Chinese or Other ethnic being convicted of indictable violence against the person offences.

Drugs – possession & supply

For possession and supply of drug offences in 2016, statistically significant higher odds of receiving custodial sentences were observed for Black young people compared with their White counterparts. The analysis found no association of ethnicity and custodial sentencing for other BAME groups in 2016.

Over time, Black young people were more likely to receive a custodial sentence for possession and supply of drug offences compared to their White counterparts. The higher odds peaked in 2011 at 3.7 times more likely than their White counterparts, and were their lowest at 2.1 times more likely in 2016.

Similarly, the Asian ethnic group, when compared to their White equivalents, was associated with significantly higher odds in all observed years between 2009 and 2013, from 2.3 times more likely to 3.1 times more likely respectively. No significant difference was observed in 2015 and 2016.

Higher odds of receiving custodial sentences, compared to the White ethnic group, were also observed for the Mixed ethnicity group in 2009, who were 2.5 times more likely to receive custody. Significantly higher odds were also seen for this group in 2013 and 2015. There was no difference in the odds of receiving a custodial sentence for the Chinese or Other ethnic group in 2009, though higher odds were observed in 2011 and 2013 (5 times and 7.7 times more likely respectively).

The White ethnic group was associated with a significant increase in the probability of being sentenced to custody for possession and supply of drug offences between 2013 and 2015. No significant change over time was observed for any other ethnic group.

Possession of weapons

Young Black people who committed a possession of weapons offence in 2016 were 2.7 times more likely than their White counterparts to receive a custodial sentence. The analysis otherwise found no difference between ethnicity and custodial sentencing for the other ethnic groups in this year. Over time, Black young people were associated with more than twice the odds of being sentenced to custody compared to their White equivalents in all observed years. Mixed ethnic young people were more than twice as likely to be sentenced to custody compared to the White group in 2011 and in 2015. There was no significant

difference for Asian young people in any observed year. No significant change over time was observed for any ethnic group²³.

Conclusion

This study aimed to address the role of custodial sentencing rates as a driver of historical change in the proportions of White and BAME young people aged 10-17 in custody. Therefore, the analysis addressed whether there was an association between ethnicity and custodial sentencing and whether any observed ethnicity effect changed over time. While the analysis allowed the associations between ethnicity and custodial sentences to be assessed under similar criminal circumstances, it could not take into account all factors involved in sentencing. For example, the analysis did not include offender plea, the specific offence committed or any associated mitigating and aggravating factors and this needs to be taken into account when interpreting results.

The logistic regression analysis in this study showed that in 2016, self-reporting as Black, Asian, or Mixed was associated with 71%, 86% and 35% higher odds, respectively, of being sentenced to custody compared to the White category. These results varied over the study period, however.

Between 2009 and 2016, there was a consistent significant positive association between being Black or Asian on the likelihood of receiving a custodial sentence compared to being White. The analysis further revealed virtually no significant change in the odds of custodial sentencing for each BAME group relative to White group over time.

The analysis also showed that the association between ethnic group and youth custodial sentencing varied between groups of offences. Higher odds of custodial sentences were observed in 2016 for Black and Asian ethnic groups, compared to their White counterparts, who committed indictable violence against the person offences. Identifying as Black in 2016 was also associated with higher odds for possession and supply of drugs offences, and possession of weapons offences. There were consistently higher odds of receiving custodial sentences for Black young people in the observed offences over time, while associations for other ethnic groups varied. However, no significant change in the odds of a custodial sentence was observed between successive years for any BAME group for the specific groups of offences analysed.

Taken together, the results presented in this paper suggest that custodial sentencing is more likely for Black and Asian young people compared with their White counterparts, across all years and offence groups, and this disproportionality has been largely constant over time. This alone, therefore, cannot explain the sharp increase in the proportion of BAME young people in custody observed over the study period. It seems that other factors may influence the change in the ethnic makeup of the youth custodial population as well as the overall custodial volumes. These include up-stream factors, such as trends in police activity, charging, prosecutions, offender plea, convictions, or other drivers associated with ethnicity such as rates of crime committed by young people, crime mix and sentence length.

²³ The Chinese or Other ethnic group was removed from the analysis due to a small volume of Chinese or Other ethnic being convicted of possession of weapons offences.

Annex A: Logistic regression models for the likelihood of being sentenced to custody for young people aged 10-17, examining ethnicity by year interactions.

		Reference Year				
		2009	2011	2013	2015	2016
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Year	2009	---	0.85 *	0.78 *	0.75 *	0.82 *
	2011	1.18 *	---	0.93	0.88 *	0.97
	2013	1.28 *	1.08	---	0.95	1.05
	2015	1.34 *	1.14 *	1.05	---	1.10
	2016	1.21 *	1.03	0.95	0.91	---
Ethnicity	(White)					
	Black	1.55 *	1.57 *	1.63 *	1.84 *	1.92 *
	Asian	1.51 *	1.72 *	1.24	1.82 *	2.03 *
	Mixed	1.16	1.22 *	1.36 *	1.48 *	1.44 *
	Chinese or Other	2.41 *	1.91 *	1.69	2.38 *	1.68
Ethnicity & Year Interaction	(White*Year)					
	Black*2009	---	0.98	0.95	0.84	0.80
	Black*2011	1.02	---	0.97	0.86	0.82
	Black*2013	1.05	1.04	---	0.89	0.85
	Black*2015	1.19	1.17	1.13	---	0.96
	Black*2016	1.24	1.22	1.18	1.05	---
	Asian*2009	---	0.87	1.22	0.83	0.74
	Asian*2011	1.14	---	1.39 *	0.95	0.85
	Asian*2013	0.82	0.72 *	---	0.68 *	0.61 *
	Asian*2015	1.20	1.05	1.47 *	---	0.90
	Asian*2016	1.35	1.18	1.64 *	1.12	---
	Mixed*2009	---	0.95	0.85	0.78	0.81
	Mixed*2011	1.05	---	0.89	0.82	0.85
	Mixed*2013	1.18	1.12	---	0.92	0.95
	Mixed*2015	1.27	1.22	1.08	---	1.03
	Mixed*2016	1.24	1.18	1.06	0.97	---
	Chinese or Other*2009	---	1.26	1.43	1.01	1.43
Chinese or Other*2011	0.79	---	1.13	0.80	1.14	
Chinese or Other*2013	0.70	0.88	---	0.71	1.00	

	Chinese or Other*2015	0.99	1.24	1.41	---	1.42
	Chinese or Other*2016	0.70	0.88	1.00	0.71	---
Age Group	(10 to 14)					
	15 to 17	1.72 *	1.72 *	1.72 *	1.72 *	1.72 *
Sex	(Female)					
	Male	1.95 *	1.95 *	1.95 *	1.95 *	1.95 *
Offence Group (Modified Offender Group Reconviction Scale)‡	(Possession of weapons)					
	Absconding/bail	0.16 *	0.16 *	0.16 *	0.16 *	0.16 *
	Acquisitive violence	3.01 *	3.01 *	3.01 *	3.01 *	3.01 *
	Burglary (domestic)	1.85 *	1.85 *	1.85 *	1.85 *	1.85 *
	Burglary (other)	0.70 *	0.70 *	0.70 *	0.70 *	0.70 *
	Criminal damage	0.09 *	0.09 *	0.09 *	0.09 *	0.09 *
	Drug possession/supply	0.20 *	0.20 *	0.20 *	0.20 *	0.20 *
	Fraud and forgery	0.38 *	0.38 *	0.38 *	0.38 *	0.38 *
	Handling stolen goods	0.46 *	0.46 *	0.46 *	0.46 *	0.46 *
	Motoring offences	0.41 *	0.41 *	0.41 *	0.41 *	0.41 *
	Other offences	0.27 *	0.27 *	0.27 *	0.27 *	0.27 *
	Public order and harassment	0.31 *	0.31 *	0.31 *	0.31 *	0.31 *
	Sexual offences	2.34 *	2.34 *	2.34 *	2.34 *	2.34 *
	Theft (non-motor)	0.33 *	0.33 *	0.33 *	0.33 *	0.33 *
	Vehicle-related theft	0.41 *	0.41 *	0.41 *	0.41 *	0.41 *
	Violence against the person - Indictable	1.95 *	1.95 *	1.95 *	1.95 *	1.95 *
Violence against the person - Summary	0.34 *	0.34 *	0.34 *	0.34 *	0.34 *	
(No previous convictions or cautions)						
Previous convictions or cautions		2.68 *	2.68 *	2.68 *	2.68 *	2.68 *
Each additional previous conviction or caution†		1.16 *	1.16 *	1.16 *	1.16 *	1.16 *

* Denotes statistical significance at $p < 0.01$

† For continuous data such as 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 additional previous conviction or caution).

‡ These aggregated offence groups were developed drawing on the Police National Legal Database (PNLD) classification that underpins the Youth Offender Group Reconviction Scale (YOGRS). The resulting offence groups are not directly comparable with those recorded in the court appearance data, which are used when custody rates are published in the Criminal Justice Statistics Quarterly and for other related statistics.

Annex B: Logistic regression models for the likelihood of being sentenced to custody for young people aged 10-17 for indictable violence against the person offences. Shown is the ethnicity by year interaction.

		Reference Year				
		2009	2011	2013	2015	2016
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
	2009	---	1.25 *	1.00	0.87	1.09
	2011	0.80 *	---	0.81	0.70 *	0.88
	2013	1.00	1.24	---	0.87	1.09
	2015	1.15	1.43 *	1.15	---	1.25
	2016	0.91	1.14	0.92	0.80	---
	(White)					
Ethnicity	Black	2.36 *	3.68 *	3.95 *	3.12 *	3.08 *
	Asian	1.24	1.94 *	1.70	2.40 *	4.66 *
	Mixed	1.61	1.49	1.99	1.92	1.37
	Chinese or Other	0.74	0.00	1.59	5.78	6.58
	(White*Year)					
Ethnicity & Year Interaction**	Black*2009	---	0.64	0.60	0.76	0.77
	Black*2011	1.56	---	0.93	1.18	1.20
	Black*2013	1.67	1.07	---	1.27	1.28
	Black*2015	1.32	0.85	0.79	---	1.01
	Black*2016	1.31	0.84	0.78	0.99	---
	Asian*2009	---	0.64	0.73	0.52	0.27 *
	Asian*2011	1.57	---	1.14	0.81	0.42
	Asian*2013	1.37	0.87	---	0.71	0.36
	Asian*2015	1.93	1.23	1.41	---	0.51
	Asian*2016	3.76 *	2.40	2.74	1.94	---
	Mixed*2009	---	1.09	0.81	0.84	1.18
	Mixed*2011	0.92	---	0.75	0.77	1.09
	Mixed*2013	1.23	1.34	---	1.03	1.45
Mixed*2015	1.19	1.29	0.97	---	1.40	

	Mixed*2016	0.85		0.92		0.69		0.71	---
Age group	(10 to 14)								
	15 to 17	2.77	*	2.77	*	2.77	*	2.77	*
Sex	(Female)								
	Male	2.64	*	2.64	*	2.64	*	2.64	*

(No previous convictions or cautions)

Previous convictions or cautions	1.85	*	1.85	*	1.85	*	1.85	*	1.85	*
Each additional previous conviction or caution†	1.20	*	1.20	*	1.20	*	1.20	*	1.20	*

* Denotes statistical significance at $p < 0.01$

** Chinese or Other removed due to small volumes

† For continuous data such as 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 additional previous conviction or caution).

Annex C. Logistic regression model for the likelihood of being sentenced to custody for young people aged 10-17 for possession and supply of drug offences. Shown is the ethnicity by year interaction.

		Reference Year				
		2009	2011	2013	2015	2016
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
	2009	---	1.17	0.88	0.43 *	0.40 *
	2011	0.86	---	0.75	0.37 *	0.34 *
	2013	1.14	1.33	---	0.49 *	0.45 *
	2015	2.34 *	2.73 *	2.06 *	---	0.93
	2016	2.51 *	2.93 *	2.21 *	1.07	---
Ethnicity	(White)					
	Black	3.11 *	3.71 *	3.21 *	2.24 *	2.06 *
	Asian	2.41 *	2.66 *	3.35 *	1.90	1.16
	Mixed	2.57 *	2.04	3.23 *	2.21 *	1.28
	Chinese or Other	3.52	5.04 *	8.19 *	3.19	0.73
Ethnicity & Year Interaction	(White*Year)					
	Black*2009	---	0.84	0.97	1.39	1.51
	Black*2011	1.19	---	1.16	1.66	1.80
	Black*2013	1.03	0.87	---	1.44	1.56
	Black*2015	0.72	0.60	0.70	---	1.09
	Black*2016	0.66	0.55	0.64	0.92	---
	Asian*2009	---	0.91	0.72	1.27	2.09
	Asian*2011	1.10	---	0.79	1.40	2.30
	Asian*2013	1.39	1.26	---	1.77	2.90
	Asian*2015	0.79	0.71	0.57	---	1.64
	Asian*2016	0.48	0.43	0.35	0.61	---
	Mixed*2009	---	1.26	0.80	1.16	2.01
	Mixed*2011	0.79	---	0.63	0.92	1.59
Mixed*2013	1.26	1.59	---	1.46	2.53	

	Mixed*2015	0.86		1.09		0.68		---		1.73	
	Mixed*2016	0.50		0.63		0.40		0.58		---	
	Chinese or Other*2009	---		0.70		0.43		1.10		4.82	
	Chinese or Other*2011	1.43		---		0.61		1.58		6.90	
	Chinese or Other*2013	2.33		1.63		---		2.57		11.22	
	Chinese or Other*2015	0.91		0.63		0.39		---		4.37	
	Chinese or Other*2016	0.21		0.14		0.09		0.23		---	
Age group	(10 to 14)										
	15 to 17	2.77	*	2.77	*	2.77	*	2.77	*	2.77	*
Sex	(Female)										
	Male	2.64	*	2.64	*	2.64	*	2.64	*	2.64	*
	(No previous convictions or cautions)										
	Previous convictions or cautions	1.24		1.24		1.24		1.24		1.24	
	Each additional previous conviction or caution†	1.09	*	1.09	*	1.09	*	1.09	*	1.09	*

* Denotes statistical significance at $p < 0.01$

† For continuous data such as 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 additional previous conviction or caution).

Annex D. Logistic regression model for the likelihood of being sentenced to custody for young people aged 10-17 for possession of weapons offences. Shown is the ethnicity by year interaction.

		Reference Year							
		2009	2011	2013	2015	2016			
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio			
	2009	---	0.92	0.57 *	0.58 *	0.51 *			
	2011	1.09	---	0.62 *	0.63 *	0.55 *			
	2013	1.75 *	1.61 *	---	1.01	0.89			
	2015	1.74 *	1.60 *	0.99	---	0.88			
	2016	1.97 *	1.81 *	1.13	1.14	---			
	(White)								
Ethnicity	Black	2.22 *	2.42 *	2.29 *	2.84 *	2.62 *			
	Asian	1.97	2.62 *	1.05	1.78	2.18			
	Mixed	1.91	2.87 *	1.68	3.16 *	2.14			
	Chinese or Other	2.26	0.00	2.08	2.96	1.54			
	(White*Year)								
Ethnicity & Year Interaction**	Black*2009	---	0.92	0.97	0.78	0.84			
	Black*2011	1.09	---	1.05	0.85	0.92			
	Black*2013	1.04	0.95	---	0.81	0.87			
	Black*2015	1.28	1.18	1.24	---	1.08			
	Black*2016	1.18	1.09	1.14	0.92	---			
	Asian*2009	---	0.75	1.87	1.10	0.90			
	Asian*2011	1.33	---	2.50	1.47	1.20			
	Asian*2013	0.53	0.40	---	0.59	0.48			
	Asian*2015	0.91	0.68	1.70	---	0.82			
	Asian*2016	1.11	0.83	2.08	1.23	---			
	Mixed*2009	---	0.67	1.14	0.60	0.90			
Mixed*2011	1.50	---	1.70	0.91	1.34				
Mixed*2013	0.88	0.59	---	0.53	0.79				

	Mixed*2015	1.65		1.10		1.88		---		1.48
	Mixed*2016	1.12		0.75		1.27		0.68		---
Age group	(10 to 14)									
	15 to 17	2.77	*	2.77	*	2.77	*	2.77	*	2.77
Sex	(Female)									
	Male	2.64	*	2.64	*	2.64	*	2.64	*	2.64

(No previous convictions or cautions)

Previous convictions or cautions	3.86	*	3.86	*	3.86	*	3.86	*	3.86	*
Each additional previous conviction or caution†	1.24	*	1.24	*	1.24	*	1.24	*	1.24	*

* Denotes statistical significance at $p < 0.01$

** Chinese or Other removed due to small volumes

† For continuous data such as 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 additional previous conviction or caution).