

Ethnic disproportionality in remand and sentencing in the youth justice system

Analysis of administrative data

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Foreword

As Chair of the Youth Justice Board, I have ensured that one of our strategic objectives is to address over-representation within the youth justice system. We committed to complete this research in our business plan for 2020/21¹.

It uses two years of the YJB's case management and assessment data to better understand the extent of ethnic disproportionality in remand and sentencing outcomes². In commissioning this research, our aim was to expand our understanding of ethnic disproportionality and find out where and why it exists. We want to use that information to support our efforts to explain or reform disparity in the system.

David Lammy MP, within his review in 2017³, considered the youth justice system his 'biggest concern'. At this time, the proportions of Black, Asian and Minority Ethnic children in Custody was 41%, as of August 2020 it had increased to 52%. In August 2020, we published 'exploring racial disparity: how it affects children in their early years and within the youth justice system'⁴. This identified that custody rates for both remand and sentence remain disproportional, particularly for Black children.

We therefore felt it was incumbent to understand this disproportionality and to utilise our collected data in doing so. It is of equal note that we conducted this research in the context of the murder of George Floyd in the USA, and health inequalities arising from COVID-19, as highlighted by Public Health England analysis⁵.

While the scope of this report is limited by the data available, it gives us a more nuanced picture of the extent of disproportionality. For example, we now know that once demographic and offence-related factors were taken into account, disproportionality in some court sentence outcomes persisted for Black children but not for other Minority Ethnic groups.

The research also identifies other areas where disproportional outcomes cannot be explained by offence-related and demographic factors. These areas require further exploration as does the influence of a remand outcome on a sentencing outcome, and the role of assessments of risk and vulnerability.

The report also shows Black, Asian and Minority Ethnic children are less likely to get a formal out-of-court disposal. As such, since commissioning this report, we have started collecting data from youth offending teams on community resolutions. This is to expand our understanding of disproportionality in this

¹ <https://www.gov.uk/government/publications/yjb-business-plan-2020-to-2021>

² For the purposes of the research, "sentencing outcomes" includes formal out-of-court disposals

³ <https://www.gov.uk/government/publications/lammy-review-final-report>

⁴ <https://www.gov.uk/government/news/to-end-racial-disparity-we-require-your-absolute-focus>

⁵ The Lammy Review: An independent review into the treatment of, and outcomes for, Black, Asian and Minority Ethnic individuals in the Criminal Justice System, page 4, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf

area. Also, from April 2021, we will collect extra AssetPlus data. This will give us a richer understanding of the differences between children of different ethnicities in the youth justice system that might affect outcomes.

This research helps us identify the specific areas where we can work with partners across the system to focus our collective efforts. Its insights are however constrained to those parts of the system within the scope of our data. What this means is that other areas where disproportionality may occur, such as arrests, plea, or custodial placements, are not covered in this report. It also does not provide any evidence with regards to any actors, agencies, or mechanisms through which the factors included might influence outcomes. What is clear though, is that this is a system wide issue and I am asking for all of the stakeholders involved to make a concerted and coordinated effort to address it.

Keith Fraser

Chair of the Youth Justice Board

Executive Summary

Background

1. The Youth Justice Board (YJB) commissioned analysis of case management and assessment data to measure and explain the disproportionality in remand and sentencing outcomes (including out-of-court disposals) for ethnic minority children compared to White children in England and Wales.
2. This research has two key aims. First, to understand the extent of ethnic disproportionality in outcomes and second, to assess how far this observed disproportionality can be explained by the demographic characteristics of children (such as age, gender and residence), offence-related factors or practitioner assessments of children.
3. The project focuses narrowly on disproportionality in remand decisions and sentencing. However, disproportionality can also occur in other stages of the process: arrests, decisions to charge, acquittals, etc. The 2018-19 Youth Justice Statistics⁶ show that there are differences in arrest rates between ethnic groups. In 2019, Black children were just over four times more likely to be arrested compared to White children, while children with a Mixed ethnicity were twice as likely.

Method

4. The analysis uses two data sources: youth offending team (YOT) case management system records and AssetPlus assessments recorded by YOTs between October 2017 and December 2019 and submitted to the YJB quarterly. Case data includes gender, ethnicity, age, local area, offence history, nature of the offence and offence seriousness. It also includes case information on outcome, remand decision, court type, sentence and sentence length. AssetPlus data includes information such as the likelihood of reoffending, safety and wellbeing assessments, concerns, risk of serious harm (ROSH) score, care history, etc.
5. For the period under investigation, the data extract from the YOT case management systems included records for 89,679 children. Out of these, 24,544 children had a remand outcome recorded and 62,269 children were sentenced⁷ or received an out-of-court disposal. In addition, for the same time period, AssetPlus records included 95,644 assessments pertaining to 35,766 children.

⁶ <https://www.gov.uk/government/statistics/youth-justice-statistics-2018-to-2019>

⁷ This included custodial sentences, YROs and first-tier sentences. Tables 1 and 2 in Chapter 1 include the particular types of outcomes that are included in each category.

6. The analysis starts by presenting the distribution of the factors, highlighted in the previous paragraph, for each ethnicity. We assess the differences between White and Asian, Black, Mixed ethnicity children and children from Other ethnicities, respectively.
7. We continue by assessing the influence of these factors on remand and sentencing outcomes (including out-of-court-disposals) through multivariate statistical analyses. These are presented in Chapter 2 and the methodology is described in the Technical Note.
8. This is followed, in Chapter 3, by further multivariate statistical analyses, to ascertain whether the disproportionality observed in remand and sentencing decisions is maintained when taking into account these factors.
9. The main findings are summarised below, followed by a set of overarching conclusions.

Summary of main findings

Summary of ethnicities

10. Compared to White children convicted of an offence, all minority ethnic groups are more likely to be male. They are convicted of offences with a higher average severity, offences that are more likely to involve a knife, and their cases are more likely to be heard at Crown Court. Black and Mixed ethnicity children have on average more previous orders (court sentences/disposals) than White children, whereas Asian and children of Other ethnicities receive fewer.
11. Practitioner assessments suggest Black and Mixed ethnicity children are assessed as both higher risk and more vulnerable. Black children are most likely, and children of Mixed ethnicity are second most likely, to be assessed as at a high likelihood of reoffending, at risk of serious harm and have greater concerns over their safety and wellbeing. Findings suggest fewer differences for Asian and Other ethnic groups, however, Asian children were the least likely to have serious concerns raised over their safety and wellbeing and their likelihood of reoffending.

Remand

12. Children were more likely to receive custodial remand⁸ if they were male, older, non-local residents, committed more serious offences, or were judged as having a higher likelihood of reoffending, a greater risk of serious harm or safety and wellbeing concerns or their cases were heard at Crown Court.
13. All minority ethnic groups were more likely to receive custodial remand and less likely to receive community remand⁹ compared to White children. In most cases these disproportionate outcomes could be largely explained by differences in offending profiles and demographics.

⁸ Custodial remand refers exclusively to being remanded to Youth Detention Accommodation. This report uses the classifications included in the YJB Data Recording Requirements. We present these in Table 1 in Chapter 1.

⁹ Please refer to Chapter 1 for the classification of outcomes.

14. However, once we controlled for demographics and offence-related factors, children of Mixed ethnicity and Black children remained more likely to get custodial remand (5 and 7 percentage points¹⁰, respectively), and Black children remained less likely to get community remand compared to White children (9 percentage points¹¹). The remaining disproportionality could be partially or entirely explained by differences in practitioner assessments of risk and wellbeing of Black and Mixed ethnicity children compared to White children.
15. However, even after taking into account the influence of offending, demographics, and practitioner assessments, Black children remained less likely to receive community remand (8 percentage points¹²).

Sentences (including out-of-court disposals)

16. Children were more likely to receive custodial sentences if they were: male, older, non-local residents, committed more serious or knife-involved offences, or had more previous orders or higher likelihood of reoffending. Custodial sentences were also more likely if they were judged as at higher risk of serious harm, given a custodial sentence proposal, had been remanded into custody or their cases were heard at Crown Court.
17. Compared to White children, in almost all cases, Black, Asian and Mixed ethnic groups were more likely to receive harsher sentences. Disproportionality for children of Other ethnicities was only observed for out-of-court-disposals which they were less likely to receive compared to White children. Demographics and offence-related factors (such as court type, offence and age) accounted for much of the disproportionality in legal outcomes.
18. However, the reduced likelihood of Black, Asian and Mixed ethnicity children receiving an out-of-court-disposal compared to White children could not be fully accounted for by differences in their demographic and offending profile or by the YOT they reside in.
19. Differences in demographics and offence-related factors could only partly explain why Black children received harsher outcomes. They remained between 2 and 10 percentage points less likely to receive a first-tier outcome¹³ and between 2 and 8 percentage points more likely to receive a custodial sentence vs a Youth Rehabilitation Order (YRO) after accounting for differences in all factors. Disproportionality in remand outcomes for Black children appears to contribute to their disproportionate likelihood of receiving custodial sentences. Differences in practitioner assessments of Black children, also appear to contribute to their harsher outcomes. The extent of disproportionality for Black children could not be fully explained by the available variables.

¹⁰ The analysis shows that the true value of the difference is between 1 and 9 percentage points for children of Mixed ethnicity and, between 3 and 11 percentage points for Black children. This value assumes a 95% Confidence Interval.

¹¹ With a 95% Confidence Interval, the true value will be between 5 and 13 percentage points.

¹² With a 95% Confidence Interval, the true value will be between 2 and 14 percentage points.

¹³ Please refer to Chapter 1 for the classification of outcomes.

Overarching conclusions

- For most outcomes and for most ethnicities, the disproportionality that is initially observed is explained when demographics and offence-related factors are taken into account. *Differences that are observed in the types of outcomes or their harshness, can in many cases, be explained by the differences in demographic characteristics, offences and offence history, location (YOT) and court type.* This suggests that, in these cases, the remand and sentencing decision does not add to the disproportionality. This does not mean that ethnicity does not have an impact on the outcomes as any disproportionality originating earlier in the process might be perpetuated. We discuss this further below.
- Taking into account demographics and offence-related factors does not always explain disproportionality. There are three disproportional outcomes that such factors (YOT, type of offence, offence history, court type and demographic characteristics) cannot fully explain. We find that:
 - There are *more restrictive remand outcomes* for Black and Mixed ethnicity children;
 - There are *fewer out-of-court disposals* for Black, Asian and Mixed ethnicity children;
 - There are harsher court sentences for Black children.
- However, in some of these cases, differences in remand decisions and/or practitioner-assessed factors further explain the disproportionality.
 - We show that remand decisions are disproportional. Disproportionality in remand decisions, in some cases, translates into disproportionality in sentencing, even when controlling for the nature of the offence. For example, being remanded into custody increases the likelihood that a custodial sentence will be imposed.
 - Both remand decisions and legal outcomes are affected by practitioner assessments. This means that any potential bias in practitioner assessments of risk and vulnerability translates into disproportionality in both remand and sentencing outcomes.
- As was mentioned above, the explanatory factors included in the analysis might themselves be affected by ethnicity. For example, decisions pertaining to the type of court that hears the case or even the determination of a child's actions into a type of offence might be influenced by ethnicity. However, the research reported here does not address these issues.
- Finally, even when taking into account all available information (demographics, offence-related factors, remand status and practitioner-assessments) we are unable to explain all of the disproportionality seen for Black children. *Black children are still more likely to receive harsher sentences.*

Chapter 1: A descriptive look at ethnicity, remand and sentencing in the youth justice system

Introduction

20. The Youth Justice Board (YJB) commissioned analysis of the data it holds to generate robust scientific evidence that can be used to frame and guide efforts to redress disproportionality in the youth justice system.
21. In recent years there has been significant interest in the question of ethnic disproportionality across the Criminal Justice System for England and Wales. This has, in part, been driven by perennial concerns around ethnic disparity in criminal justice outcomes and the experiences for Black, Asian and Minority Ethnic (BAME) people when compared to their White counterparts. These include the increased likelihood of being stopped and searched by police and law enforcement agencies and substantially disproportionate numbers of BAME children in custody (MOJ 2019¹⁴, Lammy 2017¹⁵).
22. Now in its 30th year, the bi-annual report on ‘Statistics on Race in the Criminal Justice System’ has also consistently demonstrated that racial disparity within the Criminal Justice System negatively affects BAME people when compared to their White counterparts in England and Wales. Within its most recent publication (2019), levels of racial disparity have for the first time been presented for children as a distinct group, illustrating the prevalence of differential outcomes for minority ethnic children.
23. In 2018, BAME children made up 53% of those who are remanded in custody and 51% of those who resided in the children’s secure estate. However, the Statistics on Race in the Criminal Justice System report acknowledges that no causal links can be drawn from those summary statistics¹⁶. Therefore, whilst the Statistics on Race in the Criminal Justice System report displays racial disparities, it does not offer any meaningful explanations for this.
24. These findings have raised questions around the fairness and legitimacy of the Criminal Justice System and driven mistrust of the system amongst BAME people and communities (Lammy, 2017). Such reports evidence ethnic disproportionality in the justice system but are unable to fully explain the factors that drive these disparities.

¹⁴ Ministry of Justice (2019) ‘Statistics on Race and the Criminal Justice System 2018: A Ministry of Justice publication under Section 95 of the Criminal Justice Act 1991’. London: MOJ <https://www.gov.uk/government/statistics/race-and-the-criminal-justice-system-statistics-2018>

¹⁵ The Lammy Review: <https://www.gov.uk/government/organisations/lammy-review>

¹⁶ <https://www.gov.uk/government/statistics/race-and-the-criminal-justice-system-statistics-2018>

25. Shiner et al (2019)¹⁷ found that the over-policing of minority ethnic children, particularly pertaining to a suspicion of drugs and violent crime offences, increases the numbers of minority ethnic children entering the system. Uhrig (2016)¹⁸ noted that substantial ethnic disproportionality is driven by policing practice but found further evidence of disproportionality once individuals entered the Criminal Justice System, such as in court experiences.
26. Consequently, the aim of this research is twofold:
- a. First, to understand the extent of ethnic disproportionality in the youth justice system as it pertains to remand decisions and legal outcomes, and
 - b. Second, assess how far this observed disproportionality can be explained by the demographic characteristics (other than ethnicity), offence-related factors or practitioner assessments that influence remand and sentencing decisions. This second aim explores whether disproportionality observed when comparing outcomes for different ethnic groups is actually driven by their ethnicity, or is a product of other personal or criminogenic factors. For example, observed ethnic disproportionality could be explained if children of a particular ethnicity commit more serious offences and as a result receive harsher sentences.

Ethnic disproportionality in the remand and sentencing of children

27. We start by presenting the results of descriptive analyses that measure the extent of disproportionality in remand decisions and legal outcomes. We also assess the differences between ethnicities in factors that could potentially explain disproportionality. These factors include personal demographic characteristics, offence-related factors and practitioner assessments.

Method

28. To test disproportionality, we use the YJB's administrative data. The data is collected in accordance with the Data Recording Requirements published by the YJB¹⁹ and includes case management data and AssetPlus assessments made by youth offending team (YOT) practitioners. We

¹⁷ Shiner, M., Carre, Z., Delsol, R. and Eastwood, N. (2019) *The Colour of Injustice: 'Race', drugs and law enforcement in England and Wales*. London: StopWatch UK and Release. http://www.stop-watch.org/uploads/documents/The_Colour_of_Injustice.pdf

¹⁸ Uhrig, N. (2016) *Black, Asian and Minority Ethnic disproportionality in the Criminal Justice System in England and Wales*. London: Ministry of Justice.

¹⁹ YJB Data Recording Requirements can be accessed here: <https://yjresourcehub.uk/data/item/669-data-recording-requirements-for-youth-offending-teams-april-2020-to-march-2021.html>

analysed data for cases recorded between October 2017 and December 2019.

29. For the period under investigation, the data extract from the YOT case management systems included records for 89,679 children. Out of these, 24,544 children had a remand outcome recorded and 62,269 children were sentenced²⁰ or received an out-of-court disposal. In addition, for the same time period, AssetPlus records included 95,644 assessments pertaining to 35,766 children.
30. When examining remand decisions, the unit of analysis is the remand decision made for an individual on a specific hearing date for an offence. The offence is identified by offence date and offence type. Therefore, where a child has attended more than one hearing for an offence, multiple remand decisions may pertain to the same offence.
31. White children account for 64.5% of those who receive a remand decision, 17% of decisions refer to Black children and 5.5% of decisions refer to Asian children. Children with a Mixed ethnicity account for 10.5%. Children of Other ethnicities are present in 2% of cases.
32. To allow comparisons to be made, remand decisions have been grouped into broader categories following groupings in the YJB's Data Recording Requirements. These are detailed in Table 1.

Table 1: Remand categories used in this report

YJB categories used in analysis	Outcome types included in each category
Community remand	Unconditional bail
	Conditional bail
Community remand with intervention	Conditional bail with tag
	Bail supervision and support
	Bail supervision and support with tag
	ISS bail
	ISS bail with tag
	Remand to local authority accommodation
	Remand to local authority accommodation with tag
Custodial remand	Remand to youth detention accommodation

²⁰ This included custodial sentences, YROs and first-tier sentences. Table 2 contains a description of the particular types of outcomes that are included in each of these categories.

33. When examining sentences, the unit of analysis is the sentencing occasion. One particular individual can be represented several times in the data, depending on how many occasions they were sentenced on. The Technical Note provides further details about the derivation of the unit of analysis.
34. The terms ‘sentences’ and ‘legal outcomes’ are used interchangeably for the remainder of the report. These refer to: custodial sentences, Youth Rehabilitation Orders (YROs), first-tier sentences as well as out-of-court-disposals.
35. Legal outcomes have been grouped into broader categories following groupings in the YJB’s Data Recording Requirements. The analysis focuses on understanding disproportionality within these broad categories²¹ and does not assess disproportionality that may occur in particular legal outcomes. The categories are presented in Table 2.

Table 2: Legal outcome / sentence categories used in this report

YJB categories used in analysis	Outcome types included in each category
Out-of-court disposal	Youth caution
	Youth conditional caution
First Tier	Absolute Discharge
	Conditional Discharge
	Fine
	Bind Over
	Compensation Order
	Referral Order
	Reparation Order
Action Plan Order	
Community (YRO)	Youth Rehabilitation Order
Custody	Detention and Training Order
	Section 90-91
	Section 226B

36. White children receive 72% of all substantive outcomes delivered at sentencing occasions. 12.5% and 5% of outcomes are delivered to Black and Asian children respectively. Children with a Mixed ethnicity account for 8.5%, while those of Other ethnicities account for 2%.

²¹ The broader outcome groups contain outcomes that may differ in their level of severity or restrictiveness and may not reflect legal terms.

37. The analyses do not examine separately Gypsy, Roma and Irish Traveller (GRT) children. Even though disproportionality might affect this ethnic group, owing to the very low number of children in the data²², analysis is not feasible. This research uses the standard 5 group classification of ethnicity: White, Asian, Black, Mixed ethnicity and Other (including Chinese). GRT children are included in the White ethnicity group.
38. The following graphs display the proportions of each outcome, as observed within each ethnic group and include all available data²³. The graphs aim to offer context to this research by presenting the observed differences. Statistical significance testing is not carried out at this stage of the research.

Remand decisions

39. For children who received a remand decision, Figure 1 displays the proportion of each ethnicity that received each of the three types of remand outcome²⁴.
40. The results show the most striking differences when comparing the likelihood of being remanded in custody for each ethnicity. 15.4% of White children receive custodial remand, compared to 26.1% of Black children, 21.7% of Asian and 23.3% of children with a Mixed ethnicity.
41. Relative Rate Indices²⁵ were calculated using these results. They suggest that Black children who received any type of remand decision are 1.69 times more likely to receive a custodial remand compared to White children. Asian children are 1.41 times more likely to receive such an outcome, while children with a Mixed ethnicity 1.51 times more likely, when compared to White children.
42. All minority ethnicities, except those classified as Other, are also more likely to receive community remand with intervention, compared to White children. Asian children are 1.32 times more likely to receive community remand with intervention, Black children are 1.20 times more likely and children with a Mixed ethnicity 1.17 times more likely.
43. In contrast, all minority ethnicities appear to be less likely to receive community remand compared to White children.

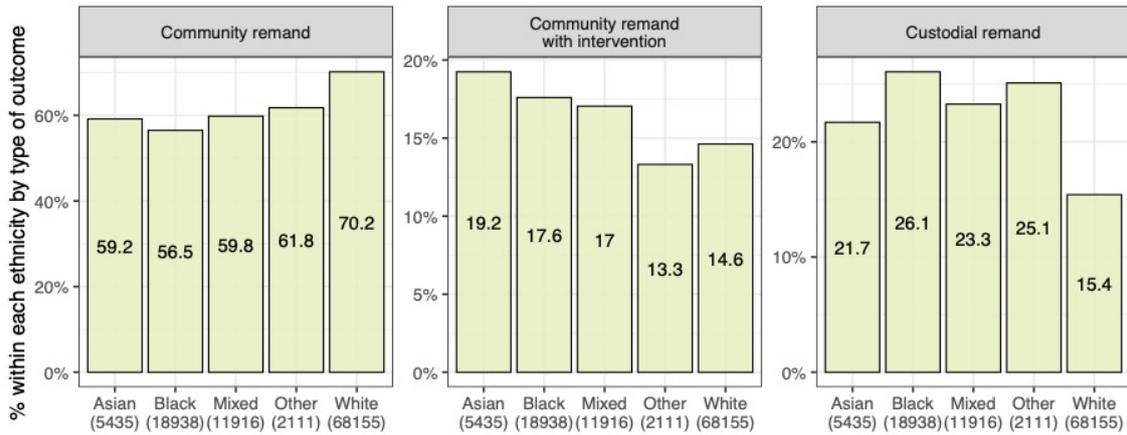
²² For example, in the data file that records legal outcomes there were 217 substantive sentencing occasion where the child was recorded as GRT (out of a total of 74,297 substantive sentencing occasions). These pertain to 126 GRT children.

²³ We include all the YJB records between October 2017 and December 2019. The analysis dataset was obtained by cleaning and merging several datasets where information is stored by the YJB. Through this process some cases were removed due to incomplete or inconsistent information.

²⁴ Please refer to Tables 1 and 2 in Chapter 1.

²⁵ The Relative Rate Index (RRI) is used as a measure of the relative difference in rates of the occurrence of an outcome, between different ethnicities. An RRI greater than 1 indicates that an outcome that is more likely in a minority ethnic group compared to White children. It is accepted that RRIs below 0.8 and above 1.25 are notable. Notability is not to be confused with statistical significance. We do not carry out tests of statistical significance between RRIs.

Figure 1: Ethnicity by type of remand decision (Oct 2017 – Dec 2019)

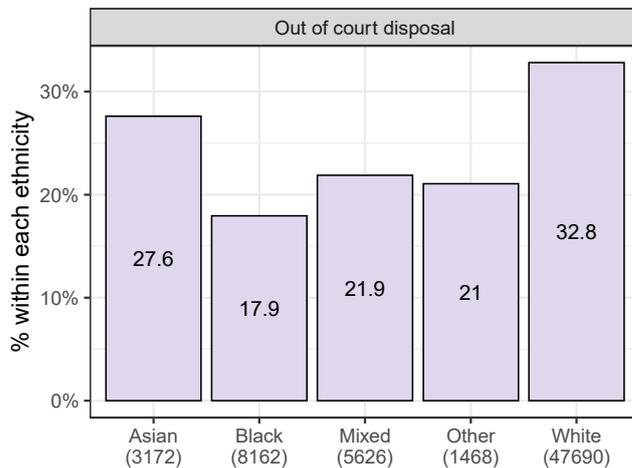


Base: All children with remand decisions.
Number of observations in parentheses.

Legal outcomes

44. Figure 2 displays the results when comparing being sentenced at court with out-of-court disposals²⁶. Black children (17.9%) are least likely to receive an out-of-court disposal, followed by children of Other ethnicity (21%), children with a Mixed ethnicity (21.9%) and Asian (27.6%) children. White children (32.8%) are most likely to receive an out-of-court disposal. The RRIs indicate that Black children are 0.55 times as likely to receive an out-of-court disposal. This means that White children are twice as likely to receive such an outcome compared to Black children.

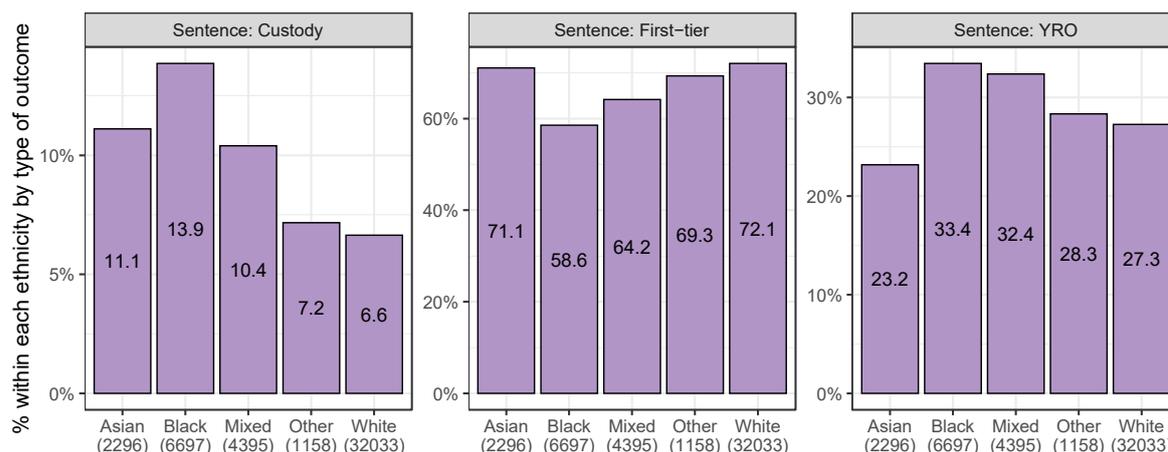
Figure 2: The proportion of out-of-court disposals by ethnicity (Oct 2017 – Dec 2019)



Base: All children sentenced at court or with an out of court disposal.
Number of observations in parentheses.

²⁶ Out-of-court disposals include youth cautions and youth conditional cautions.

Figure 3: Ethnicity by type of sentence (Oct 2017 – Dec 2019)²⁷



Base: All children sentenced at court.
Number of observations in parentheses.

45. Looking at children sentenced at court (Figure 3), Black children appear to be the least likely to receive first-tier outcomes, compared to White children (0.8 times as likely). 58.6% of Black children receive first-tier outcomes compared to 72.1% of White children.
46. This finding is broadly supported when we examine particular types of first-tier outcome, presented in Table 3. There is only sufficient data to draw conclusions on compensation orders, conditional discharge, fines and Referral Orders.

Table 3: Proportion of first-tier outcomes within each ethnicity²⁸

	Asian	Black	Mixed ethnicity	Other	White
Referral Order	43.6%	35.0%	38.1%	39.1%	41.6%
Compensation Order	17.1%	14.5%	18.1%	14.8%	20.5%
Conditional Discharge	8.7%	11.2%	11.3%	12.5%	13.2%
Fine	11.2%	5.3%	5.4%	11.8%	7.8%

Base: All children sentenced at court.

47. Figure 3 also shows that a higher proportion of children from Black (33.4%) and Mixed (32.4%) ethnicities receive YROs compared to White (27.3%) and Asian children (23.2%).
48. Turning to custodial sentences²⁹, Black children appear to be 2.09 times more likely to receive such a sentence compared to White children. 13.9%

²⁷ The proportions displayed in the graphs add up to more than 100% with each ethnicity. This is because several sentences can be imposed during a sentencing occasion.

²⁸ Within each ethnicity, the proportions displayed in the table add up to more than the total for first-tier sentences presented in Figure 3. This is because several sentences can be imposed during a sentencing occasion.

²⁹ Including Detention and Training Order, Section 90-92, Section 228 and Section 226.

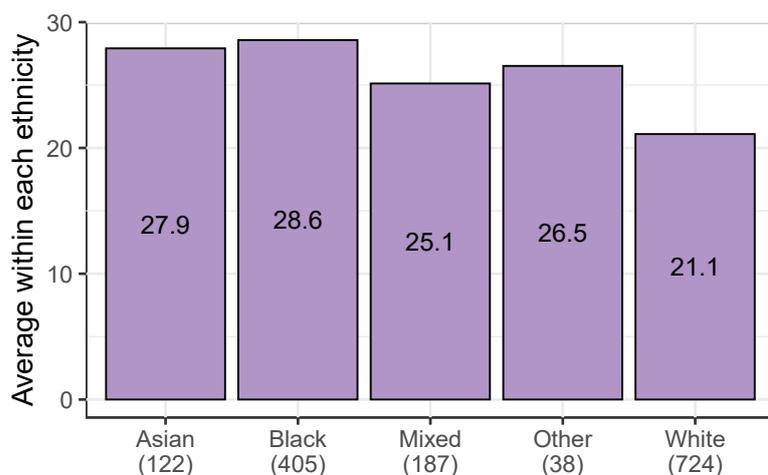
of Black children who were sentenced at court received custodial sentences compared to 6.6% for White children. Asian children are 1.67 times more likely to receive this outcome compared to White children, while children with a Mixed ethnicity are 1.57 times more likely.

Sentence length

49. We also examined the extent to which there are differences by ethnicity in average sentence lengths for the three possible substantive outcomes³⁰ after being sentenced at court (Figure 4). Outcomes without an associated sentence length, such as some first-tier outcomes (e.g. fines and compensation orders), and not included. On average, Black children’s custodial sentences are 7.5 months longer than those of White children, while Asian children’s sentences are 6.8 months longer. Children with a Mixed ethnicity receive sentences that are 4 months longer, on average, compared to White children.

50. As can be seen in Figure 5, there is far less variation by ethnicity in the length of non-custodial sentences (YRO and first-tier). The most prominent difference is that first-tier outcomes are on average 2 weeks longer for Black children compared to White children.

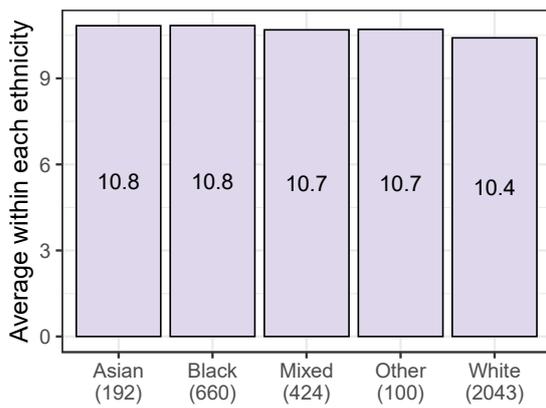
Figure 4: Ethnicity by the average custodial sentence length in months (Oct 2017 – Dec 2019)



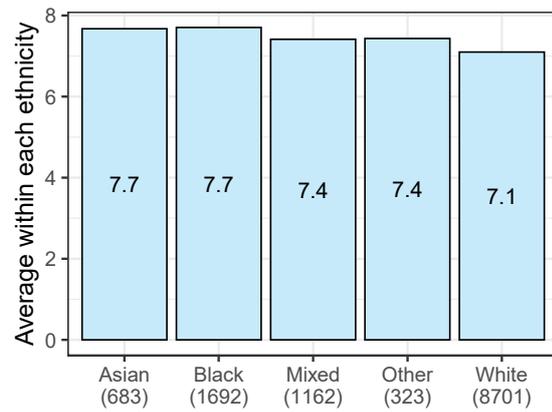
Base: All children with a custodial outcome.
Number of observations in parentheses.

Figure 5: The average sentence lengths in months for YROs and first tier, by ethnicity (including only cases where sentence length was computed) (Oct 2017 – Dec 2019)

³⁰ To avoid bias, sentence lengths are computed solely for those sentencing occasions where a single legal outcome is recorded and the sentencing occasion pertains to a single offence. This means that the results pertain to this narrowly constructed group of children and might not be generally representative of all children that pass through the youth justice system. The sample was restricted in this way as we were not able to differentiate between consecutive and concurrent sentences in the data.



Base: All children with a YRO.
Number of observations in parentheses.

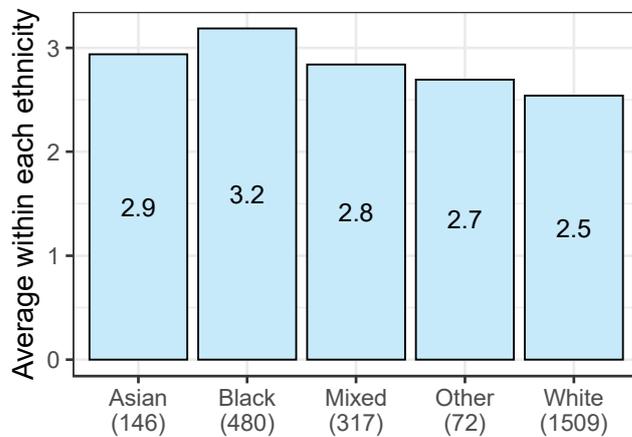


Base: All children with a first tier outcome.
Number of observations in parentheses.

Number of requirements

51. We assessed whether there are differences between ethnicities in the number of requirements³¹ that were imposed following community sentences (YROs). We compared the number of requirements after removing cases where no requirements were recorded³².
52. Figure 6 displays the results. The average number of requirements is higher for all minority ethnicities than that for White children, with the most prominent difference being between White and Black children.

Figure 6: Ethnicity by the average number of requirements for YROs (Oct 2017–Dec 2019)



Base: All children with a YRO
(excluding cases with 0 requirements).
Number of observations in parentheses.

³¹ To avoid bias, the number of requirements is computed solely for those sentencing occasions where a single legal outcome is recorded and the sentencing occasion pertains to a single offence. This means that the results pertain to this narrowly constructed group of children and might not be generally representative of all children that pass through the youth justice system.

³² The vast majority of YROs did not have requirements recorded. These were therefore removed so that they would not obscure any differences where requirements were given. Differences in the likelihood of receiving a requirement by ethnicity were not examined.

Disproportionality in explanatory factors

53. The introduction of this report sets out the aims of this research. First, to understand ethnic disproportionality in remand and sentencing outcomes. Second, to then assess how far this observed disproportionality can be explained by the characteristics of children (excluding ethnicity), their offences, or practitioner assessments.
54. The previous sections presented the differences in outcomes between ethnicities. In the following sections we discuss how the characteristics of children and their offences differ by ethnicity. We consider these to be factors that can potentially explain the observed disproportionality.
55. The data is drawn from case management and AssetPlus records. The case management data includes demographic and offence-related factors, including information such as the age of the child or the offence(s) they were sentenced for. Conversely, practitioner-assessed factors are those that are generated by practitioners and are (mostly) recorded in AssetPlus. The Technical Note describes how these two data sources are matched.

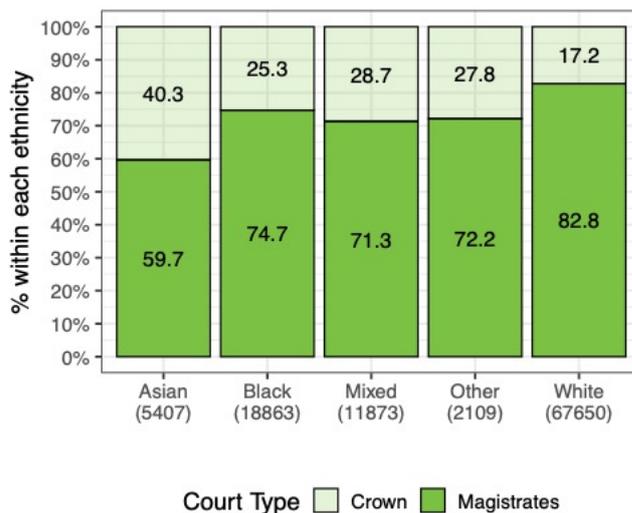
Demographics and offence-related factors

56. We start by examining children's demographic characteristics. Below we display the results for children who receive a legal outcome:
- There is little difference in the average **age**³³ of children from different ethnicities who receive substantive outcomes. White children have the lowest average age (15.5 years), while children of Other ethnicity the highest (15.9 years).
 - There are slightly wider differences by ethnicity in **gender**, White children have the highest proportion of girls (16.1%) and Asian the lowest (5.7%). Girls account for 13.8% of children with a Mixed ethnicity and 9.6% of Black children.
 - On **residence**³⁴, the largest difference by ethnicity is between White and Black children. 98% of White children are locally resident to their YOT compared to 93% of Black children.
57. Next, we assess the type of court. Compared to White children, BAME children's cases are slightly more likely to be heard in Crown Court for both remand (Figure 7a) and sentencing decisions (Figure 7b). Asian children's cases are the most likely to be heard at Crown Court, over two times more likely than White children.

Figure 7a: Ethnicity by court type for remand decisions (Oct 2017 – Dec 2019)

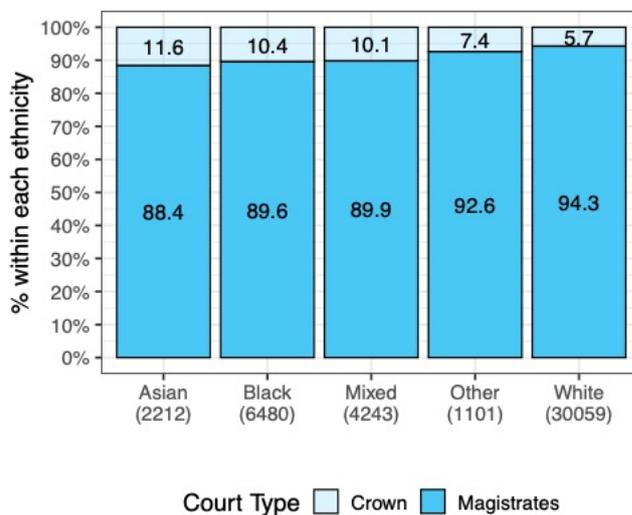
³³ Age measured at commencement for legal outcomes and at hearing for remand outcomes.

³⁴ Residence is used to record out-of-area children who may be hosted by another YOT, and often pertains to where children have been placed by the local authority, for more detail refer to the YJB's Data Recording Requirements.



Base: All children who received a remand decision.
Number of observations in parentheses.

Figure 7b: Ethnicity by court type for legal outcomes (Oct 2017 – Dec 2019)



Base: All children sentenced at court.
Number of observations in parentheses.

58. We follow on by looking at **offence-related factors**:

- Children can be remanded or convicted of one or more **offences** on the same occasion. Our analysis shows that there are differences between children in different ethnic groups in terms of what offences they are more likely to be sentenced for.
59. The graphs detailing the results are included in Appendix 1. To summarise the results, we compare convictions within each ethnicity for each offence. We identify which are the offences of which a higher proportion of one ethnicity is convicted (compared to all other ethnicities)³⁵.

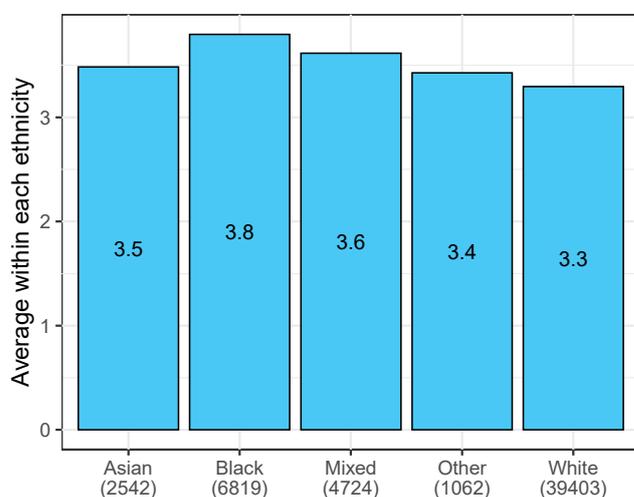
³⁵ There can be several ethnicities with equally high likelihood of being convicted of a particular offence. In this case, that offence is mentioned for each ethnicity. This does not indicate the offences that children of that ethnicity are most likely to be convicted for.

60. It is important to note that these results pertain only to offences that lead to a conviction and may differ from a comparison of all offences committed (of which only a small proportion are detected and result in a conviction). The effect of the type of offence on legal and remand outcomes is further assessed in the following chapters where we show that disproportionality between ethnicities exists even for children with similar demographic characteristics who were convicted of the same type of offence.

61. We find that, compared to other ethnicities:

- A higher proportion of Asian children were convicted for motoring offences, drugs, vehicle theft and violence against the person.
- A higher proportion of Black children were convicted for breaching statutory orders, breaching conditional discharge, and drug-related offences, robbery and violence against the person.
- A higher proportion of children with a Mixed ethnicity were convicted for breach of bail, breach of statutory orders, criminal damage, and public order offences, vehicle theft and violence against the person.
- A higher proportion of White children were convicted for criminal damage, and domestic and non-domestic burglary, public order offences, sexual offences, theft and handling of stolen goods, and vehicle theft.
- Children from Other ethnic backgrounds have a higher likelihood of being convicted for breach of bail, breach of statutory orders, drug-related offences, and fraud and forgery.

Figure 8: Ethnicity by the average gravity score (Oct 2017 – Dec 2019)



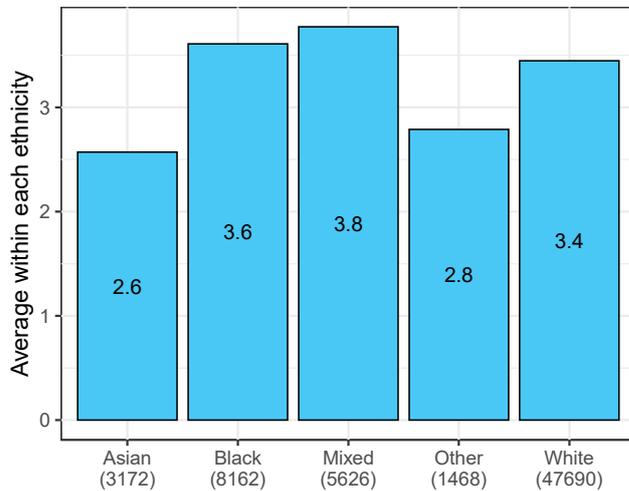
Base: All children with substantive outcomes.
Number of observations in parentheses.

62. The **gravity score** is based on the seriousness of the offence and is measured on a scale between 0 and 8. Figure 8 compares average gravity scores³⁶ by ethnicity. The results indicate that although White children account for the majority of all convictions, the average seriousness score of

³⁶ For sentencing occasions that include several offences with different gravity score we extract the highest score.

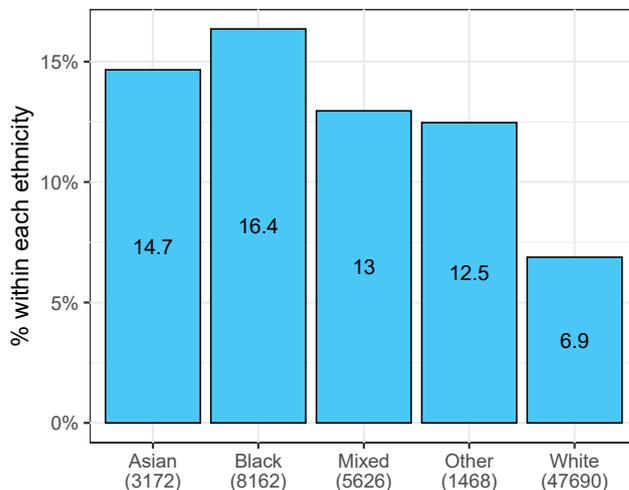
crimes for which Black children are convicted is higher than for other ethnicities. These differences only apply to children with substantive outcomes. We cannot draw conclusions about differences in offending due to the lack of information on undetected crime, and earlier stages of the process, such as acquittals.

Figure 9: Ethnicity by the average number of previous orders (Oct 2017 – Dec 2019)



Base: All children with substantive outcomes.
Number of observations in parentheses.

Figure 10: Ethnicity by sentencing occasions that deal with an offence where a knife was used (Oct 2017 – Dec 2019)



Base: All children with substantive outcomes.
Number of observations in parentheses.

63. We also examined the **number of previous orders (court sentences)** a child has received. The results are displayed in Figure 9 and indicate that Black children and children with a Mixed ethnicity have a slightly higher number of previous orders compared to White children, while Asian and children from Other ethnicities have fewer previous orders.
64. An indicator of the gravity of an offence is also whether the offence involved the possession of or use of a **knife** (Figure 10). A substantially higher

proportion of Black children (16.4%) are convicted of knife-related offences than White children (6.9%).

65. Using data collected through AssetPlus, we also have access to automatically computed assessments of the child, such as **YOGRS**³⁷. The data shows no difference in the average **YOGRS** score when comparing children from White, Black and Mixed ethnicities. Children from Asian and Other ethnic backgrounds have slightly lower average scores.

Practitioner-assessed factors

66. We start by looking at **remand** and **sentence proposals**. Due to low levels of coverage of proposals, there is limited usable information³⁸, meaning that the following results should be treated with caution.

- **Sentence proposals:** there are no notable differences in the types of sentence proposals received when comparing Asian or Black children to White children. Children of Mixed ethnicity appear more likely to receive a YRO proposal, compared to all other ethnicities.
- **Remand proposals:** the distribution of remand proposals mirrors the distribution of remand decisions. Black children appear to be 1.34 times more likely to receive a custodial remand proposal compared to White children.
- Black and Asian children are also more likely to receive a proposal for community remand with intervention and, conversely, BAME children are less likely to receive a community remand proposal (without intervention).

67. We use AssetPlus records to examine other practitioner assessments of children and their circumstances, such as the **MAPPA**³⁹ categorisation.

- 7.4% of Black children, 7.1% of Asian children and 4.9% of White children have an existing **MAPPA**⁴⁰ category at the time of sentencing. Due to the low number of children for who are subject to MAPPA we do not report the differences in the type of MAPPA category between ethnicities in the report (available in Appendix 1).

³⁷ YOGRS is the youth justice system specific version of the Offender Group Reconviction Scale (OGRS). OGRS estimates the probability that offenders with a given history of offending will be resanctioned for any recordable offence within two years of sentence, or release if sentenced to custody. In the youth justice system, the term sanction is used to refer to convictions and out-of-court-disposals.

³⁸ Just over 2% of either remand hearing or sentencing occasions in our data sets contain a sentence or remand proposal. Due to the low sample sizes, results pertaining to proposals should be treated with caution.

³⁹ We only present information on MAPPA as it stands *before* sentencing, for children who receive substantive outcomes. This information indicates whether a child is already on a MAPPA at the time of sentencing (the MAPPA we report is not an outcome / has not been updated as a result of the sentencing occasion we analyse).

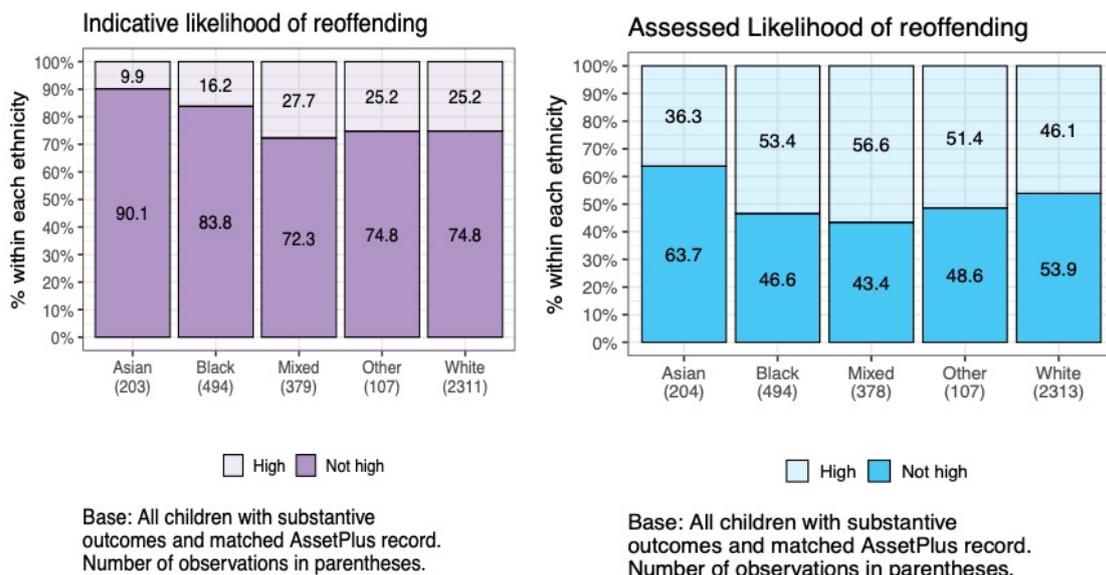
⁴⁰ MAPPA (or Multi-Agency Protection Arrangements) were introduced under the Criminal Justice and Court Services Act 2000 as a mechanism through which agencies can co-ordinate their work to manage the risk to the public presented by those who commit serious sexual and violent offences.

- Information on **MAPPA level** is available for 5.3% of Black and 3.9% of Asian children compared to 3.4% of White children.

68. We look at two measures that record the **likelihood of reoffending**. The **indicative likelihood of reoffending** is a measure calculated by the system to quantify a child’s likelihood of reoffending. This measure can then be manually adjusted by the practitioner based on their assessment of the child. We name this measure the ‘assessed likelihood of reoffending’. This is displayed on the right-hand side of Figure 11. The results show that Black and children from Mixed and Other ethnic backgrounds, are slightly more likely to be set higher assessed likelihoods of reoffending. Asian children tend to be set a lower likelihood of reoffending than White children⁴¹.

69. It is also interesting to note practitioner-driven change in this measure. When comparing the practitioner adjusted likelihood to the system calculated one, we note that the likelihood is substantially increased for all ethnicities. Nonetheless, differences can be observed: the proportion of Black children assessed to have a ‘high’ likelihood of reoffending is increased by 37.2 percentage points. This can be compared to a 20.9 percentage point increase for White and a 26.4 percentage point increase for Asian children.

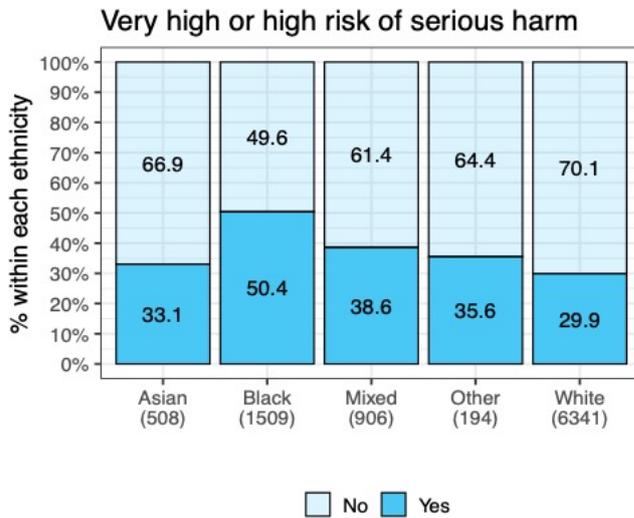
Figure 11: Ethnicity by the indicative likelihood of reoffending and the assessed likelihood of reoffending (Oct 2017 – Dec 2019)



⁴¹ Due to technical issues in data reporting, in 63% of cases the likelihood of reoffending is missing.

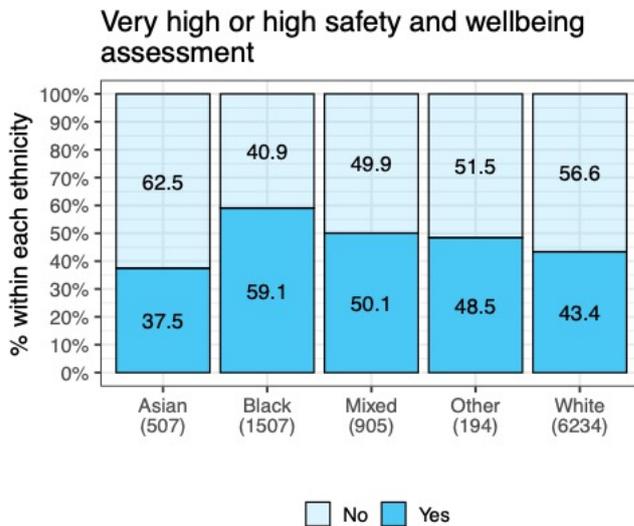
70. The graph below displays the ROSH judgement⁴² by ethnicity. A substantially higher proportion of Black children appear to have 'very high' or 'high' risk judgements (50.4% compared to 29.9% for White children).

Figure 12: Very high or high ROSH judgement levels by ethnicity (Oct 2017 – Dec 2019)



Base: All children with substantive outcomes with a matched AssetPlus record.
 Number of observations in parentheses.

Figure 13: Very high or high safety and wellbeing judgement levels by ethnicity (Oct 2017 – Dec 2019)



Base: All children with substantive outcomes and matched AssetPlus record.
 Number of observations in parentheses.

⁴² YOTs must complete the risk of serious harm and record the risk of serious harm level for every assessment recorded for which 'Yes' was answered to any question in the indicators of risk of serious harm section.

71. A very similar pattern emerges when we examine the **safety and wellbeing judgement**. A higher proportion of Black children have a 'very high and high' safety and wellbeing judgement (59.1% compared to 43.4% for White children). Conversely, a lower proportion of Asian children (compared to White children) have a high or very high assessed level (37.5%).
72. No clear or consistent patterns can be identified when examining **concerns** recorded by case workers. For each concern, we compare the proportion of children within each ethnicity that have that concern recorded. We find that:
- **Asian children** are the ethnicity with the lowest proportion of concerns raised when compared to the other ethnicities within each area.
 - **Black children:** present with a lower proportion of concerns raised (when compared with other ethnicities) for: *mental health* and *languages*. They have the highest proportions for: *local issues*, *offence attitudes* and *justification*, *safety and wellbeing*, *lifestyle* and *risk to others concerns*. Higher (but not highest) proportions are also recorded for: *accommodation and care history*.
 - **Children with a Mixed ethnicity:** have the highest proportion with concerns raised for: *education*, *training and employment*, *family behaviour*, *parenting*, *relations to others*, *relationships and substance misuse*. Higher (but not highest) proportions are also recorded for: *language*, *lifestyle*, *mental health*, *risk to others*.
 - On average, 1.3 concerns are raised for Asian children, 1.9 concerns for Black children and 1.6 for children with a Mixed ethnicity. On average, there were 1.1 concerns raised for White children.
73. There is minimal variation between ethnicities when looking at current **care status**. There are some exceptions which can be viewed in Appendix 1.
74. Indicators pertaining to the **impact of adverse outcomes**⁴³ on a child's safety and wellbeing are generally consistent across ethnicities. An exception is the evaluation of physical harm, where a higher proportion of Black children have more severe evaluations (Critical: 14.8% compared to 8.2% for White children; Major: 54.3% compared to 42.6% for White children).
75. There is also very little difference between ethnicities in the assessed **likelihood of adverse outcomes**. The only notable difference can be seen in the assessed likelihood of death, which is assessed to be 'very likely' or 'likely' for 16.9% of Black children, compared to 9.6% of White children.
76. There are no remarkable differences by ethnicity in the categories of factors, such as features of lifestyle or self-identity, that would assist the child's desistance (**for desistance**) and slight differences⁴⁴ when considering factors that would inhibit desistance (**against desistance**).

⁴³ Possible adverse outcomes relating to young person's safety and wellbeing are recorded in AssetPlus. This include recording the likely effect and the likelihood of the assessed adverse outcome that may happen to the child.

⁴⁴ Some factors are assessed to have slightly stronger effects on Black children compared to White.

77. Generally, there were fewer notable difference in accommodation⁴⁵ concerns by ethnicity. However, Black and Mixed ethnicity children appeared to be more likely to live in overcrowded, short term or unsafe accommodation or share an accommodation with a known offender⁴⁶.

⁴⁵ Accommodation concerns include concerns with: instability; absconding; short-term accommodation; over-crowding; unhealthy or unsafe; offending in family; living with known offenders.

⁴⁶ The results pertaining to accommodation should be treated with caution due to the low number of observations. Only approximately 3% of records have information on accommodation.

Chapter 2: Factors associated with remand decisions and legal outcomes

78. The previous chapter assessed how the remand decisions and legal outcomes differ for children of different ethnicities. The results showed that Black, Asian and Minority Ethnic (BAME) children have different, often harsher, outcomes imposed on them compared to White children. They are more likely to receive custodial remand and less likely to benefit from out-of-court disposals. They are also more likely to receive a custodial sentence and the length of the sentence is likely to be longer. If a Youth Rehabilitation Order (YRO) is imposed, the number of requirements is also likely to be higher.
79. In addition to examining differences in outcomes, we assessed differences between ethnicities for the key demographic, offence-related and practitioner-assessed factors. The results showed variation by ethnicity. For example, Black children appear to have the harsher evaluations, compared to both White children and children of other ethnicities.
80. This begs the question: can the differences we find between BAME and White children on outcomes be accounted for by the differences we find in their personal characteristics, offence history, or assessments pertaining to them or their case?
81. As mentioned in the previous chapter, disentangling the relationship between youth justice system outcomes, children's characteristics, and ethnicity is the key aim of the analysis presented in this report.
82. To disentangle these complex relationships, we first assess the relationship between each demographic, offence-related, and practitioner-assessed factor and the outcomes of interest. We present the results in this chapter. Second, we ascertain whether ethnic differences observed are maintained after taking into account these characteristics. We present the results in the next chapter.
83. As was mentioned earlier, the data used to carry out the analyses originates from two sources: case management records and AssetPlus records⁴⁷. The two data sources are collected through separate processes and do not share a unique identifier through which AssetPlus records could easily be matched to a particular outcome in the case management data. Only AssetPlus assessments that were recorded and submitted in the 30 days before the sentencing occasion (or remand decision) were used. This increased the likelihood that the assessment was reflective of the child, and

⁴⁷ For further information on data collected through these mechanisms please consult the YJB Data Recording Requirements, available at: <https://yjresourcehub.uk/data/item/669-data-recording-requirements-for-youth-offending-teams-april-2020-to-march-2021.html>

the information that decision makers had about the child, at the time of the decision. As a result, a relatively low proportion of cases in the analytic datasets include AssetPlus records.⁴⁸

84. For each outcome of interest, we implemented a set of sequential statistical models to assess how different groups of factors explain each outcome. Each analysis was implemented through hierarchical linear modelling (also referred to as multilevel modelling)⁴⁹ for both continuous and dichotomous⁵⁰ variables.
85. We do not have any means of knowing whether decision makers had access to all factors or whether all such factors were taken into account when a decision was made. Their knowledge may vary depending upon the extent to which reports, such as Pre-Sentence Reports, are provided to them, and more complete information should be expected for more serious cases. From a legal perspective not all variables we use should be relevant to decision making, however, they may nonetheless be useful in explaining disproportionality.

Table 4: The structure of models

Statistical models		Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Set 7	Set 8	Set 9
Demographic and offence-related factors										
Demographic characteristics	Gender	Yes								
	Age	Yes								
	Residence	Yes								
	YOT or Region	Yes								
Offence-related factors	Court type **	Yes								
	Remand decision * **	No	Yes	No						
	Offence	No	No	Yes	No	No	No	No	No	No
	Gravity score	No	No	No	Yes	No	No	No	No	No

⁴⁸ Details of the matching process can be found in the Technical Note.

⁴⁹ A multilevel regression model is used when data is structured at different levels that are nested in each other. For legal outcomes the unit of analysis is the sentencing occasion. Each sentencing occasion is 'nested' in an individual and each individual is nested in a youth offending team. For a more detailed discussion of the methodology (including the modelling approach and variables used) please consult the Technical Note.

⁵⁰ For a discussion of the appropriateness of using a linear approach for a dichotomous dependent variable (i.e. the linear probability model) instead of a nonlinear approach, please consult the Technical Note.

	YOGRS	No	No	No	Yes	No	No	No	No	No
	No. of previous orders *	Yes								
Area level characteristics	Ethnicity in the 10 to 17-year-old population in each YOT	No	No	No	No	Yes	No	No	No	No
	Number of previous cautions and orders for each ethnicity in each YOT	No	No	No	No	Yes	No	No	No	No

Practitioner-assessed factors

Sentence proposal * **	Yes	No	No	No	No	No	No	No	No
MAPPA category and level	No	No	No	No	No	Yes	No	No	No
Likelihood of reoffending	No	No	No	No	No	Yes	No	No	No
ROSH judgement	No	No	No	No	No	Yes	No	No	No
Safety and wellbeing judgement	No	No	No	No	No	Yes	No	No	No
Concerns	No	No	No	No	No	No	Yes	No	No
No. of concerns	No	No	No	No	No	No	No	Yes	No
Care history	No	No	No	No	No	No	No	No	Yes

* The variables marked are only included in the regression models that assess sentencing outcomes. They are not included in the models measuring remand decisions.

** The variables marked are not included in the models that assess out-of-court disposals.

86. The analyses are carried out on two different datasets: one that records sentencing outcomes and a separate dataset on remand decisions.

87. Table 4 details the structure of the sequential models used to analyse legal outcomes (a similar approach is used to analyse remand decisions, but fewer variables are used). Nine models have been implemented for each outcome variable. All models contain some key demographic and system-related variables. In addition, at each subsequent step additional key variables are included⁵¹.

⁵¹ Given the low number of CM records that have a matched AssetPlus record, we reran sets 1 to 5 on the entire CM analytical sample. This increases sample and helps us to guard against potential bias that could be induced by running the analysis on a smaller (perhaps particular) subsample. By comparing the analyses on the two samples, we ensure that any

88. The results we report in the sections below illustrate the effects of the explanatory factors in relative isolation – we test most groups of factors one at a time. This allows us to understand the association between each set of factors and each outcome. However, in reality these factors are not independent and are related to each other. The next chapter will use the insights derived here to develop overarching models that combine all factors and assess their joint effect.

Remand decision

89. The results show that the majority of demographic, offence-related and practitioner-assessed factors tested have significant effects that explain remand decisions. Table 5 summarises the results. For in-depth information on the size of the effects, including the regressions coefficients, please consult the regression results that are included in the data tables (Appendix 2a and 2b).

90. Appendix 2a contains the results obtained by running all analyses on a sample that was restricted to include only those children for whom an AssetPlus record was identified and matched. Appendix 2b details the results for models run on the full dataset and include only data obtained from case management records⁵².

Community remand (without intervention)

91. The results below detail the effects of the explanatory variables on receiving community remand, **compared to** not receiving this outcome, and receiving either community remand with intervention or custodial remand.

92. On average, being a girl, being younger or residing locally increases the likelihood of receiving community remand. For example, girls are approximately 14 percentage points more likely to receive community remand than boys.

Table 5: Summary of regression results for remand decisions

Remand decision	Community remand	Community remand with intervention	Custodial remand
Demographic and offence-related factors			
Gender	More likely for girls	More likely for boys	More likely for boys
Age	More likely for younger children	More likely for slightly older children	More likely for older children
Residence	More likely for local children	<i>No significant effect</i>	More likely for non-local children

insights found are not a function of the subsample on which the analysis is run. The results we report below are based on both samples.

⁵² The results pertaining to demographics and offence-related factors (excluding YOGRS), presented in Table 5, were retrieved from Appendix 2b, on account of the much higher number of observations included in that analysis. The results pertaining to practitioner-assessed factors were taken from the analysis detailed in Appendix 2a.

Court type	More likely to be a result of Magistrates Court	Slightly more likely to be a result of Crown Court	More likely to be a result of Crown Court
YOT	There are significant differences between YOTs	There are significant differences between YOTs	There are significant differences between YOTs
Offence	More likely for: breach of statutory order; criminal damage; motoring offences; public order offences; racially aggravated; sexual offences; theft	More likely for: breach of bail; domestic burglary; drugs; fraud; robbery	More likely for: domestic burglary; fraud; robbery
Gravity score	Higher scores decrease the likelihood	<i>No significant effect</i>	Higher scores increase the likelihood
YOGRS	More likely for higher YOGRS	More likely for lower YOGRS	<i>No significant effect</i>

Practitioner-assessed factors

MAPPA category	Less likely for category 3, more likely for category 1 and 2	Less likely for category 1 and 2 and more likely for category 3	<i>No significant effect</i>
Likelihood of reoffending	More likely for lower likelihood of reoffending	<i>No significant effect</i>	More likely for higher likelihood of reoffending
ROSH judgement	More likely for lower ROSH judgement	More likely for slightly lower ROSH judgement	More likely for higher ROSH judgement
Safety and wellbeing judgement	More likely for lower safety judgement	More likely for slightly higher safety judgement	More likely for higher safety judgement
Concerns	More likely for: care history; mental health; lifestyle	More likely for: justification; behaviour; family behaviour; physical health; language	More likely for: attitudes; behaviour; accommodation; parenting
Number of concerns	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>
Care history	More likely if 'Previously' child in need	More likely if 'Never' child in need	Less likely if 'Never' child in need
Accommodation	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>

93. The type of court has a significant effect: magistrates' courts are approximately 26 percentage points more likely to impose community remand compared to Crown Courts.

94. There is an association between community remand and the type of offence, with this type of remand being imposed for offences of seemingly lower gravity. This is confirmed by the effect of the gravity score: increasing

gravity score by 1 point (on its 8-point scale) decreases the likelihood of receiving community remand by approximately 3 percentage points.

95. Increasing the YOGRS score also increases the likelihood of receiving community remand⁵³. However, the likelihood of this outcome decreases if the assessed likelihood of reoffending, the risk of serious harm (ROSH) judgement or the safety and wellbeing judgement increases. For example, if the ROSH judgement is high or very high the likelihood of community remand decreases by 10 percentage points. A similar result can be found for the assessed likelihood of reoffending, while the effect of concerns about the child's safety and wellbeing⁵⁴ is slightly lower at 6 percentage points.
96. We also identified differences between MAPPA categories⁵⁵. If a child has an existing MAPPA category 1, he or she would be 18 percentage points more likely to receive community remand (compared to a child for whom we do not have information on MAPPA). MAPPA category 2 increases the likelihood by 13 percentage points, while category 3 decreases it by 13 percentage points.
97. Community remand appears to be associated with concerns around care history, lifestyle or mental health.

Community remand with intervention

98. In terms of the effects of the explanatory variables, community remand with intervention sits between community remand and custodial remand, but is slightly closer to custodial remand. The factors that explain community remand with intervention are similar to those that explain custodial remand, but the sizes of their effects are smaller.
99. The results below detail the effects of the explanatory variables on receiving community remand with intervention, **compared to** not receiving this outcome, and receiving either community remand without intervention or custodial remand.
100. On average, being a boy or being older increases the likelihood of receiving community remand with intervention. For example, boys are approximately 5 percentage points more likely to receive community remand with intervention than girls.
101. The type of court has a small significant effect: Crown Courts are approximately 5 percentage points more likely to impose community remand with intervention compared to magistrates' courts.
102. Community remand with intervention tends to be imposed for somewhat more serious offences such as domestic burglary and robbery or breach of bail.

⁵³ This appears to be counterintuitive and is defined in the literature as a suppression effect, where one variable's indirect relationship with the outcome through several other variables is in conflicting directions.

⁵⁴ Practitioner assessed judgment of concerns around the young person's safety and wellbeing.

⁵⁵ MAPPA Category One: Registered Sex Offenders, Category Two: Violent and Other Sexual Offenders, Category Three: Other Dangerous Offenders

103. Decreasing the YOGRS score increases the likelihood of receiving community remand with intervention.
104. The likelihood of this outcome decreases if the ROSH judgement increases to high or very high: the effect is approximately 4 percentage points. Conversely, if the level of concern about the child's safety and wellbeing increases to high or very high, the likelihood of this outcome increases by 2 percentage points.
105. We also identified differences between MAPPA categories. If a child has been tagged in the past as category 1 or 2, he or she would be less likely to receive community remand with intervention. Having been tagged as MAPPA category 3, increases the likelihood of a child receiving this outcome by 7 percentage points.
106. Community remand with intervention appears to be associated with concerns around justification, behaviour, family behaviour, physical health and language.

Custodial remand

107. The results below detail the effects of the explanatory variables on receiving custodial remand, **compared to** not receiving this outcome, and receiving a type of community remand with or without intervention.
108. On average, being a boy, being older or not residing locally increases the likelihood of receiving custodial remand. For example, boys are approximately 9 percentage points more likely to receive custodial remand than girls. Not living locally also increases the likelihood by 7 percentage points. Every additional year in age increases the likelihood by 4 percentage points.
109. The type of court has a large significant effect: the likelihood of receiving custodial remand increases by 23 percentage points if the case is heard in Crown Court compared to a magistrates' court.
110. Custodial remand is associated with more serious offences such as domestic burglary and robbery, or fraud. An increase of the gravity score by 1 point (on its 8-point scale), increases the likelihood of receiving custodial remand by approximately 2 percentage points.
111. The likelihood of custodial remand increases if the likelihood of reoffending score is high: the effect is approximately 12 percentage points. Moreover, having a high or very high level of the ROSH or safety and wellbeing judgements increase the likelihood of receiving custodial remand by approximately 14 and 4 percentage points, respectively.
112. There are no significant differences between MAPPA categories.
113. Custodial remand appears to be associated with concerns around attitudes, behaviour, accommodation and parenting.

Legal outcomes

114. The summary of the regression results are displayed in Tables 6 and 7. Table 6 sets out the results for outcome categories and Table 7 displays the results pertaining to the severity of the sentences⁵⁶.
115. Each outcome has been compared to the other available outcomes, or the most likely alternative outcome. For example, court outcomes are grouped together and compared to out-of-court-disposals, to reflect the decision of whether to give an out-of-court-disposals or proceed to court. This tries to capture the choice available to decision makers, and compare outcomes for more similar situations, whilst reducing the number of comparisons needed. However, it should be acknowledged that these may not always reflect the sentences available in every case, as set out in the sentencing guidelines. For example, where the mandatory referral order criteria apply, the option of custody or referral order is available to the courts but a YRO is not.

Out-of-court disposal versus court (custodial, YRO or first-tier) outcomes

116. The analysis **compared** children with out-of-court-disposals with those who had a custodial, YRO, or first-tier outcome.
117. On average, being a girl and being younger increases the likelihood of receiving an out-of-court-disposal. For example, girls are approximately 9 percentage points more likely to receive an out-of-court-disposal than boys. Every additional year in age at commencement decreases the likelihood of an out-of-court-disposal by 5 percentage points.
118. Increasing the gravity score by 1 point (on its 8-point scale) decreases the likelihood of receiving an out-of-court-disposal by approximately 5 percentage points.
119. Increasing the YOGRS score by one tenth (0.1 on a scale ranging from 0 to 1) decreases the likelihood of receiving an out-of-court-disposal by approximately 5 percentage points.
120. Having a high or very high level for the ROSH or safety and wellbeing judgements decreases the likelihood of receiving an out-of-court-disposal by approximately 3 and 6 percentage points, respectively.
121. An out-of-court-disposal is 18 percentage points less likely for children who have a MAPPA category 1 tag.
122. As the number of concerns identified by case workers increases, the likelihood of receiving an out-of-court-disposal decreases at a rate of 1 percentage points per concern identified.

Table 6: Summary of regression results for legal outcomes⁵⁷

⁵⁶ In Tables 6 and 7, the results pertaining to demographics and offence-related factors (excluding YOGRS), were retrieved from the analysis presented in Appendix 2b. The results pertaining to practitioner-assessed factors were taken from the analysis detailed in Appendix 2a.

⁵⁷ The results for out-of-court-disposals suggest that the likelihood of such an outcome increases with the increase in the likelihood of reoffending. This is likely due to a suppression effect. We discuss this type of effect in footnote 48.

Legal outcomes	Custody versus YRO	First-tier versus YRO or custody	Out-of-court disposal versus sentenced at court
Demographic and offence-related factors			
Gender	More likely for boys	Less likely for boys	Less likely for boys
Age	More likely for older children	More likely for younger children	More likely for younger children
Residence	More likely for non-local children	More likely for local children	More likely for local children
Court type	More likely to be a result of Crown Court	More likely to be a result of Magistrates Court	<i>Not included</i>
YOT	There are significant differences between YOTs	There are significant differences between YOTs	There are significant differences between YOTs
Offence	Custodial sentence more likely for: breach of statutory order; death or injury as a result of dangerous driving; domestic or non-domestic burglary; robbery; sexual offences; violence against the person. YROs more likely for: breach of conditional discharge; criminal damage; drugs; public order offences; theft and vehicular theft.	When compared to YRO or custody, a first-tier outcome is a less likely outcome for any offence.	When compared to being sentenced at court, an out-of-court disposal is a less likely outcome for any offence.
Remand decision	Custodial remand increases the chances for a custodial sentence, while community remand decreases it.	Any type of remand decreases the chances for a first-tier outcome	<i>Not included</i>
Gravity score	Higher scores increase the likelihood of a custodial sentence	Higher scores decrease the likelihood of a first-tier sentence	Higher scores decrease the likelihood of out-of-court disposal
Knife	Increases the likelihood of a custodial outcome	Decreases the likelihood of a first-tier sentence	Decreases the likelihood of an out-of-court disposal
Number of previous orders	Increases the likelihood	Decreases the likelihood	Decreases the likelihood
YOGRS	More likely for slight lower YOGRS	More likely for lower YOGRS	More likely for lower YOGRS

Practitioner-assessed factors

Sentence proposal	Custodial proposal increases likelihood, YRO proposal decreases it	First-tier proposal increases likelihood, custodial or community decrease it	<i>Not included</i>
MAPPAs category	Custodial sentence are more likely for category 2 or 3	Less likely for category 1	Less likely for category 1
Likelihood of reoffending	More likely for higher likelihood of reoffending	More likely for lower likelihood of reoffending	More likely for higher likelihood of reoffending
ROSH judgement	More likely for higher ROSH judgement	More likely for lower ROSH judgement	More likely for lower ROSH judgement
Safety and wellbeing judgement	<i>No significant effect</i>	More likely for lower safety judgement	More likely for lower safety judgement
Concerns	<i>Model did not converge</i>	More likely for: parenting; substance misuse.	Less likely for: substance misuse.
Number of concerns	Higher number of concerns increases likelihood of custody	Higher number of concerns decreases likelihood	Higher number of concerns decreases likelihood
Care history	<i>No significant effect</i>	More likely if 'Never' child in need or 'Never' siblings in care	More likely if 'Never' child in need or 'Never' siblings in care

First-tier outcomes compared to custodial or YRO

123. The results below detail the effects of the explanatory variables on receiving a first-tier outcome, **compared** to receiving a different type of substantive outcome: a custodial sentence or a YRO. The analysis only includes those children who have received a court disposal.
124. On average, being a girl and being younger increases the likelihood of receiving a first-tier sentence. For example, girls are approximately 9 percentage points more likely to receive a first-tier sentence than boys.
125. The type of court has a very large significant effect: the likelihood of receiving a first-tier sentence increases by 30 to 37 percentage points⁵⁸ if the case is heard in a magistrates' court compared to a Crown Court. One explanation is that referral orders, the most common first-tier sentence, are only available in the Crown Court in very limited circumstances.
126. A proposal that calls for a first-tier outcome increases the likelihood of actually receiving a first-tier outcome by 23 percentage points. A proposal for a YRO decreases the likelihood of receiving a first-tier outcome by 18 percentage points, while a proposal for a custodial outcome decreases it by 17 percentage points.

⁵⁸ The size of the effect varies between 38 percentage points and 30 percentage points, depending what other variables are included in the model.

127. If the offence the sentencing occasion addresses has any remand decision linked to it (compared to there not being a recorded of a remand decision) this decreases the likelihood of receiving a first-tier sentence compared to receiving a custodial sentence or a YRO.
128. When compared to YRO or custodial sentences, and after we control for age, gender, residence, number of previous orders, court type and YOT, a first-tier outcome is a less likely outcome for any type of offence.
129. Increasing the gravity score by 1 point (on its 8-point scale) decreases the likelihood of receiving a first-tier sentence by approximately 5 percentage points. Moreover, if the offence did not involve a knife, the likelihood of receiving a first-tier outcome increases by 11 percentage points.
130. Increasing the YOGRS score by one tenth (0.1 on a scale ranging from 0 to 1) decreases the likelihood of receiving a first-tier sentence by 4.5 percentage points.
131. The likelihood of a first-tier sentence increases if the likelihood of reoffending score is not high: the effect is approximately 6 percentage points. Having a high or very high level for ROSH or safety and wellbeing judgements decreases the likelihood of a first-tier sentence by approximately 10 and 8 percentage points, respectively.
132. Receiving a first-tier sentence is 15 percentage points less likely for children who have a MAPPA category 1 tag.
133. Finally, as the number of concerns identified by case workers increases, the likelihood of receiving a first-tier outcome decreases at a rate of 2 percentage points per concern identified.

Custody versus YROs

134. The results below detail the effects of the explanatory variables on receiving a custodial sentence, **compared to** receiving a YRO. The analysis is restricted to only those children who have received one of the two outcomes.
135. On average, being a boy, being older or not residing locally increases the likelihood of receiving a custodial sentence. For example, boys are approximately 7 percentage points more likely to receive a custodial sentence than girls. Every additional year in age at commencement increases the likelihood by 2 percentage points.
136. The type of court has a very large significant effect: the likelihood of receiving a custodial sentence increases by between 25 and 38 percentage points⁵⁹ if the case is heard in a Crown Court compared to a magistrates' court.
137. The sentence proposal is closely related to the outcome. A proposal that calls for a custodial outcome increases the likelihood of actually receiving a custodial outcome by 48 percentage points, while a YRO proposal

⁵⁹ The size of the effect varies between 38 percentage points and 25 percentage points, depending what other variables are included in the model.

decreases the likelihood of a custodial outcome (in favour of a community outcome) by 14 percentage points. This does not indicate that proposals are necessarily driving sentencing decisions. In many cases the sentence to be imposed will be inevitable and practitioners may tailor their proposal to reflect the likely outcome.

138. The type of remand previously imposed on the child has an important effect on the sentence. If the child was remanded into custody, the likelihood of receiving a custodial outcome (versus a YRO) increases by 31 percentage points. The two decisions are not independent since one of the criteria for a custodial remand is that the court considers there to be a real prospect of a custodial sentence. If the child received a community remand, the likelihood shifts in favour of a YRO by 14 percentage points.
139. Unsurprisingly, the type of outcome is related to the type of offence. For example, the likelihood of a custodial sentence increases for: breach of statutory orders, death or injury as a result of dangerous driving; domestic or non-domestic burglary; robbery; sexual offences; or violence against the person.
140. Conversely, the likelihood of a YRO increases for: breach of conditional discharge; criminal damage; drugs; public order offences; or theft and vehicular theft.
141. Increasing the gravity score by 1 point (on its 8-point scale) increases the likelihood of receiving a custodial sentence by approximately 5 percentage points. Moreover, if the offence involved a knife, the likelihood of this outcome (versus a YRO) increases by 15 percentage points.
142. Increasing the YOGRS score by one tenth (0.1 on the scale ranging from 0 to 1) decreases the likelihood of a custodial sentence by 1.5 percentage points⁶⁰.
143. The likelihood of receiving a custodial sentence increases if the likelihood of reoffending score is high: the effect is approximately 9 percentage points. Moreover, having a high or very high level for ROSH judgement increases the likelihood of receiving a custodial sentence by approximately 21 percentage points.
144. Custodial sentences are more likely for children who have a MAPPA category 2 or 3 tag. The differences are approximately 25 and 16 percentage points, respectively.
145. Finally, as the number of concerns identified by case workers increases, the likelihood of a custodial outcome also increases very slightly (1 percentage point per concern).

Number of requirements (for YROs)

146. We tested the effect of the explanatory factors on the number of requirements imposed as part of a YRO, as a measure of severity.

⁶⁰ As was mentioned previously, the counterintuitive effect of YOGRS score is likely a consequence of a suppression effect (please see footnote 48).

147. On average, being a boy increases the number of requirements by a 0.5 (half of a requirement). There are no differences by age or residence.
148. Crown Courts are likely to impose slightly higher numbers of requirements (on average by 0.3).
149. Having a high or very high level for the ROSH or safety and wellbeing judgements appears to increase the number of requirements. However, due to the low sample size the effect is not statistically significant in some analyses.

Length of sentence (for custodial, YROs and first-tier outcomes)

150. We also measured and tested the effect of each explanatory factor on the length of the sentence. We measured this in months. The analysis was carried out separately for custodial, YRO and first-tier outcomes, with each analysis including only those children who had received the outcome in question and for whom we had information on the length of the sentence.
151. In general, the results are consistent with the findings presented above on legal outcomes.
152. There are no significant differences by gender in the length of custodial sentences. However, boys' sentences appear to be 2.2 months longer for YRO and 1.3 months longer for first-tier outcomes.
153. In general, age (i.e. being older) appears to increase the length of YROs and first-tier sentences but has no effect on the length of custodial outcomes.
154. The type of court has a varying level of effect on sentence length. Having the case heard in a Crown Court increases the sentence length by almost 30 months (on average) for custodial sentences, by about 6 months for YROs, and by just under 1 month for first-tier outcomes⁶¹.

Table 7: Summary of regression results for number of requirements and sentence length

Severity	Number of requirements for YROs	Sentence length for custodial outcomes	Sentence length for YROs	Sentence length for first-tier outcomes
Demographic and offence-related factors				
Gender	More requirements for boys	<i>No significant effect</i>	Longer sentences for boys	Longer sentences for boys
Age	<i>No significant effect</i>	<i>No significant effect</i>	Longer sentences for older children	Longer sentences for older children

⁶¹ Youth Courts should only refuse jurisdiction and send a case to Crown Court in cases where a grave or specified offence has been committed and they consider a sentence beyond to be available.

Residence	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	Shorter sentences for local children
Court type	More requirements set in Crown Court	Substantially longer sentences in Crown Court	Slightly longer sentences in Crown Court	Slightly longer sentences in Crown Court
Region	There are significant differences between some Regions	There are significant differences between some Regions	There are significant differences between some Regions	There are significant differences between some Regions
Offence	Fewer requirements for: breach of statutory order; non-domestic burglary; sexual offences, theft. More requirements for: domestic burglary; robbery.	Shorter sentences for: breach of statutory order; drugs; public order offences; robbery.	Shorter sentences for: breach of bail; breach of statutory order; criminal damage; theft; vehicular theft. Longer sentences for: arson; domestic burglary; robbery; sexual offences.	Shorter sentences for: breach of statutory order; criminal damage; drugs; motoring; non-domestic burglary; public order offences; theft; vehicular theft. Longer sentences for: arson; domestic burglary; robbery; sexual offences.
Remand decision	All types of remand increase the number of requirements.	Having had a custodial remand increases the length of the sentence, while having been in community remand (with or without intervention) decreases it.	All types of remand increase the sentence length.	<i>Model did not converge</i>
Gravity score	Higher scores increase the number of requirements	Higher scores increase the sentence length	Higher scores increase the sentence length	Higher scores increase the sentence length
Knife	Increases the number of requirements	<i>No significant effect</i>	Increases the sentence length	Increases the sentence length
Number of previous orders	<i>No significant effect</i>	Decreases the sentence length	Decreases the sentence length	Decreases the sentence length
YOGRS	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	<i>Model did not converge</i>
Practitioner-assessed factors				
Sentence proposal	YRO proposal increases number of	<i>No significant effect</i>	YRO proposal increases length	First-tier proposal increases length

requirements				
MAPPA category	Less likely for category 3, more likely for category 1 and 2	<i>Having been tagged as category 2 in the past substantially increases the sentence length</i>	<i>Having been tagged as category 1 in the past increases the sentence length</i>	<i>Having been tagged as category 1 or 2 in the past increases the sentence length. Category 3 decreases it.</i>
Likelihood of reoffending	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>
ROSH judgement	<i>No significant effect</i>	Substantially longer sentences for higher ROSH judgements	Somewhat longer sentences for higher ROSH judgements	Slightly longer sentences for higher ROSH judgements
Safety and wellbeing judgement	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>
Concerns	<i>Model did not converge</i>	<i>Model did not converge</i>	<i>Model did not converge</i>	<i>Model did not converge</i>
Number of concerns	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>
Care history	<i>No significant effect</i>	<i>No significant effect</i>	<i>No significant effect</i>	<i>Model did not converge</i>

155. The type of sentence proposal has no effect on the length of custodial sentences. For YROs, having received a YRO sentence proposal (versus no proposal) increase the length of the sentence by just over 1 month. A similar effect is identified for first-tier outcomes⁶².

156. Some offences are associated with longer sentences. These are included in Table 7.

157. Having been in custodial remand increases the length of a custodial sentence by approximately 17 months, while any other type of remand decreases it. Having had community remand with intervention increases the length of a YRO. The length of a first-tier sentence increases if the child had been placed in community remand (with or without intervention).

158. Increasing the gravity score substantially increases sentence length, particularly for custodial sentences. A similar pattern is observed for the ROSH judgement.

159. As regards MAPPA categories, the length of custodial sentence increases if a child is tagged as category 2. Having been tagged as category 1 increases the length of YROs or first-tier sentences.

⁶² Proposals for any outcome are more likely to be made in cases where custody is being considered, therefore even where a YRO or first-tier is received, a longer sentence might be expected for these cases.

Chapter 3: Explaining disproportionality in remand decisions and legal outcomes

160. In addition to measuring disproportionality in key youth justice system outcomes, a key aim of this research is to ascertain whether disproportionality remains once children's demographic characteristics, offence history and the particularities of their journey through the youth justice system are taken into consideration.
161. The analysis in Chapter 1 showed that there are differences between Black, Asian and Minority Ethnic (BAME) and White children in the likelihood of experiencing various youth justice system outcomes. It also showed that there are differences in personal characteristics and systemic characteristics between children of different ethnicities.
162. Chapter 2 assessed the relationship of personal and systemic characteristics to youth justice system outcomes. The results of these analyses show that most of these characteristics influence the likelihood of receiving certain outcomes.
163. This chapter builds on that analysis by seeking to understand:
- whether disproportionality is maintained when factors that were shown to have significant effects on youth justice system outcomes are taken into account, and
 - which characteristics, or combination of characteristics, best account for the apparent disproportionality.
164. These two aims are pursued through a single analytical strategy. We address the first by implementing a regression model in which, along with ethnicity, we include all personal and systemic characteristics that have been shown to have an effect on youth justice system outcomes. (This is carried out using Model 4 as per the table below.) If the variable measuring ethnicity maintains a significant effect on the outcome after the inclusion of these explanatory factors, this would suggest that disproportionality is explained by either ethnicity itself or other factors that were not included in the analysis.
165. The second aim of this stage of the research is addressed by executing the analysis sequentially. We start from an unadjusted model (**Model 1**) that only includes ethnicity. This model, in essence, simply shows the average difference between each BAME group and White children. This is followed by **Model 2** which includes ethnicity, demographics, offence-related factors, excluding the remand decision. **Model 3** adds remand information (where applicable) and **Model 4** adds practitioner-assessed information mostly captured from AssetPlus. The sequential nature of the analysis allows us to deduce the approximate effect of each set of factors on explaining disproportionality.

166. The models we implement in this stage are linked to the analyses presented in Chapter 2. Only those individual characteristics that have been shown earlier to have a significant effect on an outcome are included in the models.

167. Table 8 illustrates the structure of the models for legal outcomes (excluding out-of-court-disposals). We followed a similar approach for remand decision and out-of-court-disposals; however, the set of models that introduce remand as an explanatory factor is removed (model 3 in Table 8).

168. We also carried out additional analyses to drill deeper and measure the power of each individual characteristic to explain disproportionality. We discuss these later.

Table 8: The structure of the models and their components

Statistical models		Model 1	Model 2	Model 3	Model 4
		Unadjusted (only ethnicity)	Adjusted for demographics and offence-related factors, excluding remand	Adjusted for demographics and offence-related factors, including remand	Adjusted for demographics, offence-related factors, remand and practitioner assessments
Ethnicity					
Ethnicity	Asian compared to White	Yes	Yes	Yes	Yes
	Black compared to White	Yes	Yes	Yes	Yes
	Mixed ethnicity compared to White	Yes	Yes	Yes	Yes
	Other minority ethnic compared to White	Yes	Yes	Yes	Yes
Demographic and offence-related factors					
Demographic characteristics	Gender	No	Yes	Yes	Yes
	Age	No	Yes	Yes	Yes
	Residence	No	Yes	Yes	Yes
	YOT or Region	No	Yes	Yes	Yes
Area level characteristics	Ethnicity in the 10 to 17-year-old population in	No	Yes	Yes	Yes

each YOT				
Number of previous cautions and orders for each ethnicity in each YOT	No	Yes	Yes	Yes

Offence-related factors	Court type **	No	Yes	Yes	Yes
	Offence	No	Yes	Yes	Yes
	Gravity score	No	Yes	Yes	Yes
	Use of knife *	No	Yes	Yes	Yes
	YOGRS	No	Yes	Yes	Yes
	No. of previous orders *	No	Yes	Yes	Yes
	Remand decision * **	No	No	Yes	Yes

Practitioner-assessed factors

Sentence proposal * **	No	No	No	Yes
MAPPA category and level	No	No	No	Yes
Likelihood of reoffending	No	No	No	Yes
ROSH judgement	No	No	No	Yes
Safety and wellbeing judgement	No	No	No	Yes
Concerns	No	No	No	Yes
No. of concerns	No	No	No	Yes
Care history	No	No	No	Yes

* The variables marked are only included in the regression models that assess sentencing outcomes. They are not included in the models measuring remand decisions.

** The variables marked are not included in the models that assess out-of-court disposals. Model 3 is not run for this outcome.

Remand decision

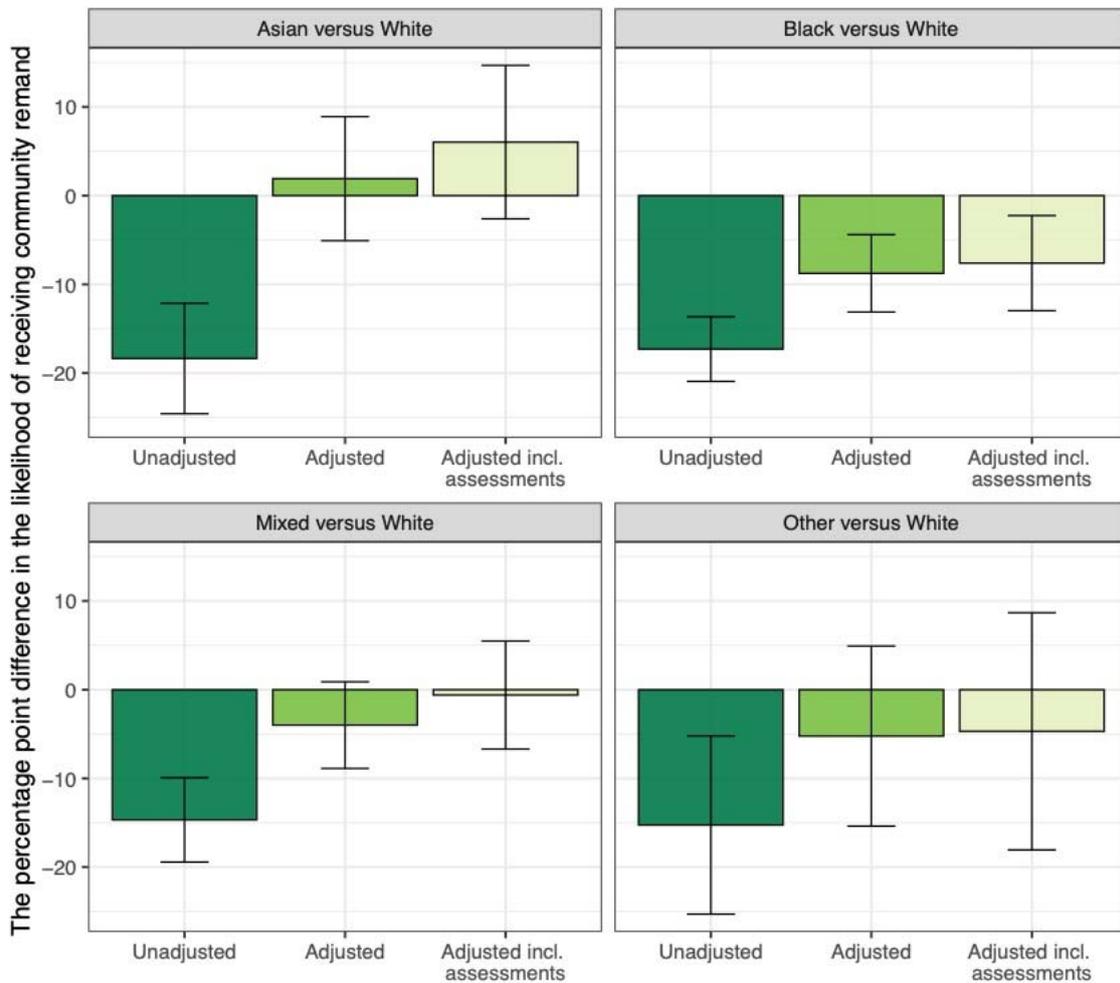
169. The results of the analyses are displayed in the figures below. Each figure includes four graphs, one for each minority ethnic group compared to the White ethnic group. In each graph there are three bars, one for each type of model. The bars indicate the difference between the given ethnicity and White children if different groups of factors are accounted for.

170. Each bar contains a vertical line with horizontal edges. This indicates the range of the 95% Confidence Interval. The Confidence Interval allows us to see if the difference between BAME and White ethnicities is statistically significant (i.e. is not a chance result of natural variation). If the range denoted by this bar includes the X axis (i.e. 0), the difference is not statistically significant.

171. The results we report are based on the subsample of children for whom we have AssetPlus data. There are slight differences in the size of the effects compared to using the full analytical sample; however, the direction of effects and the pattern of differences between models are similar. It is the differences between these sequential models displayed in the graphs that are of relevance to this analysis.

Community remand

Figure 14: Differences between each BAME ethnicity and White across sequential models for community remand



The 'Adjusted' model includes demographics and offence-related factors. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

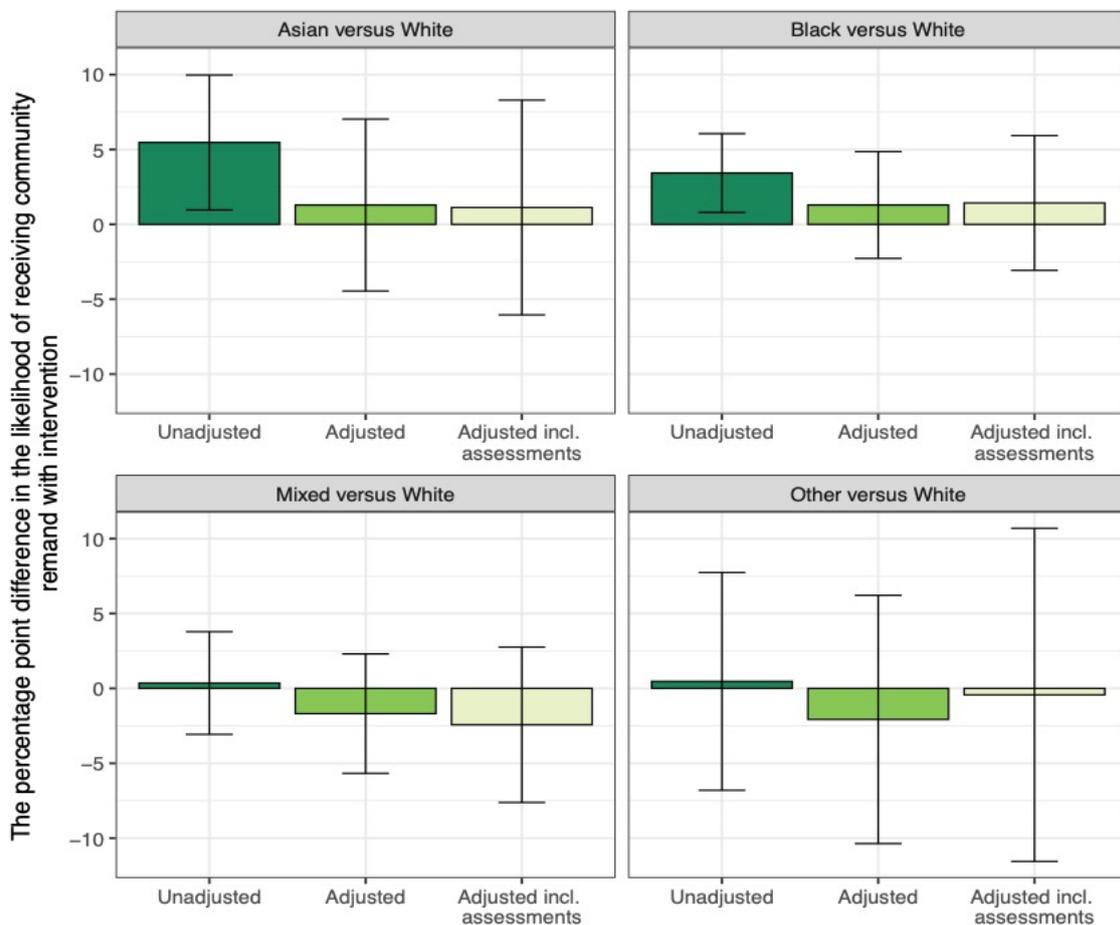
172. Figure 14 indicates that irrespective of the specific ethnic group to which a BAME child belongs, he or she is less likely to receive community remand compared to a White child (dark green bars). This is consistent with the descriptive analysis presented in Chapter 1.

173. However, for all minority ethnic groups, except Black, when demographics and offence-related factors are included, the difference with the White ethnic group loses significance. This means that the apparent disproportionality we see in remand decisions for these groups can be explained by factors other than ethnicity, such as the children’s demographic characteristics, offence history or court type.

174. This finding does not apply to Black children, for whom taking into account demographic and offence-related characteristics explains part, but not all, of the disproportionality. Even after controlling for practitioner-assessments, approximately half of the observed disproportionality is maintained.

Community remand with intervention

Figure 15: Differences between each BAME ethnicity and White across sequential models for community remand with intervention

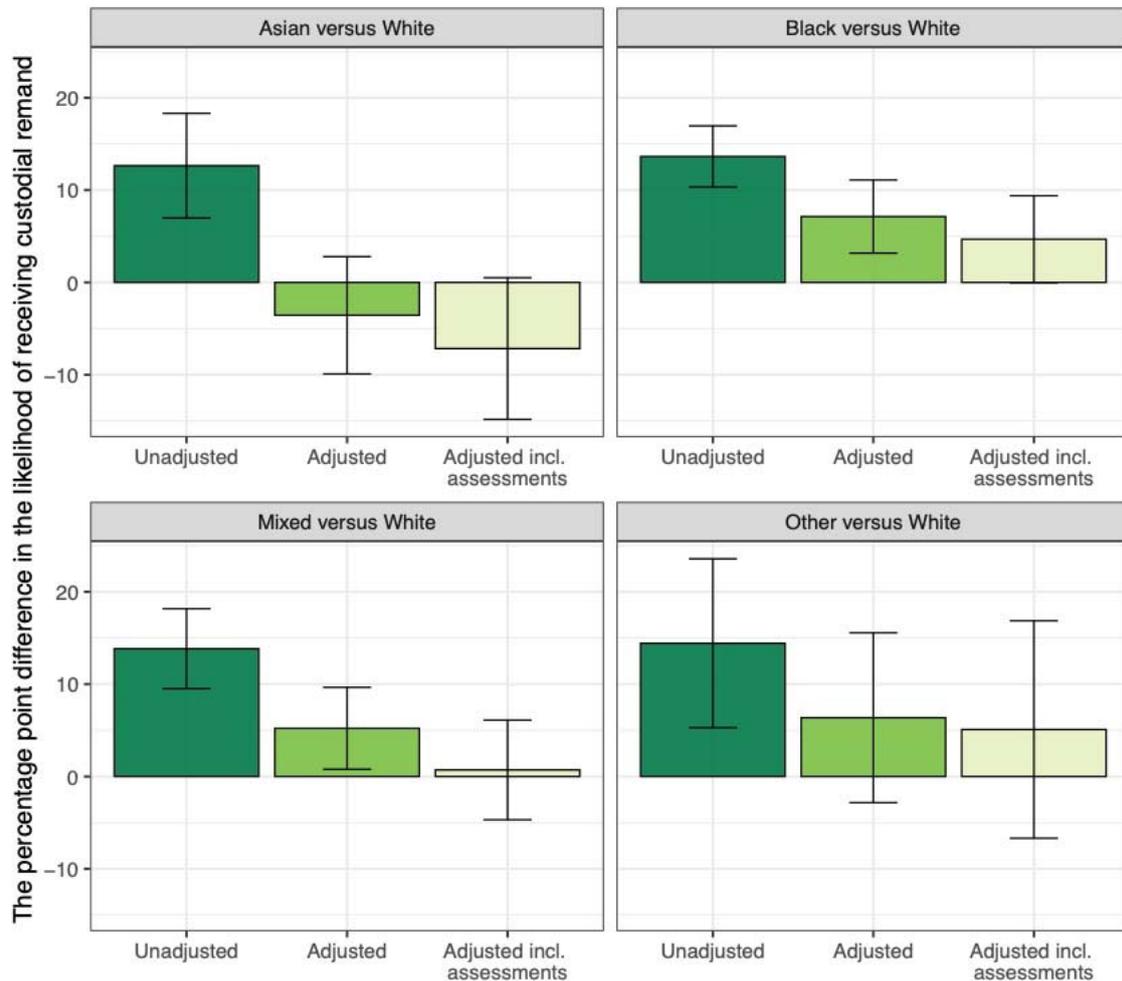


The 'Adjusted' model includes demographics and offence-related factors. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

175. The results for community remand with intervention (Figure 15) display a similar, but opposite, pattern to those for community remand without intervention. Each ethnicity appears more likely than White to receive such an outcome; however, for Mixed and Other ethnicities this difference is not statistically significant. Moreover, once demographics and offence-related factors are controlled for, the apparent disproportionality dissipates for all ethnicities.

Custodial remand

Figure 16: Differences between each BAME ethnicity and White across sequential models for custodial remand



The 'Adjusted' model includes demographics and offence-related factors. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

176. Again, all BAME children appear to be statistically significantly more likely than White children to receive custodial remand. Once we control for demographics and offence-related factors, the apparent disproportionality is eliminated for Asian children and for children from Other ethnic groups.
177. For Black children and children with a Mixed ethnicity, controlling for demographics and offence-related factors decreases the size of, but does not eliminate, the disproportionality. Once practitioner-assessments are included, this difference is eliminated for children with a Mixed ethnicity. For Black children the difference borders on statistical significance and should be interpreted with care.
178. It is important to note that even though this analysis might suggest that introducing practitioner-assessments from AssetPlus (nearly) eliminates the effect of ethnicity, this might not be the case in reality. Such assessments may themselves already integrate the effect of ethnicity. It is possible that variables such as the likelihood of reoffending, the ROSH judgement and

the safety and wellbeing score are themselves affected by ethnicity, with Black children more likely to be judged more severely.

Legal outcomes

179. The paragraphs below set out the results of the analysis pertaining to legal outcomes and their severity. The analyses were carried out in a similar way to the ones presented above and the figures can be interpreted similarly.

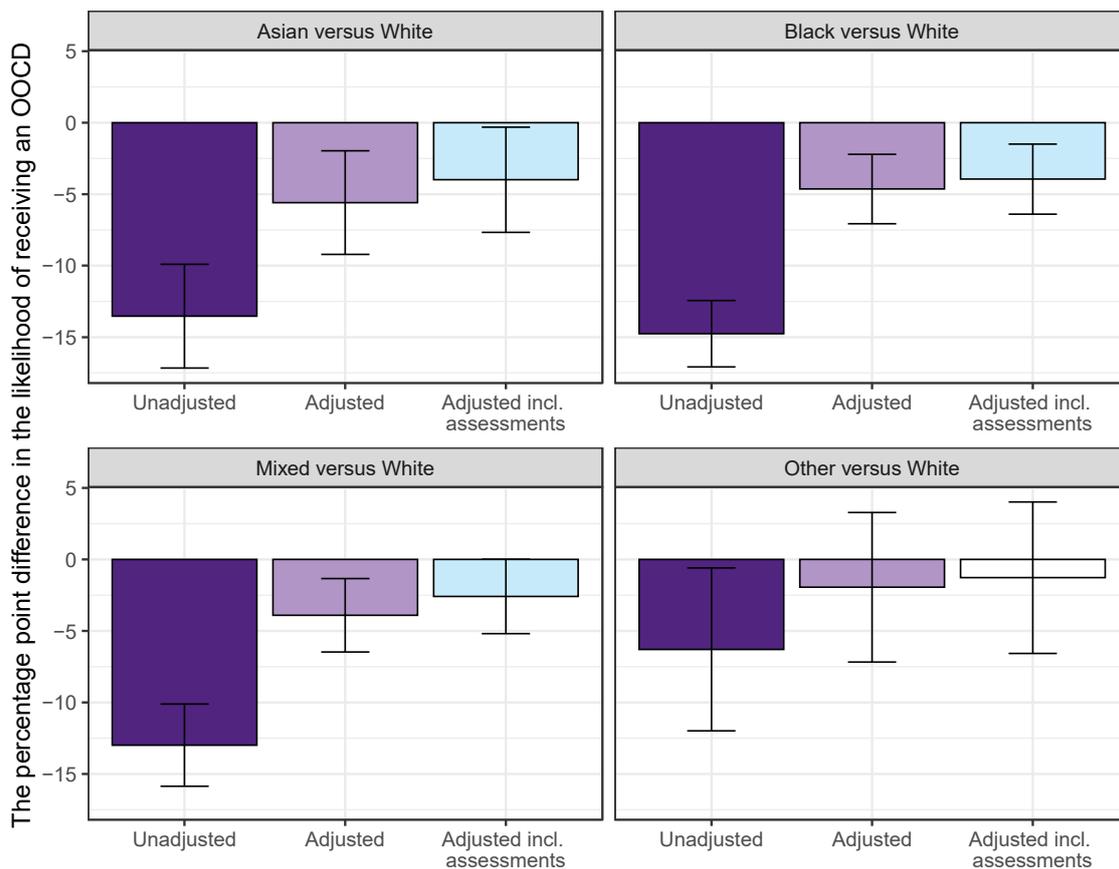
Out-of-court disposal versus sentence at court

180. Asian, Black and children of Mixed ethnicity are substantially less likely to receive an out-of-court disposal compared to White children (Figure 17).

181. This disproportionality is reduced, but still significant when demographic characteristics, offence-related factors, and the youth offending team (YOT) are taken into account.

182. Black children are the only ethnic group for whom there is still a clear significant difference in the probability of receiving an out-of-court disposal once practitioner-assessed factors are also controlled for.

Figure 17: Differences in probability of receiving an out-of-court disposal compared to being sentenced in court between White children and BAME children

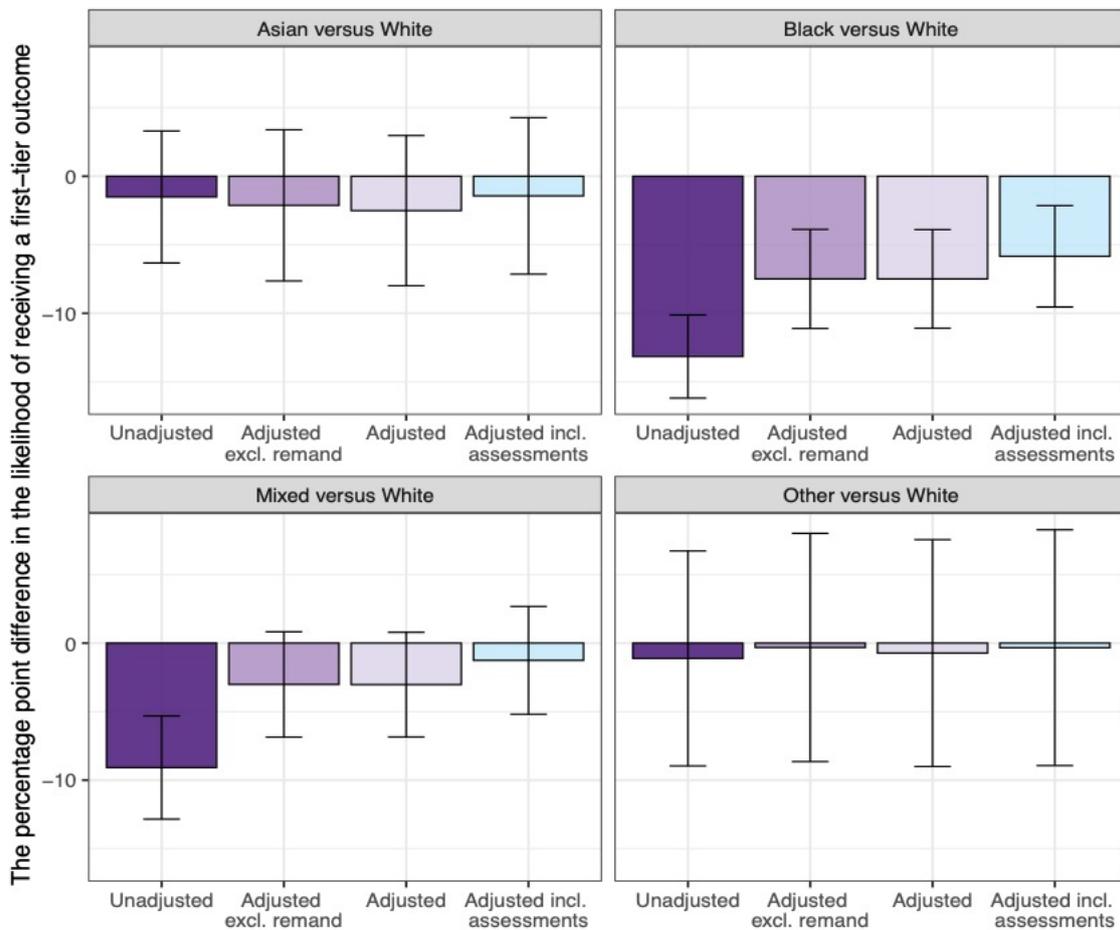


The 'Adjusted' model includes demographics and offence-related factors. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

First-tier outcomes compared to a YRO or custodial sentence

183. Black and children with a Mixed ethnicity are less likely to receive a first-tier outcome than White children (Figure 18).
184. For children with a Mixed ethnicity this original statistically significant difference of approximately 9 percentage points decreases and loses statistical significance when demographics and offence-related factors are taken into account. This suggests that for children with a Mixed ethnicity it is their demographic and offence history that can explain their likelihood of receiving a first-tier outcome.
185. For Black children, we find that as we include in the model demographics and offence-related factors followed by practitioner assessments the difference with White children halves but is not eliminated. Even after controlling for all factors on which we have data, Black children are between approximately 2 and 10 percentage points less likely to receive a first-tier outcome at court.
186. This research cannot shed light on the reasons for this finding; however, technically there are two potential (non-mutually exclusive) explanations:
- There are biases in the sentencing of Black children.
 - There are other factors that could explain this difference (such as plea, type and quality of representation, etc.) and we do not control for them in this research as they are not recorded in the data.

Figure 18: Differences in probability of receiving a first-tier sentence compared to either a custodial or a YRO between White children and BAME children



The 'Adjusted' model includes demographics, offence-related factors and remand. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

Custodial sentences versus YROs

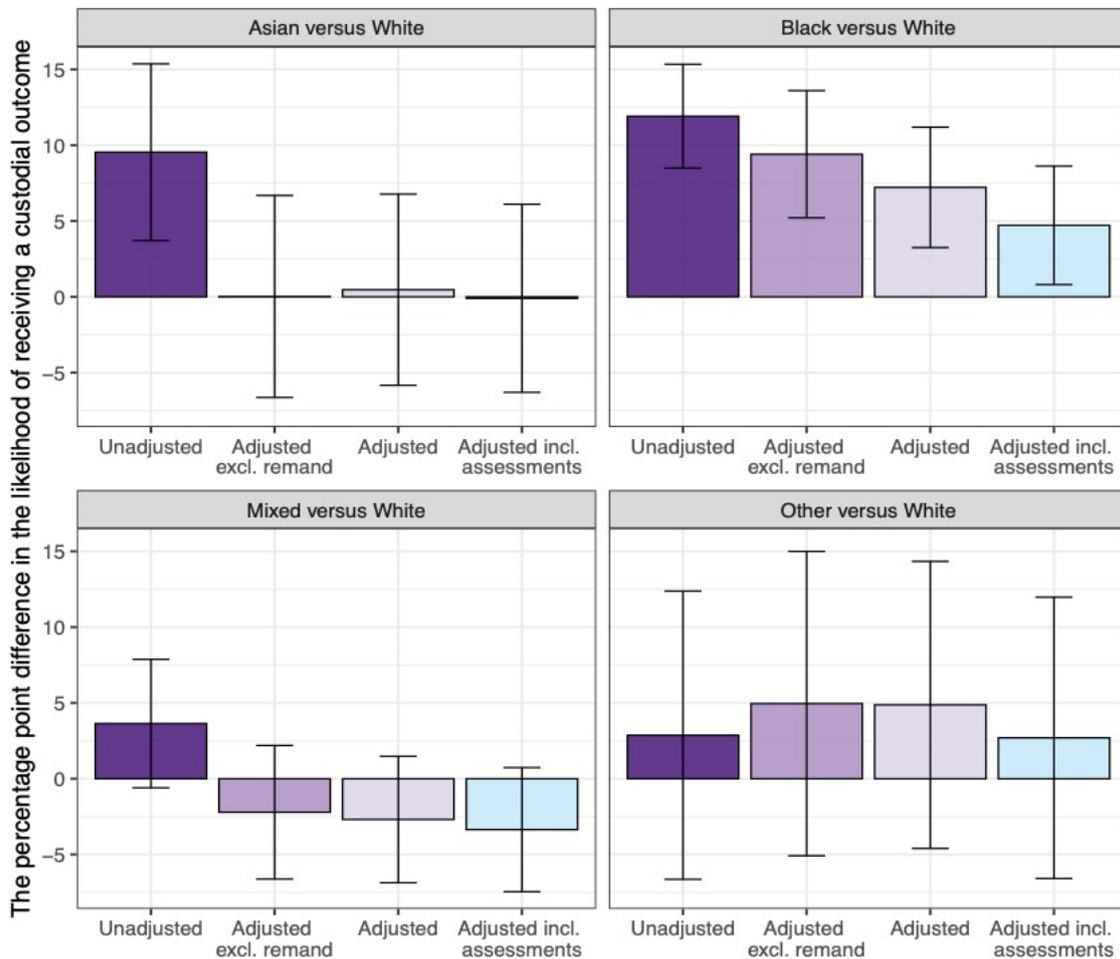
187. Asian and Black children appear to be significantly more likely to receive a custodial sentence rather than a YRO compared to White children by 10 and 12 percentage points, respectively. There is no statistically significant difference when comparing children from the Mixed and Other ethnic groups to White children (Figure 19).

188. The difference observed for Asian children in the unadjusted model is almost entirely removed, losing statistical significance, as soon as demographics and offence-related factors are included. This means that the original differences observed between Asian and White children can be explained by the children's demographics characteristics, the particularities of their offending behaviour, YOT and court type.

189. For Black children, we find that as we sequentially increase the number of factors in the model the difference with White decreases but is not eliminated. Even after controlling for demographics and offence-related, and practitioner-assessed factors, Black children are between approximately 2 and 8 percentage points more likely to receive a custodial sentence compared to White children.

190. As mentioned earlier, this research cannot shed light on the reasons for this finding.

Figure 19: Differences in the probability of receiving a custodial sentence compared to a YRO between White children and BAME children



The 'Adjusted' model includes demographics, offence-related factors and remand. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

Sentence length

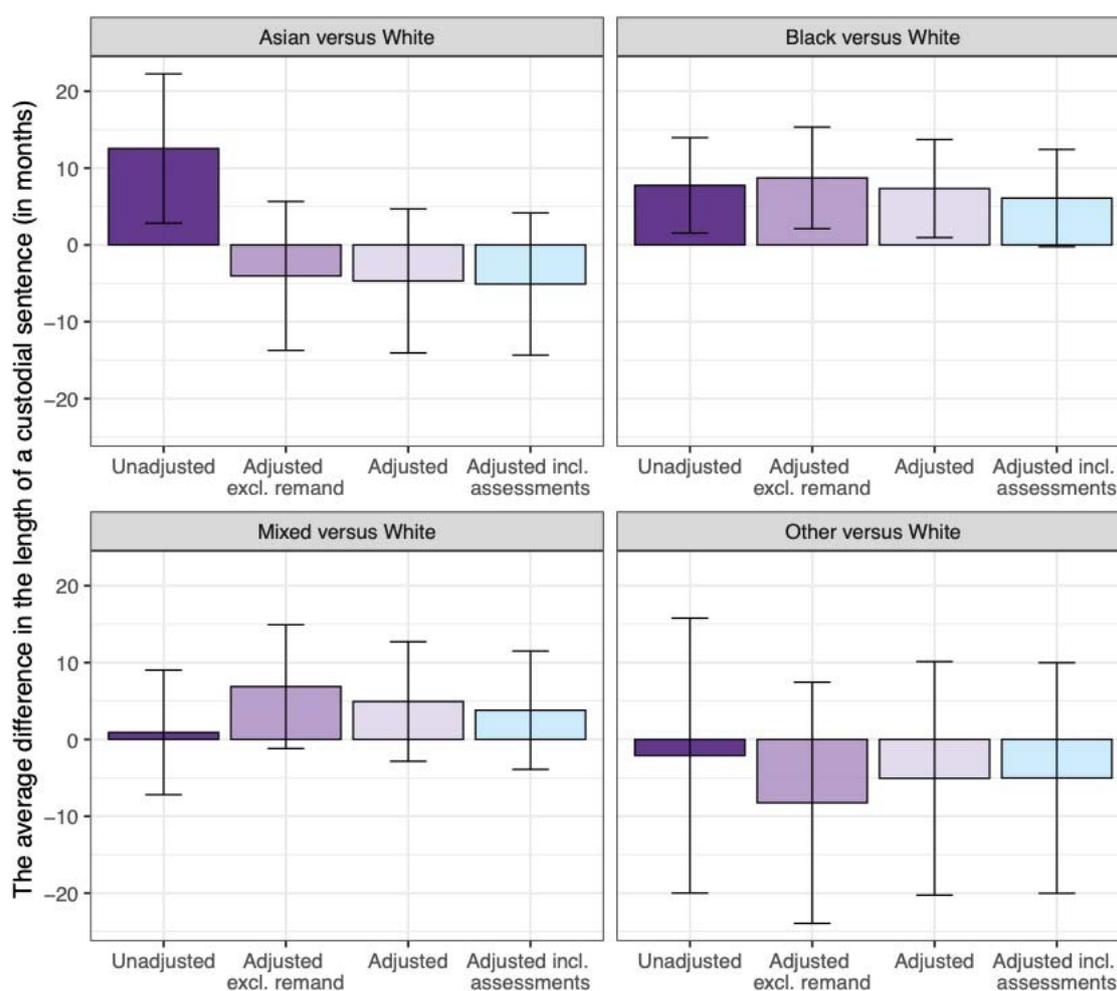
191. Asian and Black children are likely to have longer sentences compared to White children. For Asian children this difference is eliminated when controlling for demographics and offence-related factors (Figure 20).

192. For Black children, the difference is maintained until the effects of practitioner-assessments are controlled for. At that point, the difference between Black and White children loses statistical significance.

193. The ethnicity of children may still influence their outcomes indirectly. Ethnicity may affect the formation of judgements (e.g. ROSH), as well as remand decisions (as shown in the previous analysis) which in turn influence sentencing outcomes.

194. Differences in sentence lengths by ethnicity for YRO and first-tier outcomes are not significant.

Figure 20: Differences in average length of the sentence (in months) for custodial sentences between White children and BAME children



The 'Adjusted' model includes demographics, offence-related factors and remand. The graphs display coefficients obtained in sequential multilevel regression models. The 95% Confidence Interval is identified by the black vertical bars.

Number of requirements for community outcomes

195. There are no statistically significant differences by ethnicity in the number of requirements when children with no requirements are included. The descriptive analysis in Chapter 1 illustrated the differences when those with no requirements are removed. Due to low sample size, we did not perform an inferential analysis after removing those without requirements.

Explaining disproportionality – further analyses

196. We carried out additional analyses to determine each variable's, or group of variables', contribution to the decrease in disproportionality. This was achieved by rerunning the appropriate models and removing one variable at a time and gauging the difference in the adjusted differences for each ethnicity.

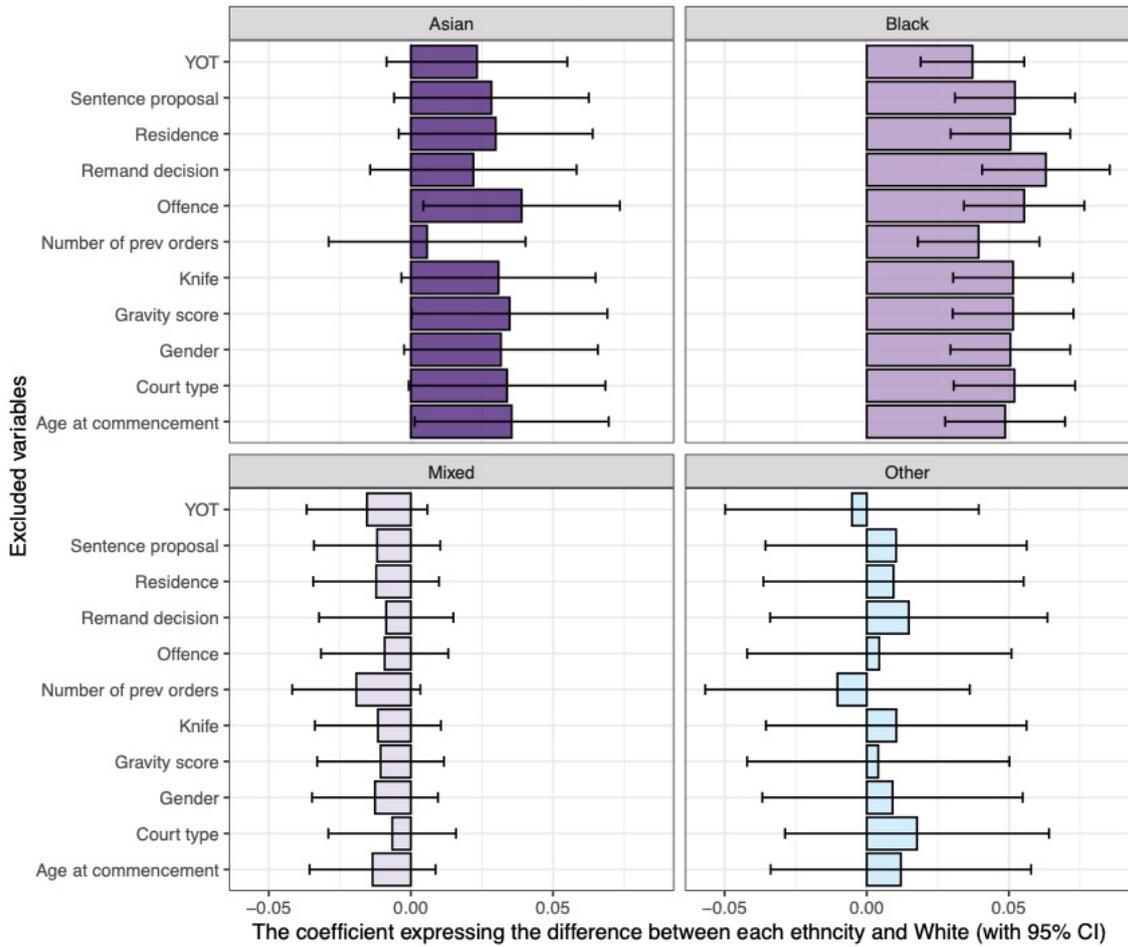
197. As an example, we include the results for model 3 of the analysis assessing custodial outcomes versus YROs in Figure 21.

198. In general, the results were inconclusive and do not allow us to clearly characterise the contribution of each variable.
199. In the example below, we focus on the results for Black children. The bars quantify the difference between Black and White children after removing each of the variables mentioned on the Y axis, one at a time.
200. The model that contains all variables identifies a difference of 0.05⁶³ (5 percentage points).
201. The results show that removing some variables (such as remand) increases the difference. This means that remand is responsible for explaining a portion of the disproportionality that is equal to distance of the bar away from 0.05.
202. The results also show that removing some variables (e.g. YOT) actually decrease the size of the difference. This is counterintuitive but not surprising. This is defined in the literature as a suppression effect, where one variable's indirect relationship with the outcome through several other variables is in conflicting directions. Taking into account the YOT suppresses part of the error term and allows for a more accurate comparison between Black and White children to be made.
203. Finally, a third category of factors have very limited unique effects on the results. This is because most demographic and offence-related factors are linked (e.g. the gravity score is based on the offence type, the court type is influenced by the offence type, the offence type is related to personal background and history, etc.). This means that their explanative power overlaps. Our analysis set out to identify factors' unique effect i.e. their effect once this overlap is removed.
204. Taken together, the results indicate that the unique power of each variable to explain disproportionality is low and it is actually the combination of characteristics that should be considered when explaining disproportionality. This has already been done in the analysis presented earlier in the chapter.

Figure 21: Example assessment of the unique effect of each explanatory factor in the custodial versus YRO analysis.

⁶³ Bar not included in the graph.

Dependent variable : outcome_custody



Chapter 4: Discussion and conclusions

205. In light of the enduring problem of ethnic disproportionality and the over-representation of Black, Asian and Minority Ethnic (BAME) children in custody, where minority ethnic children now account for over 50% of the population⁶⁴, analysing remand decisions and legal outcomes is critical.
206. This study was concerned with two central questions. First, to understand the extent of disproportionality in remand and sentencing outcomes in the youth justice system of England and Wales.
207. Second, to investigate the extent to which disproportionality can be explained by either the child's demographic characteristics, offence-related factors or practitioner assessments. Crucially, the aim was to identify factors that may introduce, maintain and drive up ethnic disproportionality.
208. To achieve this second aim we carried out two tasks. First, we assessed the relationship between each of the factors listed above and sentencing and remand outcomes. Second, we analysed how these relationships affect the effects of ethnicity on the outcomes.
209. Previous discussions of ethnic disparity have sought to identify the factors that can explain the persistence of disproportionality in youth justice outcomes (Lammy 2017, Uhrig 2016), but have tended to conflate the true risk of offending behaviour with how this risk is perceived (informed by demographic characteristics). For example, contemporary debates around gang-related offending and/or knife crime have been used to explain the increased disparities of BAME children within the youth justice system (Williams and Durrance 2018⁶⁵, Maslaha 2016⁶⁶).
210. This study included regression modelling to assess what happens to disproportionality in remand decisions and legal outcomes once demographics, offence-related, and practitioner-assessed factors are taken into account. Offence-related factors include type of offence, youth offending team (YOT) and case factors that are unchanging, such as court type. Practitioner-assessed factors are those that are generated by practitioners.
211. While we acknowledge that disproportionality can also occur in different stages of the process (arrests, decisions to charge, acquittals, etc), this

⁶⁴ Youth Custody Service (2020) 'Monthly Youth Custody Report, June 2020'. London: HMPPS <https://www.gov.uk/government/statistics/youth-custody-data>.

⁶⁵ Williams, P. and Durrance, P. 'Resisting effective approaches for BAME offenders: The triumph of inertia' in P. Ugwu-dike, P. Raynor and J. Annison (eds) (2018) *Evidence based skills in Criminal Justice: International perspectives on Effective Practice*. Bristol: Policy press.

⁶⁶ Maslaha Charity (2016) 'Young Muslims on Trial'. London: Barrow Cadbury Trust. <https://www.maslaha.org/Project/Young-Muslims-on-Trial>

project focused narrowly on assessing if remand or sentencing decisions are disproportional given the characteristics of each case.

Limitations

212. We should acknowledge that the results presented in this report are limited to the information statutorily required to be collected for organisational monitoring and for the purpose of supervising children who enter the system. This means that pertinent variables that inform how practitioners come to understand BAME children under supervision and may affect decision making are not included in the data. For example, plea data is not available. The nature of plea influences the severity of sentence and there is evidence that BAME children are more likely to plead not guilty (Uhrig, 2016). An admission of guilt is also required for a caution to be imposed, and there is some evidence that BAME children are more likely to make 'no comment' interviews and so may not be eligible for an out-of-court-disposal (Lammy, 2017).
213. Conversely, it could also be the case that information that we do include in the analysis might not have been available to decision makers when imposing an outcome. Decision makers' knowledge may vary depending upon the extent to which reports such as Pre-Sentence Reports are provided to them, and more complete information would be expected for more serious cases. From a legal perspective, not all variables should be relevant to decision making, however, they were included in the analyses as they may nonetheless have an influence.
214. The data also cannot speak to the subjective and lived experiences of children subject to youth justice supervision, it only reflects practitioners' perspectives of children who enter the system.
215. Grouping all children from ethnic minorities into an omnibus BAME group inadvertently obscures the specific experiences of disproportionality for different ethnic groups. For this reason, this report has focused on identifying the differentiated experiences of children from each broad ethnic group compared to White children. Differences within each broad ethnic group may also exist, however, limited numbers meant it was not feasible to separate these groups out further.
216. Similarly, remand and sentencing outcomes were combined into broader categories to enable comparisons using the classifications found in the YJB's Data Recording Requirements. These broad categories contain a number of different particular types of outcomes that might differ in their level of severity or restrictiveness and may not reflect legal terms. This analysis focused on assessing disproportionality in the broad categories and cannot speak to any disproportionality that might exist in particular outcomes.
217. Moreover, the use of such broader outcome categories could potentially obscure the nuances of effects. For example, the category 'community remand with intervention' contains remand outcomes that follow after a grant of bail or a refusal of bail and might include effects that could cancel each other out when subjected to analysis. Moreover, our comparisons of outcome categories do not always capture the nuances of the legal

process, i.e. the avenues open to a child's case at different stages. We acknowledge that these may not always reflect the sentences available in every case, as set out in the sentencing guidelines.

218. The analyses assess the effect of a wide array of factors on outcome categories. It is important to note that we cannot draw conclusions about how and why the factors we discuss may influence outcomes. The analyses we present in the report illustrate the relationships between the various factors and outcomes and have been implemented in such a way as to allow for the identification of each factor's unique effect. This allows us to say what the expected 'movement' in an outcome is based on changes in the factor. However, none of the analyses in this report can be interpreted causally. For example, we are able to say that a case being heard in a Crown Court compared to a magistrates' court increases the likelihood of a custodial outcome, but we cannot say that being heard in a Crown Court is the cause of the custodial outcome.
219. The factors we use to explain disproportionality include demographics, offence-rated factors and practitioner assessments. There may be some inherent subjectivity in many of these and they themselves could already be affected by ethnicity. For example, the decision as to what court hears a case could potentially harbour bias. This may also be true of decisions around the categorisation of offences. It is also possible that variables such as the likelihood of reoffending, the risk of serious harm (ROSH) judgement and the safety and wellbeing score are themselves affected by ethnicity, with Black children more likely to be judged more severely.
220. As such, even if this research shows that the factors that were included appear to account for all disproportionality, this does not mean there is no indirect influence of ethnicity, through the effect ethnicity could have had, earlier in the process, on these factors.

Summary of the results

Summary of drivers of remand and sentencing outcomes

221. The likelihood of custodial remand is shown to be affected by not being a local resident, having previous orders, having a 'high or very-high' ROSH and 'safety and wellbeing' assessment. This might suggest that custodial remand decisions may be presented as being in the interest of the child particularly in light of assessments of 'safety and wellbeing' and risk of serious harm. Consequently, concerns around child protection and safeguarding measures may inadvertently increase the likelihood of remand in custody. However, custodial remand is also linked to having a higher likelihood of reoffending. As such, an argument can also be made that remand is a function of the assessed risk the individual presents to society. This analysis is unable to determine whether it is concerns pertaining to 'risk' or 'welfare' that might be motivating remand.
222. Being remanded in custody substantially increases the likelihood of a custodial sentence by approximately 31 percentage points. This means that out of two children with the same demographic and offence profile if one receives custodial remand and the other receives community remand, the

one who received custodial remand is far more likely to receive a custodial sentence.

Summary by ethnicity

223. There are notable differences between children of different ethnicities in risk, wellbeing and offending profiles with Black children and children of Mixed ethnicity having the largest differences compared to White children.

Asian children

224. **Profile.** Asian children were more likely than all other ethnic groups to be convicted for motoring offences. The Asian group were more likely to receive an out-of-court disposal than other minority ethnic children. When heard in court, a higher proportion of Asian children had their cases heard in the Crown Court for both remand and legal outcomes. They were most likely to be remanded to the community with intervention.

Asian children had on average the lowest number of previous orders which may explain why Asian children as a group were more likely to receive first-tier sentences and least likely to receive a Youth Rehabilitation Order (YRO). Comparative to all other children, 36% of Asian children were assessed as having a high likelihood of reoffending, the lowest for all groups. This group had the lowest proportion assessed with 'concerns'.

225. **Remand.** Comparing the outcomes of Asian children with those of White children suggests there is disproportionality in both remand and sentencing outcomes. For example, Asian children appear to be less likely than White children to be remanded to the community and more likely to be remanded with intervention or to receive custodial remand.

226. **Sentencing.** Asian children also appear to be more likely to receive a custodial sentence (compared to a YRO). However, when the factors such as children's demographic characteristics, offence, remand status and court type are taken into consideration this disproportionality is completely explained. This suggests that it is differences in Asian children's circumstances and characteristics that explain their disparity in outcomes.

227. The unadjusted higher probability of Asian children being sentenced in court, rather than receiving an out-of-court disposal, may be the consequence of gravity scores and the type of offences committed by Asian children. The disproportionality decreases but remains statistically significant when we control for demographics and offence-related factors. Even if practitioner assessments are included, the difference is not eliminated, it maintains statistical significance.

Black children

228. **Profile.** Compared to all the other ethnic groups, Black children were substantially less likely to receive an out-of-court disposal and most likely to be remanded in custody. In addition, Black children were most likely to receive a custodial sentence and to serve longer sentences than all other ethnic groups.

Black children were more likely to have been convicted of drug related offences or violence against the person. Black children were more likely to be assessed as at greater risk of serious harm, and with higher safety and

wellbeing concerns. Practitioners had more serious concerns with regards to risk of physical harm and were more likely to consider death a more likely adverse outcome. Such assessments may be related to the finding that Black children experienced the highest number of sentencing occasions for knife-related offences.

229. **Remand.** Black children are less likely to receive community remand without intervention and neither demographics, offence-related factors, nor practitioner-assessed factors can fully explain this difference. Conversely, Black children are statistically more likely to receive community remand with intervention compared to White children, but the significance of this difference disappears when we control for demographics and offence-related, such as offences, gravity, court type, YOT, etc.

Black children also appear more likely to be remanded into custody compared to White children. Demographics and offence-related factors do not entirely explain this disproportionality. However, when practitioner-assessed factors are taken into account (such as, ROSH score, safety and wellbeing judgement, likelihood of reoffending and concerns) the difference loses statistical significance.

230. **Sentencing.** Unlike for other minority ethnic groups, the differences in demographics and offence-related factors, and practitioner-assessed factors cannot fully explain why Black children receive fewer first-tier outcomes and more custodial sentences. Black children are between 2 and 8 percentage points more likely than White children to receive a custodial sentence when controlling for all available variables. Demographics and offence-related factors, along with practitioner-assessed factors halve the original size of the disproportionality but we could not identify the factors, other than ethnicity, that can explain the remaining level of disproportionality⁶⁷. Further, Black children are between 2 and 10 percentage points less likely than White children to receive a first-tier outcome once we control for all variables.

Children with a Mixed ethnicity

231. **Profile.** Mixed ethnicity children present with a similar offence-type profile to Black children but with increased levels of criminal damage and vehicle theft offences. This group has the greatest number of previous orders. Children with a Mixed ethnicity, along with Black children were the group most likely to receive a YRO. Just under a quarter of children of Mixed ethnicity were remanded to custody with the majority being remanded to the community.

232. **Remand.** Children with a Mixed ethnicity appear less likely to receive community remand and more likely to be remanded in custody, compared to White children. For community remand, once demographics and offence-related factors are taken into consideration the difference decreases and ceases to be statistically significant.

⁶⁷ This finding echoes the work of Hood et al (1992) and his classic study 'Race and sentencing: a study in the Crown court'.

233. The difference between children with a Mixed ethnicity and White children in the likelihood of receiving custodial remand is decreased but still present and statistically significant when demographics and offence-related factors are taken into account. This difference loses statistical significance when practitioner-assessed factors are included.
234. This finding might suggest that practitioners' views of children drive the outcome and not ethnicity itself. This, in turn, might suggest that there is disproportionality in practitioner judgements. Further research is required to determine whether such judgements are commensurate with children's circumstances, or whether the harshness of judgements differs by ethnicity.
235. **Sentencing.** We observe that children with a Mixed ethnicity are less likely to receive a first-tier outcome (compared to a custodial sentence or YRO), however, the difference loses statistical significance when taking into account demographics and offence-related factors. They are also less likely to receive an out-of-court disposal and controlling for demographics and offence-related factors decreases but does not eliminate the observed disproportionality. This difference between children of Mixed ethnicity and White children in the likelihood of receiving an out-of-court disposal loses statistical significance when practitioner-assessed factors are included.

Children from Other ethnic groups

236. **Profile.** Children whose ethnicity was identified as Other present with a qualitatively different offence profile, with fraud and forgery present alongside breach of bail and statutory orders, and drug-related offences. In terms of the average gravity score, the Other ethnicity group was similar to the White group. This group also have comparatively lowered YOGRS scores and have fewer previous orders which is slightly above the Asian group who on average have served the fewest previous orders.

The Other ethnic group were least likely to be remanded in the community with an intervention and received a similar number of additional sentence requirements to White children. The majority of Other ethnicity children received a first-tier sentence with 7.2% being sentenced to custody.

237. **Remand and sentencing.** There are apparent differences between children of Other ethnic groups and White children for remand decisions but almost no significant differences in sentencing outcomes. Moreover, any differences that were observed in unadjusted models decrease and lose statistical significance when demographics and offence-related factors are considered.

Conclusion: the persistence of disproportionality

238. In general, levels of disproportionality observed when comparing outcomes across ethnic groups in most instances can be explained by demographics, offence-related factors or practitioner-assessed factors. We summarise the main findings below:

- For most outcomes and for most ethnicities the disproportionality that is initially observed is removed (or at least reduced) when demographics and offence-related factors are taken into account. *Differences that are observed in the types of outcomes or their harshness, can in many cases,*

be explained by the differences in demographic characteristics, offences and offence history, location (YOT) and court type. Statistically, this means that two children who are similar in all these respects would be predicted to receive the same outcome irrespective of ethnicity.

- This suggests that, in these cases, remand and sentencing decision do not add to the disproportionality. This does not mean that ethnicity does not have an impact on the outcomes as any disproportionality originating earlier in the process might be perpetuated. We discuss this further below.
- *There are some outcomes for some ethnicities where demographics and offence-related factors alone do not explain away the disproportionality.* We find that:
 - There are *more restrictive remand outcomes* for Black and Mixed ethnicity children
 - There are *fewer out-of-court disposals* for Black, Asian and Mixed ethnicity children
 - There are harsher court sentences for Black children
- In some of these cases *remand decisions and/or practitioner-assessed factors further explain the disproportionality.*
- *Remand decisions are themselves disproportional*, and disproportionality in remand decisions, in some cases, translates into disproportionality in sentencing, even when controlling for the nature of the offence.
- Furthermore, *both remand decisions and legal outcomes are affected by practitioner assessments.* Differences in practitioner assessments of vulnerability and risk might reflect biases in judgement or actual societal differences in circumstances and wellbeing between children of different ethnicities. Disproportionality in practitioner assessments may translate into disproportionality in both remand and sentencing outcomes⁶⁸.
- In some cases, *disproportionality between Black and White children is maintained, even after all available factors are controlled for.* Black children are the least likely group to receive an out-of-court disposal and most likely to be remanded in custody. Black children are most likely to receive custodial sentences.

239. This analysis assessed disproportionality and tried to localise it more precisely. We identify two potential explanations for the persistence of disproportionality. Where disproportionality cannot be explained through the available data, this may be due to:

1. biases in how sentencing and remand decisions are made, particularly pertaining to Black children;
2. the omission from the analysis of relevant factors that could explain disproportionality (such as plea, type and quality of representation, etc.);

⁶⁸ The descriptive analysis indicates that there are clear and substantial differences between ethnicities in practitioner-assessments, particularly around the risk and wellbeing of Mixed and Black children.

240. Arguably the potential biases mentioned above could originate in the inadvertent use of heuristics based on aggregate evidence (e.g. group level statistics) or personal experience that might suggest that Black children are more prone to group-affiliated offending behaviour and violent crime. As identified in this report, more subjective assessments present Black children as both vulnerable and risky especially on the scales of assessed likelihood of reoffending and on safety and wellbeing judgements.
241. Further research should be carried out to examine whether any of these explanations holds true. We suggest them as possibilities and this research is not able to directly substantiate them.
242. Finally, this analysis also shows that individual factors and variables cannot alone explain ethnic disproportionality. The various explanatory factors are related to each other and explain disproportionality when taken together. It is their joint and cumulative effect that is assessed by this research.

Technical Note

The paragraphs below include the details of the methodology used to carry out the analysis, including relevant decisions made.

Data preparation

The data was extracted from youth offending team (YOT) case management systems in four sets of distinct data files (each set contained data for 1 year or 6 months):

- One file was the *main case management extract* that contained background, demographic and offence- and system-related information on children
- A second file contained information on *sentence proposals*
- A third file contained information of *legal outcomes (sentences)*
- A fourth file contain information on *remand proposals and decisions*

In addition, data from AssetPlus was extracted to a fifth set of files.

All files were of the type 'long', containing several rows pertaining to an individual or a sentencing occasion. Each row represented an entry in the system.

Data was cleaned, merged, transformed to wide format and aggregated to the agreed units of analysis (see below). The various data files were merged. Two final datasets were generated: one to allow analyses of legal outcomes and a second to analyse remand decisions. Below we outline this process.

1. Determine the unit of analysis and create unique IDs.

In working with each file, we generated unique identifiers that can operationalise the units of analysis. On several occasions in the cleaning and matching process we had to sequentially change the unit of analysis in a dataset (see section 4).

2. Transform the variables

To allow for analysis to be carried out we needed to ensure that a unit of analysis is represented in the data by a single row. To achieve this, depending on the type of variable, we took the following steps to eliminate duplicates rows:

- For nominal variables (e.g. offence type, outcome type, etc.) the variable was transformed from long to wide format by creating a number of dichotomous variables equal to the number of values the original variable had. A dichotomous variable indicates if each unit of analysis (denoted by the unique ID) had or did not have the characteristic in question (e.g. offence).

- For continuous variables (e.g. the gravity score, number of previous orders, etc.) we took the maximum value per unique ID.
3. 'Clean' and de-duplicate the data
- The wide datasets we obtained in the previous step were cleaned and quality assured. To this end we replaced missing or inconclusive information (e.g. 'Yet to clarify'; 'To be determined'; 'N/A'; 'Withheld', etc.) with substantive information where this was available. This resulted in duplicate rows that subsequently were deleted.

We also identified several inconsistencies in the various data sets and corrected them or removed data:

- Due to changes in the YOTs in South Wales there were duplicate entries. We removed any rows where the YOT name was Western Bay. We also correct the name of the YOT based in Cheshire.
- The data contained duplicated entries where the only difference between two rows with the same unique ID was the Court Type. We made the following changes:
 - Remove entries where the Court Type is 'Civil'.
 - Replace 'Youth' with 'Magistrates'.
 - If both 'Magistrates' and 'Crown' courts are recorded for the same ID, we retain the entry for 'Crown'.
- Rescaled the sentence length to allow us to use a single measure: months.
- Encode remand proposal based on YJB's Data Recording Requirements from free-form text.
- In each dataset we removed rows where the key variable of interest (legal outcome, sentence proposal, etc) or a key variable that is used to generate the unique ID was recorded as 'none' or had a missing value.
- Dropped entries where the YOT name was contradictory.
- Demographic variables had a significant number of inconsistent or contradictory entries. These were removed from the case management datasets, cleaned and later reintroduced.

4. Merge the case management data

The five datasets were combined into two final analytical datasets: one for analyses of legal outcomes and a second for analyses of remand. In the absence of unique matching keys, the merging process was carried out in stages between which the units of analyses in different datasets were changed.

During this process data had to be discarded due to the inability to obtain matches. When this was necessary, we always checked any effect on the ethnicity profile of both the deleted and remaining data.

Below we illustrate the composition of each final dataset and highlight the matching variables that were used to integrate the different datasets.

Legal outcome matching stages:

- Step 1: Merge case data extract and sentence proposal data based on current id, intervention start date and intervention end date.
- Step 2: Merge the dataset obtained at step 1 with legal outcome data based on current id, offence date, outcome date and offence type.
- Step 3: Merge the dataset obtained at step 2 with remand data based on current id, offence date, and offence type.

Remand matching stages:

- Step 1: Merge case data extract and remand decision and proposal data based on current id, offence date and offence type.

5. Include AssetPlus data

AssetPlus data was introduced in both analysis datasets by exact-matching on the *'current young person id'* and range-matching on date. We consider a match if the AssetPlus record was created in the 30-day period *before* the outcome occurred.

6. Include YOT level data

In this step we included in both final datasets the following YOT-level statistics:

- The aggregate distribution of ethnicity in the population of interest in each YOT.
- Distribution of children who received a youth caution or a court sentence by ethnicity in each YOT in the past years.

To be able to include this data, we operate an adjustment in the YOT level data with regards to the three changed YOTs in South Wales. The master data includes separate YOTs for Swansea, Neath Port Talbot and Bridgend. However, the YOT-level data only contains information on Western Bay. As such, we disaggregate the information on Western Bay into the 3 smaller YOTs by dividing the Western Bay value by 3. We understand this might be seen as problematic, however, for the purposes of this analysis we believe the risks to bias are small.

Units of Analysis

When looking at **legal outcomes**, it was agreed that the **sentencing occasion** (per person) is the unit of analysis that best minimises potential bias linked with the connection between offences and outcomes.

When using the sentencing occasion as the unit of analysis, there are two situations to consider:

- A large part of the observations have a **single offence** recorded per sentencing occasion. In this case it is clear that all outcomes recorded (including lengths of sentence and number of requirements) relate to that offence.
- In a small portion of the observations **several offences** are recorded for a single sentencing occasion. In this case, due to how the data was recorded,

we do not know which outcomes are linked with which offences, or whether the outcomes relate to the offences taken together. In such cases, we aggregate the observations so that for each sentencing occasion there is a record of what offences and what outcomes were recorded. Unless otherwise specified, the analysis would then assess the combined effect of the set of offences on the set of outcomes.

For **remand decision**, we use as the unit of analysis the remand decisions made for a person on a specific hearing date for an offence (defined by offence date and offence type). It is not uncommon for a child to be remanded on more than one occasion in the course of a single set of proceedings prior to final outcome – where for instance the case goes to trial. This is also more likely where bail is refused since there are statutory time limits in relation to such remands – and a further hearing (and remand decision) is required if the child is to stay in custody. As a consequence, if remand decisions are made several times pertaining to the same case we include these separately in the analysis. This allows us to consider the effects of any changes in the available information (e.g. AssetPlus records).

Outcome variables and the universe of analysis

To be able to assess the disproportionality that children experience at each distinct step of the process, each analysis is restricted to the universe of children that experience that particular stage. The table below displays the outcome variables and their universes.

Table 9: Outcome variables

Outcome variable		Universe
Legal outcome	Custodial outcome (versus YRO)	All children with custodial outcomes or YROs <i>In a small number of cases in one sentencing occasion several types of outcomes were imposed. We remove 9 cases.</i>
Legal outcome	First-tier outcome (versus custodial or YRO)	All children sentenced at court
Legal outcome	Out-of-court disposal (versus sentenced at court)	All children with an out-of-court disposal or sentenced at court <i>In a small number of cases in one sentencing occasion several types of outcomes were imposed. We remove 31 cases.</i>
Legal outcome	Number of requirements for YROs	All children with a YRO
Legal outcome	Number of requirements for first-tier outcomes	All children with a first-tier outcome

Legal outcome	Sentence length for custodial sentences	All children with a custodial sentence. <i>Only for sentencing occasions that refer to one offence and one outcome.</i>
Legal outcome	Sentence length for YROs	All children with a YRO. <i>Only for sentencing occasions that refer to one offence and one outcome.</i>
Legal outcome	Sentence length for first-tier outcomes	All children with a first-tier outcome. <i>Only for sentencing occasions that refer to one offence and one outcome.</i>
Remand	Community remand	All children with a remand decision
Remand	Community remand with intervention	All children with a remand decision
Remand	Custodial remand	All children with a remand decision

Explanatory factors and controls

The report clearly identifies the variable groups and variables used as explanatory factors.

Modelling strategy

The data is structured hierarchically: person-linked sentence occasions (or hearings) are nested in individuals, who are nested in YOTs. To obtain correct estimates of effect at the level of the unit of analysis, 2-level hierarchical linear modelling is used with fixed effects for YOT⁶⁹. We implement random intercept models, that allow the effects of ethnicity (and other variables) to vary across individuals. The inclusion of fixed effects for YOT essentially removes any effect YOT could have had on the outcome. The modelling strategy ensures unbiased estimates of statistical significance.

The dependent variables are either dichotomous or continuous. All models are implemented through linear regression. The use of the linear probability model was justified by the requirement to generate findings that are easily interpretable. The coefficients of the linear probability model are automatically interpretable as changes in probability. A nonlinear approach, such as a logit, produces results that are more difficult to interpret (such as odds ratios). In addition, Gomila (2019)⁷⁰ shows that for analyses similar to ours (nested data) where the interest lays in explanation (versus prediction), the use of a linear model is less likely to induce bias.

⁶⁹ For the regression assessing the number of requirements and sentence lengths, due to the low sample size Region is used as a fixed effect instead of YOT.

⁷⁰ https://www.researchgate.net/publication/334410430_Logistic_or_Linear_Estimating_Causal_Effects_of_Binary_Outcomes_Using_Regression_Analysis

To ensure that the results of our linear models are not a product of the statistical model, we compared our main findings to what they would have been if generated by a logistic model. No noteworthy differences were found.

Representativity

To be able to include data from AssetPlus and maintain comparability between sequential models, we restricted the analytical sample to only those cases that had an AssetPlus record. As such, there is a possibility that the results we report apply only to a subgroup of individuals. However, we do not believe this to be the case. We reanalysed the models that do not contain AssetPlus data using the entire available sample. Our conclusions remained unchanged.

In addition, in Chapter 2, we presented the relationships between each group of factors and the youth justice system outcomes of interest. As mentioned, those analyses did not account for the influence of other factors (including ethnicity) on the effect of each characteristic. We believe this to be useful to understand the distinct effect of each set of factors.

To understand how the effect of each set of factors changes when other factors, including ethnicity, are controlled for, please review the regression tables that include the results of the complete models. These are the models whose results pertaining to ethnicity were reported in Chapter 3.

The results show minimal changes in terms of the statistical significance of factors. However, a wide array of changes can be observed in the sizes of the coefficients.