# Investigating factors and potential biases that might help explain the overrepresentation of people from ethnic minority backgrounds amongst missing person cases

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# Executive summary

## Background

In the 2019-20 UK Missing Persons Unit (UKMPU) Annual Data Report, 23 forces in England and Wales reported investigating a disproportionate number of Black missing persons when compared to the general population (UK Missing Persons Unit, 2021b). For example, at that time, 14% of missing persons in the United Kingdom (UK) were categorised as Black, while census data indicated that Black people made up just 3% of the population (UK Government, 2020). The current research sought to understand why this might be.

## Methodology

Data relating to missing person cases from nine police forces in England and Wales were analysed to better understand, (i) characteristics relating to missing persons (key characteristics, e.g., demographic, contextual, and risk information), (ii) the allocation of risk in missing person cases, and (iii) whether these characteristics differ according to the ethnicity of the missing person. Prior to statistical analyses the data were cleaned to remove cases with incomplete and ambiguous data, and to remove repeat missing cases and non-informative data. This process resulted in 18,266 missing person cases for statistical analyses, which were completed in three stages: (i) descriptive analyses for the key characteristics of interest, (ii) statistical analyses to examine whether there are any statistically significant differences in the 14 key characteristics of interest in missing person cases according to the ethnicity of the missing person, and (iii) statistical analyses to examine the relationships between previously identified key characteristics and the allocation of risk. Particular attention was given to whether there was evidence of investigative bias in the allocation of risk in missing person cases based on the ethnicity of the missing person.

## Key findings

The **Stage I descriptive analyses for key characteristics** found that 70.4% of the sample of missing persons were classified as medium risk (percentages for high, low, and no apparent

risk were 19.2%, 9.4%, and 1.0% for respectively). Key characteristics relating to types of risk reported include vulnerability risk (70.4% of the sample), personal risk (69.3%), health risk (61.7%), harm risk (39.7%).

The **Stage II statistical analyses for ethnicity** found that White missing persons were more likely than Black missing persons, Asian missing persons, and missing persons of Mixed/other ethnicity to be allocated high risk. White missing persons were also more likely to be reported as having a mental illness, a health risk, and/or a harm risk, in comparison to Black missing persons, Asian missing persons (health risk only) and missing persons of Mixed/other ethnicity (mental illness and health risk only). Black missing persons were more likely to be reported as having a vulnerability risk than White and Asian missing persons.

The **Stage III statistical analyses for the allocation of risk** found that various key characteristics made statistically significant contributions to the allocation of risk. The ethnicity of the missing person did not significantly predict the allocation of risk having controlled for the other characteristics. However, several characteristics that were more prevalent for Black missing persons in the sample were found to predict the allocation of risk. Specifically, Black missing persons were younger than White missing persons, and more likely to have absconder and care orders; all of which were characteristics associated with a *reduced likelihood* of being allocated high risk. A different pattern emerged for White missing persons, who were more likely to be reported as having a mental illness, a health risk, and/or a harm risk than missing persons from other ethnic groups; all of which were characteristics associated with an *increased likelihood* of being allocated high risk.

## Selected discussion and limitations

Overall, the data show that while ethnicity did not directly predict allocations of risk, there were differences in key characteristics according to ethnicity that were found to predict differences in risk level. It is possible that some characteristics (e.g., mental health concerns) that are associated with a high risk level are more or less likely to be (i) disclosed by the person reporting someone missing, and/or (ii) recorded by the police officer investigating the case, depending on ethnicity. Regarding the first point, there is some evidence of cultural differences in reporting mental health difficulties (Loewenthal et al., 2012).

Researchers examining racial disparities in mental health have found people from minority ethnic groups are at higher risk of mental health problems in comparison to White people, while also being less likely to report mental health concerns (Bignall et al., 2019; Loewenthal et al., 2012). It is possible, then, that those reporting someone missing have a similar reluctance to share information about the mental health of the missing person, thus impacting the level of risk . Regarding the second point, the available data do not allow for us to tell if information disclosed has been omitted from the missing person report. However, the fact that there is an overrepresentation of people from ethnic minority backgrounds in missing person populations suggests that reports are being made.

It is important to acknowledge two key limitations. First, the data analysed were from nine police forces and therefore not representative of the police service as a whole. Notably we were not able to include data from the Metropolitan Police Service (MPS) as they do not use COMPACT to record information about missing persons. However, data shows that the MPS accounted for 61% of all Black missing person cases in 2019-2020 (NCA, 2021). It is important to consider this limitation when interpreting our findings as there is potential that different conclusions would have been drawn if we had access to a more representative sample. Second, there was a large amount of incomplete data about a missing person's ethnicity and/or ethnic appearance. Furthermore, it is not possible to ascertain whether the impact of incomplete data disproportionately affected certain ethnic groups. Ultimately, this limitation has the potential to impact out findings given the importance of this information to address our research question.

## Key recommendations

Based on the findings we suggest two key recommendations. First, police officers should record information in full on the COMPACT (or equivalent) reporting system, especially relating to a missing person's ethnicity and ethnic appearance, and to avoid ambiguous terms (such as British). Second, police officers need to be culturally aware of the potential reluctance of certain minority ethnic groups to disclose certain information about a missing person (e.g., mental health concerns). We know from the available data that certain vulnerability, personal, health, harm, and other risks inform the allocation of risk. Therefore,

it is possible that some minority ethnic groups are disadvantaged because police officers do not seek full information about the missing person.

# Full report

## 1. Background

A missing person is "anyone whose whereabouts cannot be established … and their well-being or otherwise confirmed" (College of Policing, 2021). During the year of 2019/20, police forces in England and Wales received 359,240 calls relating to missing persons; this equates to six calls per 1,000 residents (UK Missing Persons Unit, 2021). These findings are fairly consistent year on year.

The financial and emotional costs surrounding missing people are huge. According to Shalev-Greene and Pakes (2014), a single medium risk missing person investigation in the United Kingdom (UK) costs up to £2,500, and the annual time commitment of missing person investigations equates to over 19,000 full-time police officers. Importantly, these costs will undoubtedly have risen over time, and annual reports by the National Crime Agency (NCA) suggest the number of missing person cases is increasing year-on-year. Therefore, missing person investigations are a significant concern for the public and the police.

When searching for a missing person, the police only have a finite number of resources available, so must allocate resources according to the level of perceived risk to the missing person and the public more generally. At the time of this report, the four levels of risk were: no apparent risk, where the risk of harm is absent; low, where the risk of harm is possible but minimal; medium, where the risk of harm is likely but not serious; and high, where the risk of harm is very likely and serious (College of Policing, 2021)[1]. The higher the level of perceived risk, the more resources available for the investigation. Most missing persons in the UK are classified as medium risk (UK Missing Persons Unit, 2021). This (medium) risk level requires the police and other agencies to actively search for the missing person and to support the person who reported them missing.

A concerning trend throughout recent years is the overrepresentation of people from ethnic minority backgrounds within the missing population. In 2019/20, 23 forces in England and Wales reported investigating a disproportionate number of Black missing persons when

[1] In January 2024, 'very low risk' replaced 'no apparent risk' in the College of Policing Authorised Professional Practice (APP).

compared to the general population (UK Missing Persons Unit, 2021b). At this time, Black individuals comprised 14% of missing persons in the UK while representing only 3% of the general population (UK Government, 2020). Further, archival studies show that White missing persons are more likely to be found than non-White missing persons (Hunter, Allan, & Rickford, 2023). Families of Black missing persons report that the police do not take them seriously, do little to nothing, or are slow to take any action (White, 2021).

This research addresses a current real-world issue that is a cause for concern within the UK (e.g., White, 2021) and internationally (e.g., Perrie, 2021). The data analysed are from police records relating to real missing person cases within a one-year period, which offers the opportunity to develop a better understanding of the overrepresentation of people from ethnic minority backgrounds amongst missing person cases, as well as any differences (i.e., evidence of investigative bias) in the allocation of risk according to the ethnicity of the missing person.

## 2. Methodology

### Research aims

Data relating to missing person cases were analysed to better understand, (i) characteristics relating to missing persons (key characteristics, e.g., demographic, contextual, and risk information), (ii) the allocation of risk in missing person cases, and (iii) whether these characteristics differ according to the ethnicity of the missing person.

### Sample

Police forces in England and Wales using COMPACT[2] software to report details relating to missing person cases were invited to participate in the research. COMPACT software is a dedicated system used by police forces in the UK to record and manage details related to missing person cases, including personal information and potential risk factors. The invitation outlined the research aims and assurances that information collected during the

[2] Other systems are used to record details relating to missing person investigations, but we only had the capability to develop code that could be used to download a sample of data from COMPACT. Hence, we were only able to invite police forces using COMPACT.

course of the research would be kept strictly confidential, and that data would not be attached to any individual or police force in any identifiable way. Nine police forces indicated that they were eligible and willing to participate. They were subsequently sent a code and instructions to extract one year's worth of data relating to missing person cases held on COMPACT. The dataset was emailed securely to a Police Service Volunteer (PSV) who managed a team of other PSVs who redacted any details that could be used to identify any individuals. Redacted datasets were then emailed to the Research Team.

**Limitations**

It is important to acknowledge that not all police forces participated in the research, and that any conclusions drawn in this report are based on data from only nine forces and may not represent the police service as a whole. Notably, the Metropolitan Police Service (MPS) was not included in the study because they do not use COMPACT software to record information about missing persons. This exclusion is significant, as statistics show that the MPS accounted for 61% of all Black missing person cases in 2019-2020 (NCA, 2021). Consequently, this limitation should be taken into account when interpreting our findings, as a more representative sample might have led to different conclusions.

**Quantitative data**

One year's worth of data from nine UK (England and Wales) police forces regarding all missing person cases recorded using COMPACT software between January 1, 2021 and December 31, 2021 were shared with the Research Team[3]. These data were combined to form a single dataset for the purpose of statistical analysis and cleaned using a two-step procedure: Step 1 involved the removal of incomplete data, and Step 2 involved the removal of repeat missing cases and non-informative data. The two steps are explained below.

**Step 1**. The initial sample comprised 45,750 missing person cases. However, 8,315 (18.4%) cases were identified as containing incomplete and ambiguous data relating to key

[3] See Appendix 1 for the data fields requested from COMPACT.

characteristics and removed from the dataset. Therefore, the sample following Step 1 comprised 37,435 missing person cases[4].

Regarding this step of the cleaning process, incomplete and ambiguous data were identified for age (n = 1, 0.0%), sex (n = 285, 0.6%), nationality (n = 29,312, 64.1%), ethnic appearance (*n* = 7,700, 16.8%), ethnicity (*n* = 19,584, 42.8%), marital status (n = 34,222, 74.8%), sexuality (n = 20,673, 45.2%), risk (n = 2, 0.0%), publicity (n = 2, 0.0%), and harm (n = 2, 0.0%). Cases with incomplete data for age, sex, risk, publicity, and harm were removed from the dataset given the small numbers involved. However, this strategy was not appropriate for nationality, marital status, and sexuality given the large amount of incomplete data. Therefore, we retained the cases with incomplete data and excluded these three characteristics from the subsequent statistical analyses.

Regarding ethnic appearance and ethnicity, it was not appropriate to remove the cases with incomplete and ambiguous (e.g., British) data given the large numbers involved, and it was not appropriate to exclude them from the subsequent statistical analyses given the focus of this research. Instead, cases were removed from the dataset if, (i) there were incomplete or ambiguous data for both data fields (ethnic appearance and ethnicity), (ii) there were inconsistencies in categorisation across the two data fields (e.g., ethnic appearance = White, ethnicity = Mixed/other), and (iii) it was not possible to gather information about the missing person's ethnicity elsewhere in the dataset.

**Step 2.** In Step 2, a further 19,169 (51.9%) cases were identified as representing repeat missing cases (n = 18,905, 50.5%) or containing non-informative data for risk (n = 264, 1.4%) and removed from the dataset. Therefore, the final sample following Step 2 comprised 18,266 missing person cases.

Regarding this step of the cleaning process, we retained the first case (i.e., the case with the earliest date) relating to each missing person in the dataset for the purpose of statistical analysis. We focused on missing persons rather than missing cases because the inclusion of repeat cases (ranging = 2 to 112) had the potential to impact the sample and subsequent statistical analyses. For example, comparing a group of 112 different White individuals who

[4] See Appendix 2 for the number and percentage data for cases removed because of incomplete data across the nine police forces.

each went missing once with a single Black individual who went missing on 112 different occasions would undermine the reliability and generalisability of the findings. We retained the first case relating to each missing person to minimise the impact of repeat missing cases. Nevertheless, we acknowledge that our approach was limited because we only had access to 12 months of data and were unable to assess information regarding repeat missing cases prior to 2021. Finally, cases containing non-informative 'NULL' data for risk were removed from the dataset, with only those cases with one of the four levels of risk (no apparent risk, low, medium or high risk) being retained[5].

**Qualitative data**

Five Police Service Volunteers (PSVs), under the supervision of Mr. Robert Harvey from West Mercia Police, worked to redact (remove identifying details from) free-text data fields in the COMPACT database. These fields contained information like the circumstances of disappearances and suspected reasons for going missing. The redaction process removed over 386,000 pieces of personal information (e.g., names and addresses) across more than 28,000 missing person cases involving over 17,000 individuals.

For this report, two specific free-text data fields – *warning signals* and *person risk factor flags* – were analysed using a deductive coding framework. This framework was based on the 19 original risk factor categories in COMPACT. These fields were coded to identify whether each risk factor was present or absent, ensuring a thorough recording of risk factors. For example, the 'warning signals' field sometimes mentioned conditions like anxiety or depression, even when the corresponding risk factor field in the database did not explicitly indicate a mental health issue.

Regarding ongoing research, we have three projects underway that examine additional qualitative data to determine whether there is evidence of: (i) county lines, (ii) adultification bias towards black children, and (iii) the presence of 'White Woman Syndrome', playing a

[5] See Appendix 3 for the number and percentage data for cases removed because of repeat missing cases and non-informative data for risk across the nine police forces.

role in the allocation of risk. We have included working titles and abstracts for these projects below, and will provide separate addendums for each project in due course.

**Caught in the lines: Youth vulnerabilities and risk factors within county lines operations.** This study investigates the involvement of young individuals in county lines within the UK, focusing on the exploitation by urban drug gangs to expand their operations into rural and urban areas. Using anonymised data from nine UK police forces, the study emphasises how county lines create a cycle of exploitation, particularly targeting vulnerable youths. The findings revealed associations between county line involvement and factors including age, mental health vulnerability, associations with individuals involved in county lines, residential status, and social dynamics.

**When Black children go missing: The role of adultification bias towards Black children in UK police's risk allocation in missing person investigations.** This study investigates whether the adultification bias for Black children is present and potentially plays a role in the risk classification assigned by the police in missing person investigations, compared to non-Black children. Adultification bias refers to when Black children and young adults are seen as older than their age compared to their non-Black peers. Missing persons data (n = 504) from nine different UK police forces were coded for analyses. Quantitative (Chi-square) analyses indicated no significant association between race, adultification, and risk classification. Qualitative (thematic analysis) identified six main themes that highlighted some interesting findings pointing to the presence of adultification.

**The Presence of 'White Woman Syndrome' in the Risk Assessments of Missing Persons.** This study investigates the presence of "White Woman Syndrome" in police-assigned risk assessments of missing persons in the United Kingdom. "White Woman Syndrome" refers to the phenomenon where missing white women receive more media attention than other demographic groups. The study analysed real-world missing persons data from nine police forces in the UK to examine whether White Woman Syndrome was also evident at the police investigation stage. Analyses focused on the relationship between police-assigned risk assessments and the gender and ethnicity of missing persons. Contrary to expectations, no significant main effect of gender or ethnicity on risk assessments was found. However, an interaction effect was observed, suggesting that missing white women are more likely to receive a higher risk assessment than missing white men. This finding aligns with the

broader societal narrative of "White Woman Syndrome" and highlights the need for further research into the intersection of gender and ethnicity in police risk assessments.

## 3. Data analysis

Data analyses were completed in three stages: (i) descriptive analyses for key characteristics, (ii) statistical analyses for ethnicity, and (iii) statistical analyses for the allocation of risk.

### Stage I: Descriptive analyses for key characteristics

Stage I of analysis involved performing descriptive analyses for the 14 key characteristics of interest. These included the age, sex and ethnicity of the missing person; whether they were recorded as having a disability and/or mental illness; whether they had an absconder and/or care order; and the location they went missing from. Key characteristics also included five risk factor groups[6] – health risk, vulnerability risk, harm risk, personal risk and other risk – and the level of risk allocated to each missing person case[7]. The findings are summarised below:

- The average **age** of missing persons was 28.72 years (with a standard deviation of 19.02 years). Regarding **sex**, 58.5% of missing persons were male, 41.2% were female, and 0.3% were transgender. Regarding **ethnicity**, 82.5% were White, 8.5% were Black, 6.6% were Asian, and 2.4% were of a Mixed/other ethnicity.
- 20.3% of missing persons were reported as having a **disability**, and 21.7% were reported as having a **mental illness**.
- 5.9% of missing persons had an **absconder order** and 11.0% had a **care order**.
- 77.6% of missing persons went **missing from** their home or neighbourhood, and 22.4% went missing from another location (for example, a care home).

[6] See Appendix 5 for details of the classification process for the five risk groups.
[7] See Appendix 6 for the number and percentage data for the categorical key characteristics of interest.

- Regarding the five risk factor groups, 70.4% of missing persons were reported as having a **vulnerability risk**, 69.3% were reported as having a **personal risk**, 61.7% were reported as having a **health risk**, 39.7% were reported as having a **harm risk**, and 18.6% were reported as having an **other risk**.
- Finally, 19.2% of missing persons were allocated **high risk**, 70.4% were allocated **medium risk**, 9.4% were allocated **low risk**, and 1.0% were allocated **no apparent risk**[8].

**Stage II: Statistical analyses for ethnicity**

Stage II of analysis involved examining whether there are any statistically significant differences in 13 of the key characteristics of interest in missing person cases according to the ethnicity of the missing person. Therefore, analyses of variance and chi-square analyses were performed[9]. The findings are summarised below:

- There were statistically significant differences for **age**. White (M = 29.67 years) missing persons, were significantly *older* than the other three ethnicity groups. In addition, Asian (M = 25.64 years) and Black (M = 24.26 years) missing persons were significantly *older* than missing persons of a Mixed/other ethnicity (M = 20.19 years).
- There were statistically significant differences for **sex**. White (42.2%) missing persons were significatly more likely to be female than missing persons of Black (35.1%) and Mixed/other (35.2%) ethnicities, whilst Black (64.8%) and Mixed/other 64.1%) missing persons were statistically more likely to be male than missing persons of White (57.2%) ethnicity.
- There were statistically significant differences for **disability**. Asian (23.5%), Black (20.8%) and White (20.3%) missing persons were significantly *more likely* to report having a disability than missing persons of a Mixed/other ethnicity (9.3%).
- There were statistically significant differences for **mental illness**. White (22.4%) missing persons were significantly *more likely* to report having a mental illness than Black (18.7%) missing persons and missing persons of a Mixed/other ethnicity (9.5%). In

[8] See Appendix 7 for the number and percentage data for the 19 initial risk factors.
[9] See Appendix 8 for the frequency data and significance for the categorical key characteristics of interest across the four ethnicity groups.

addition, Black and Asian (22.0%) missing persons were significantly *more likely* to report having a mental illness than missing persons of a Mixed/other ethnicity.

- There were statistically significant differences for **absconder order**. Black (6.8%) missing persons were significantly *more likely* to have an absconder order than Asian (4.2%) missing persons.
- There were statistically significant differences for **care order**. Black (13.6%) missing persons were significantly *more likely* to have a care order than White (11.0%) and Asian (7.6%) missing persons. In addition, White missing persons were significantly *more likely* to have a care order than Asian missing persons.
- There were statistically significant differences for location they went **missing from**. Asian (81.2%) missing persons were *more likely* to go missing from their home/neighbourhood than Black (74.5%) missing persons or missing persons of a Mixed/other ethnicity (66.4%). In addition, White (78.0%) missing persons were significantly *more likely* to go missing from their home/neighbourhood than Black missing persons and missing persons of a Mixed/other ethnicity; and Black missing persons were significantly *more likely* to go missing from their home/neighbourhood than missing persons of mixed or other ethnicity.
- There were statistically significant differences for **vulnerability risk**. Black (75.7%) missing persons were significantly *more likely* to have a vulnerability risk than White (69.9%) and Asian (68.5%) missing persons.
- There were statistically significant differences **health risk**. White (65.2%) missing persons were significantly *more likely* to have a health risk than the other three etnhnicity groups: Black (46.8%) missing persons, Asian (45.3%) missing persons, and missing persons of Mixed/other ethnicity (40.3%).
- There were statistically significant differences for **harm risk**. White (40.6%) missing persons were significantly *more likely* to have a harm risk than Black (33.6%) missing persons.
- There were statistically significant differences for **risk level**. White missing persons (20.3%) were significantly *more likely* to be allocated **high risk** than the other three ethnicity groups: Black (13.8%) missing persons, Asian (15.1%) missing persons, missing persons of Mixed/other ethnicity (12.7%). Furthermore, missing persons of Mixed/other

ethnicity (79.9%) were significantly *more likely* to be allocated **medium risk** than Asian (71.8%) and White (69.4%) missing persons, and Black (75.8%) missing persons were significantly *more likely* to be allocated medium risk than White missing persons. Finally, Asian (11.6%) missing persons were significantly *more likely* to be allocated **low risk** than missing persons of Mixed/other ethnicity (5.8%).

- There were no statistically significant differences in **personal risk** or **other risk** according to the ethnicity of the missing person[10].

Collectively, these findings show statistically significant differences in key characteristics according to the ethnicity of the missing person. For example, White missing persons were most likely to be allocated high risk, and to be reported as having a mental illness, a health risk, and/or a harm risk, in comparison to Black missing persons, Asian missing persons (health risk only), and missing persons of Mixed/other ethnicity (mental illness and health risk only). Black missing persons, by comparison, were more likely to be reported as having a vulnerability risk than White and Asian missing persons.

**Stage III: Statistical analyses for the allocation of risk**

Stage III of analysis involved examining the relationships between previously identified key characteristics and the allocation of risk. Due to the very small number of cases in the no apparent risk group (*n* = 187) we incorporated these into the low risk category. It is also important to note that it was not possible to include transgender individuals (n = 66) in the analyses because of insufficient data.

Analyses of variance and chi-square analyses were first performed to identify which of the key characteristics to include in subsequent logistic regression analyses. Three logistic regression analyses were then performed to examine the relationship between the identified key characteristics (the independent 'predictor' variables) and the allocation of risk (the dichotomous 'outcome' dependent variable): (i) low vs. medium risk, (ii) low vs.

[10] See Appendix 9 for the frequency data and significance for the 19 initial risk factors across the four ethnicity groups.

high risk, and (iii) medium vs. high risk[11]. Particular attention was given to whether there is evidence of investigative bias in the allocation of risk in missing person cases based on the ethnicity of the missing person.

**Low risk vs. medium risk**. Eleven key characteristics were entered into the initial logistic regression model, with a further two non-contributing characteristics being removed from the final model, which was statistically significant, $\chi^2(9, n = 14{,}757) = 1{,}369.75$, $p < .001$. This final model correctly classified 87.1% of cases (0.7% low risk, 99.9% medium risk), and explained between 8.9% (Cox & Snell R square) and 16.7% (Nagelkerke R square) of variance. In the final logistic regression model for low risk vs. medium risk, the following nine key characteristics made a statistically significant contribution.

- Regarding **age** and **sex**, a one-year *decrease* in age was associated with 1% *greater odds* of being allocated medium risk as opposed to low risk; and female missing persons were 1.13 times *more likely* to be allocated medium risk as opposed to low risk than male missing persons (controlling for all other characteristics in the model).
- Individuals who went **missing from** their home/neighbourhood were 1.52 times *more likely* to be allocated medium as opposed to low risk than individuals who went missing from another location; and missing persons with an **absconder order** were 1.42 times *more likely* to be allocated medium as opposed to low risk than missing persons without an absconder order (controlling for all other characteristics in the model).
- Regarding risks, missing persons reported as having a **vulnerability risk** were 4.26 times *more likely* to be allocated medium as opposed to low risk; missing persons reported as having a **personal risk** were 1.17 times *more likely* to be allocated medium as opposed to low risk; missing persons reported as having a **health risk** were 1.30 times *more likely* to be allocated medium as opposed to low risk; missing persons reported as having a **harm risk** were 1.50 times *more likely* to be allocated medium risk as opposed to low risk; and missing persons reported as having an **other risk** were 1.79 times *more likely* to be allocated medium as opposed to low risk than missing persons without these respective risks (controlling for all other characteristics in the model).

[11] See Appendix 10 for further details regarding the statistical analyses for the allocation of risk.

- **Ethnicity** was not a statistically significant predictor of being assigned low risk vs. medium risk. Nor was the characteristic of **care order**[12].

**Low risk vs. high risk**. All 13 key characteristics were entered into the initial logistic regression model, with three non-contributing characteristics being removed from the final model, which was statistically significant, $\chi^2(10, n = 5{,}414) = 1{,}430.39$, $p < .001$. It correctly classified 75.2% of cases (51.5% low risk, 88.0% high risk), and explained between 23.3% (Cox & Snell R square) and 32.1% (Nagelkerke R square) of variance. In the final logistic regression model for low risk vs. high risk, the following 10 key characteristics made a statistically significant contribution.

- Regarding **age** and **sex**, a one-year *increase* in age was associated with 1% *greater odds* of being allocated high risk as opposed to low risk; and female missing persons were 1.14 times *more likely* to be allocated high risk as opposed to low risk than male missing persons (controlling for all other characteristics in the model).
- Individuals who went **missing from** their home/neighbourhood were 1.41 times *more likely* to be allocated high as opposed to low risk than individuals who went missing from another location; and missing persons with a **disability** were 1.33 times *more likely* to be allocated high as opposed to low risk than missing persons without a disability (controlling for all other characteristics in the model).
- Conversely, missing persons with a **care order** were 2.13 times *less likely* to be allocated high as opposed to low risk than missing persons without a care order (controlling for all other characteristics in the model).
- Regarding risks, missing persons reported as having a **vulnerability risk** were 3.77 times *more likely* to be allocated high as opposed to low risk; missing persons reported as having a **personal risk** were 1.97 times *more likely* to be allocated high as opposed to low risk; missing persons reported as having a **health risk** were 3.42 times *more likely* to be allocated high as opposed to low risk; missing persons reported as having a **harm risk** were 1.67 times *more likely* to be allocated high risk as opposed to low risk; and missing

[12] See Appendix 11 for a summary of the final logistic regression model.

persons reported as having an **other risk** were 2.72 times *more likely* to be allocated high as opposed to low risk than missing persons without these respective risks (controlling for all other characteristics in the model).

- Again, **ethnicity** was not a statistically significant predictor of being assigned low risk vs. high risk. Nor were the characteristics of **mental illness** or **absconder order**[13].

**Medium risk vs. high risk**. Finally, all 13 key characteristics were entered into the initial logistic regression model, with three non-contributing characterisitics being removed from the final model, which was statistically significant, $\chi^2(10, n = 16{,}361) = 2{,}001.69$, $p < .001$. It correctly classified 79.8% of cases (97.8% medium risk, 13.7% high risk), and explained between 11.6% (Cox & Snell R square) and 17.9% (Nagelkerke R square) of variance. In the final logistic regression model for medium risk vs. high risk, the following 10 key characteristics made a statistically significant contribution.

- Regarding **age** and **sex**, a one-year *increase* in age was associated with 2% *greater odds* of being allocated high risk as opposed to medium risk; and female missing persons were 1.09 times *more likely* to be allocated high risk as opposed to medium risk than male missing persons (controlling for all other characteristics in the model).
- Furthermore, missing persons with a **disability** were 1.33 times *more likely* to be allocated high as opposed to medium risk than missing persons without a disability.
- Conversely, missing persons with an **absconder order** were 1.35 times *less likely* to be allocated high as opposed to medium risk than missing persons without an absconder order; and missing persons with a **care order** were 2.17 times *less likely* to be allocated high as opposed to medium risk than missing persons without a care order (controlling for all other characteristics in the model).
- Regarding risks, missing persons reported as having a **vulnerability risk** were 1.11 times *less likely* to be allocated high as opposed to medium risk than missing persons without this risk. Conversely, missing persons reported as having a **personal risk** were 1.55 times *more likely* to be allocated high as opposed to medium risk; missing persons reported as

[13] See Appendix 12 for a summary of the final logistic regression model.

having a **health risk** were 2.54 times *more likely* to be allocated high as opposed to medium risk; missing persons reported as having a **harm risk** were 1.16 times *more likely* to be allocated high risk as opposed to medium risk; and missing persons reported as having an **other risk** were 1.62 times *more likely* to be allocated high as opposed to medium risk than missing persons without these respective risks (controlling for all other characteristics in the model).

- Consistent with the previous two analyses, **ethnicity** was not a statistically significant predictor of being assigned medium risk vs. high risk. Nor were the characteristics of the location they went **missing from** or **mental illness**[14].

Collectively, these findings show that various key characteristics make statistically significant contributions to the allocation of risk. Importantly, the ethnicity of the missing person did not significantly predict the allocation of risk having controlled for the other characteristics, whereas the age and sex of the missing person consistently predicted the allocation of risk. Similarly, all five risk groups – vulnerability risk, personal risk, health risk, harm risk, and other risk – all consistently predicted the allocation of risk having controlled for the other characteristics. In all but one instance, the reporting of these risks was associated with an increased likelihood of being allocated higher risk (medium and high opposed to low, and high as opposed to medium).

## 4. Discussion

The purpose of this research was to gain a better understanding of why Black people are disproportionately represented among missing person cases in the UK. The research focused on risk allocation as a potential explanation, hypothesising that differences in how risk is allocated between White missing persons and missing persons from minority ethnic groups may contribute to this disparity.

While ethnicity did not predict risk rating alone (in the Stage III analysis), several characteristics that were more prevalent for Black people in the sample did predict the

[14] See Appendix 13 for a summary of the final logistic regression model.

allocation of risk. For example, Black missing persons were younger than White missing persons, and were more likely to have absconder and care order risks; all of which were characteristics associated with a *reduced likelihood* of being allocated high risk. A different pattern emerged for White missing persons, who were more likely to have a mental illness, a health risk, and/or a harm risk than missing persons from other ethnic groups; all of which were characteristics associated with an *increased likeihood* of being allocated high risk.

It is possible that some key characteristics that are associated with a high-risk allocation (such as vulnerability and health risks) are more or less likely to be (i) disclosed by the person reporting someone missing, and/or (ii) recorded by the police officer investigating the case, depending on ethnicity. For example, regarding the disclosure of information, there is some evidence of cultural differences in reporting mental health difficulties (Loewenthal et al., 2012). Researchers examining racial disparities in mental health have found people from minority ethnic groups are at higher risk of mental health problems and disproportionately affected by social detriments associated with mental health problems in comparison to White people. They have also been found to be less likely to report mental health, sometimes due to a lack of trust in mental health professionals (Bignall et al., 2019; Loewenthal et al., 2012). It is possible, then, that those reporting someone missing have similar reluctance to share information about the mental health of the missing person. For example, Black families might be less likely to disclose mental health issues to the police due to a perceived stigma, thus limiting the risk status assigned. Regarding the recording of information, the available data do not allow for us to tell if information disclosed has been omitted from the missing person report. However, the fact that there is an overrepresentation of people from ethnic minority backgrounds in missing person population suggests that reports are being made (rather than a delay or absence of response from a police officer).

## 5. Limitations

We acknowledge a key limitation regarding the generalisability of our findings. The data analysed were from nine police forces and therefore not representative of the police service as a whole. Notably we were not able to include data from the Metropolitan Police (MET) as

they do not use COMPACT to record information about missing persons. The Black population, and the missing Black population, are not evenly distributed in the general population. For example, the 2021 Census shows that 49% of Black people in England and Wales live in London (UK Government Census, 2021), and the NCA missing persons report looking at data from 2019-2020 shows that the MET accounted for 61% of all Black missing persons incidents (National Crime Agency, 2021). This should be considered when interpreting our findings as there is potential that different conclusions would have been drawn with a more representative sample.

A second limitation, also beyond our control, relates to the amount of incomplete and ambiguous data about a missing person's ethnicity and/or ethnic appearance. To address our research question, it was important to have this information. However, incomplete data for ethnicity amounted to 19,584 cases (42.8%), while incomplete data for ethnic appearance totalled 7,700 cases (16.8%). Most incomplete data for ethnicity (*n* = 16,076, 35.1%) arose because the missing person had been categorised only as 'British' which does not convey ethnic appearance. Attempts were made to establish a person's ethnic identity, and missing person cases were only removed if, (i) there were incomplete or ambiguous data for both variables (ethnic appearance and ethnicity), or (ii) there were inconsistencies in categorisation across the two data fields (e.g., ethnic appearance = White, ethnicity = Mixed/other). Despite this, we acknowledge a large amount of data excluded from analyses. Unfortunately, it is not possible to ascertain whether the impact of incomplete data disproportionately affected certain ethnic groups.

A final limitation relates to the recent UKMPU Statistical Report 2022-2023 (UK Missing Persons Unit, 2024) that revealed a lack of consistency in risk classification across police forces. For example, only 2.4% of missing persons were classified as high risk in Durham police force, compared to 35.6% in Surrey police force [Shalev & Collie, 2024). It was not possible to account for such potential disparities between forces in risk classifications in the current report.

## Conclusion

Characteristics associated with lower risk ratings (e.g., care orders, vulnerability risks, absconder orders, and going missing from locations other than home) were more common among Black individuals in the sample. Conversely, White individuals were more likely to exhibit characteristics linked to higher overall risk ratings, such as mental illness or health and wellbeing risks. Thus, although ethnicity alone did not explain the differences in risk allocation, these factors go some way to explaining why Black individuals were less often rated as high risk and more often rated as medium risk.

## 6. Recommendations

Two key recommendations relating to training have arisen from this research. First, for police officers to record information in full on the COMPACT (or equivalent) system, especially relating to a missing person's ethnicity and ethnic appearance, and to avoid ambiguous terms (such as British). Second, for police officers to be more culturally aware of potential reluctance to disclose certain information about a missing person (e.g., mental health concerns). We know from the available data that certain vulnerability, personal, health, harm, and other risks inform the allocation of risk. Thus, it is possible that some minority ethnic groups are being disadvantaged by police officers not seeking full information about the missing person.

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## Appendix 1

Data fields requested from COMPACT.

| Missing person details |
|---|
| Age (when reported missing) |
| Sex |
| Nationality |
| Ethnic appearance |
| Ethnicity |
| Marital status |
| Sexuality |
| Warning signals (PNC) |
| **Disability and mental illness** |
| (All fields) |
| **Additional information** |
| Absconder order type |
| **Report details** |
| Absent from (all) |
| **Circumstances leading to disappearance** |
| Person's intentions when last seen? |
| Did the person prepare for an absence? |
| Document enquiries that the informant has made/intends to make |
| Is the person subject to a care order? |
| Detail the circumstances leading up to their disappearance |
| **Risk assessment (Initial and Latest)** |
| Person risk factor flags (person-specific, rather than case-specific) |
| Factors to be considered |
| Details |
| What do you consider to be the risk level? |
| State the reason for your choice of risk level |
| **FOUND report** |
| Did the misper go missing intentionally? |
| Specify reasons the misper gives, or the officer suspects, for going missing |
| Where was the misper found? |
| How far from the misper's home address was he or she found? |
| What was the furthest distance travelled by the misper whilst they were missing? |

How was the misper found?

Who found the misper?

Did the misper suffer any harm whilst missing?

What were the misper's circumstances whilst they were missing?

How long was the misper missing for?

Full debrief

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## Appendix 2

Number and percentage data for cases removed because of incomplete data across the nine police forces.

| Police force | Initial sample | No. removed | % removed | Step 1 sample |
|---|---|---|---|---|
| Force 1 | 2,130 | 1,059 | 50.3 | 1,071 |
| Force 2 | 3,926 | 895 | 22.8 | 3,031 |
| Force 3 | 9,057 | 3,326 | 36.7 | 5,731 |
| Force 4 | 5,623 | 388 | 6.9 | 5,235 |
| Force 5 | 4,034 | 408 | 10.1 | 3,626 |
| Force 6 | 2,863 | 232 | 8.1 | 2,631 |
| Force 7 | 1,923 | 103 | 5.4 | 1,820 |
| Force 8 | 2,985 | 118 | 4.0 | 2,867 |
| Force 9 | 13,209 | 1,786 | 13.5 | 11,423 |
| Total | 45,750 | 8,315 | 18.4 | 37,435 |

## Appendix 3

Number and percentage data for cases removed because of repeat missing cases and non-informative data for risk across the nine police forces.

| Police force | Step 1 sample | No. removed | % removed | Step 2 sample |
|---|---|---|---|---|
| Force 1 | 1,071 | 617 | 57.6 | 454 |
| Force 2 | 3,031 | 1,360 | 44.9 | 1,671 |
| Force 3 | 5,731 | 3,433 | 60.0 | 2,298 |
| Force 4 | 5,235 | 3,030 | 57.9 | 2,205 |
| Force 5 | 3,626 | 2,043 | 56.3 | 1,583 |
| Force 6 | 2,631 | 1,105 | 42.0 | 1,526 |
| Force 7 | 1,820 | 947 | 52.0 | 873 |
| Force 8 | 2,867 | 1,052 | 36.7 | 1,815 |
| Force 9 | 11,423 | 5,582 | 48.9 | 5,841 |
| Total | 37,435 | 19,169 | 51.2 | 18,266 |

## Appendix 4

Details of the 19 initial risk factor data fields on COMPACT

(1) Is the person vulnerable
(2) Is the behaviour out of character
(3) Likely to be subject of crime
(4) Likely to commit suicide
(5) Is there a reason for going missing
(6) Preparations for absence
(7) Did they fail to complete intentions
(8) Family relationship probs or conflict/abuse
(9) Victim or perpetrator of domestic abuse
(10) Mental health issue
(11) Subject to child protection
(12) Suffered or exposed to harm in previous missing incident
(13) Lacks ability to interact safely with others
(14) Requires essential medication not available to them
(15) Ongoing, bullying, harassment, or community/cultural issues
(16) Involved in violent or racist incident
(17) Education, employment, or financial issue
(18) Drug or alcohol dependency
(19) Other factors influencing risks

## Appendix 5

Details of the classification process for the five risk groups.

The 19 initial risk factors, incorporating the coded warning signals and person risk factor flags data, were assigned to groups for the purpose of statistical analyses using a two-stage process. During the **first stage** of the process, we assigned the 19 initial risk factors to one of three groups:

(1) The **personal characteristics** group included 12 initial risk factors: IR1 Is the person vulnerable; IR2 Is the behaviour out of character; IR4 Likely to commit suicide; IR5 Is there a reason for going missing; IR6 Preparations for absence; IR7 Did they fail to complete intentions; IR10 Mental health issue; IR11 Subject to child protection; IR13 Lacks ability to interact safely with others; IR14 Requires essential medication not available to them; IR17 Education, employment, or financial issue; and IR18 Drug or alcohol dependency.

(2) The **situational characteristics** group included six initial risk factors: IR3 Likely to be subject of crime; IR8 Family relationship probs or conflict/abuse; IR9 Victim or perpetrator of domestic abuse; IR12 Suffered or exposed to harm in previous missing incident; IR15 Ongoing, bullying, harassment, or community/cultural issues; and IR16 Involved in violent or racist incident.

(3) The **other characteristics** group included one initial risk factor: IR19 Other factors influencing risks.

However, the personal characteristics group was too broad for the purpose of statistical analyses, and that the situational characteristics label was too vague and hampered interpretation. Therefore, we regrouped the 12 initial risk factors in the personal characteristics group to form three separate risk groups. We also relabelled the situational characterstics group so that the label was more clear. Importantly, this **second stage** of the process allowed us to better align our risk groups with the key 'reasons for missing incidents' described in the Missing Persons Data Report 2019/20 (NCA, 2021):

(1) The **vulnerability risk** group included three of the 12 initial risk factors included in the personal characteristics group above: IR1 Is the person vulnerable; IR11 Subject to child protection; and IR13 Lacks ability to interact safely with others.

(2) The **personal risk** group included five of the 12 initial risk factors included in the situational characteristics group above: IR2 Is the behaviour out of character; IR5 Is there a reason for going missing; IR6 Preparations for absence; IR7 Did they fail to complete intentions, and IR17 Education, employment, or financial issue.

(3) The **health risk** group included four of the 12 initial risk factors included in the personal characteristics group above: IR4 Likely to commit suicide; IR10 Mental health issue; IR14 Requires essential medication not available to them; and IR18 Drug or alcohol dependency.

(4) The **harm risk** group included the six initial risk factors previously labelled situational characteristics above: IR3 Likely to be subject of crime; IR8 Family relationship probs or conflict/abuse; IR9 Victim or perpetrator of domestic abuse; IR12 Suffered or exposed to harm in previous missing incident; IR15 Ongoing, bullying, harassment, or community/cultural issues, and IR16 Involved in violent or racist incident.

(5) The **other risk** group included the same initial risk factor as the other characteristics group above: IR19 Other factors influencing risks.

## Appendix 6

Number and percentage data for the categorical key characteristics of interest.

| Variable | No. | % |
|---|---|---|
| Sex | | |
| Female | 7,523 | 41.2 |
| Male | 10,681 | 58.5 |
| Transgender | 62 | 0.3 |
| Ethnicity | | |
| Black | 1,549 | 8.5 |
| Asian | 1,211 | 6.6 |
| Mixed/other | 432 | 2.4 |
| White | 15,074 | 82.5 |
| Disability | | |
| No/unknown | 14,554 | 79.7 |
| Yes | 3,712 | 20.3 |
| Mental illness | | |
| No/unknown | 14,296 | 78.3 |
| Yes | 3,970 | 21.7 |
| Absconder order | | |
| No/unknown | 17,183 | 94.1 |
| Yes | 1,083 | 5.9 |
| Care order | | |
| No | 16,250 | 89.0 |
| Yes | 2,016 | 11.0 |
| Missing from | | |
| Home/neighbourhood | 14,180 | 77.6 |
| Another location | 4,086 | 22.4 |
| Vulnerability risk | | |
| No/unknown | 5,408 | 29.6 |
| Yes | 12,858 | 70.4 |
| Personal risk | | |
| No/unknown | 5,606 | 30.7 |
| Yes | 12,660 | 69.3 |
| Health risk | | |
| No/unknown | 6,993 | 38.3 |

| | | |
|---|---|---|
| Yes | 11,273 | 61.7 |
| Harm risk | | |
| No/unknown | 11,022 | 60.3 |
| Yes | 7,244 | 39.7 |
| Other risk | | |
| No/unknown | 14,869 | 81.4 |
| Yes | 3,397 | 18.6 |
| Risk level | | |
| No apparent risk | 187 | 1.0 |
| Low | 1,718 | 9.4 |
| Medium | 12,852 | 70.4 |
| High | 3,509 | 19.2 |

## Appendix 7

Number and percentage data for the 19 initial risk factors.

| Initial risk factor | No. | % |
|---|---|---|
| 1: Vulnerable person | | |
| No/unknown | 5,723 | 31.3 |
| Yes | 12,543 | 68.7 |
| 2: Out of character behaviour | | |
| No/unknown | 10,363 | 56.7 |
| Yes | 7,903 | 43.3 |
| 3: Crime | | |
| No/unknown | 16,956 | 92.8 |
| Yes | 1,310 | 7.2 |
| 4: Suicide | | |
| No/unknown | 14,306 | 78.3 |
| Yes | 3,960 | 21.7 |
| 5: Reason for missing | | |
| No/unknown | 12,398 | 67.9 |
| Yes | 5,868 | 32.1 |
| 6: Prepared | | |
| No/unknown | 16,335 | 89.4 |
| Yes | 1,931 | 10.6 |
| 7: Failure to complete intentions | | |
| No/unknown | 15,640 | 85.6 |
| Yes | 2,626 | 14.4 |
| 8: Family relationship problems, or conflict/abuse | | |
| No/unknown | 13,471 | 73.7 |
| Yes | 4,795 | 26.3 |
| 9: Victim or perpetrator of domestic abuse | | |
| No/unknown | 16,504 | 90.4 |
| Yes | 1,762 | 9.6 |
| 10: Mental health issue | | |
| No/unknown | 9,002 | 49.3 |
| Yes | 9,264 | 50.7 |

| | | |
|---|---|---|
| 11: Child protection plan | | |
| No/unknown | 16,616 | 91.0 |
| Yes | 1,650 | 9.0 |
| 12: Harm in previous missing incident | | |
| No/unknown | 17,556 | 96.1 |
| Yes | 710 | 3.9 |
| 13: Inability to interact safely with others | | |
| No/unknown | 16,344 | 99.5 |
| Yes | 1,922 | 10.5 |
| 14: Essential medication not available to them | | |
| No/unknown | 15,134 | 82.9 |
| Yes | 3,132 | 17.1 |
| 15: Bullying, harassment or community/cultural issues | | |
| No/unknown | 17,874 | 97.9 |
| Yes | 392 | 2.1 |
| 16: Violent or racist incident | | |
| No/unknown | 17,273 | 94.6 |
| Yes | 993 | 5.4 |
| 17: Education, employment or financial problems | | |
| No/unknown | 16,519 | 90.4 |
| Yes | 1,747 | 9.6 |
| 18: Drug or alcohol | | |
| No/unknown | 14,646 | 80.2 |
| Yes | 3,620 | 19.8 |
| 19: Other | | |
| No/unknown | 14,869 | 81.4 |
| Yes | 3,397 | 18.6 |

## Appendix 8

Frequency data and significance for the categorical key characteristics of interest across the four ethnicity groups.

| Variable | Black<br>No. (%) | Asian<br>No. (%) | Mixed/other<br>No. (%) | White<br>No. (%) |
|---|---|---|---|---|
| Sex*** | | | | |
| Female | 543 (35.1)$_a$ | 474 (39.1)$_{a,b}$ | 152 (35.2)$_a$ | 6,354 (42.2)$_b$ |
| Male | 1,004 (64.8)$_a$ | 732 (60.4)$_{a,b}$ | 277 (64.1)$_a$ | 8,668 (57.5)$_b$ |
| Transgender | 2 (0.1)$_a$ | 5 (0.4)$_a$ | 3 (0.7)$_a$ | 52 (0.3)$_a$ |
| Disability*** | | | | |
| No/unknown | 1,227 (79.2)$_a$ | 927 (76.5)$_a$ | 392 (90.7)$_b$ | 12,008 (79.7)$_a$ |
| Yes | 322 (20.8)$_a$ | 284 (23.5)$_a$ | 40 (9.3)$_b$ | 3,066 (20.3)$_a$ |
| Mental illness*** | | | | |
| No/unknown | 1,260 (81.3)$_a$ | 944 (78.0)$_{a,b}$ | 391 (90.5)$_c$ | 11,701 (77.6)$_b$ |
| Yes | 289 (18.7)$_a$ | 267 (22.0)$_{a,b}$ | 41 (9.5)$_c$ | 3,373 (22.4)$_b$ |
| Absconder order* | | | | |
| No/unknown | 1,443 (93.2)$_a$ | 1,160 (95.8)$_b$ | 408 (94.4)$_{a,b}$ | 14,172 (94.0)$_{a,b}$ |
| Yes | 106 (6.8)$_a$ | 51 (4.2)$_b$ | 24 (5.6)$_{a,b}$ | 902 (6.0)$_{a,b}$ |
| Care order*** | | | | |
| No | 1,339 (86.4)$_a$ | 1,119 (92.4)$_b$ | 382 (88.4)$_{a,b,c}$ | 13,410 (89.0)$_c$ |
| Yes | 210 (13.6)$_a$ | 92 (7.6)$_b$ | 50 (11.6)$_{a,b,c}$ | 1,664 (11.0)$_c$ |
| Missing from*** | | | | |
| Home/neighbourhood | 1,154 (74.5)$_a$ | 983 (81.2)$_b$ | 287 (66.4)$_c$ | 11,756 (78.0)$_b$ |
| Other | 395 (25.5)$_a$ | 228 (18.8)$_b$ | 145 (33.6)$_c$ | 3,318 (22.0)$_b$ |
| Vulnerability risk*** | | | | |
| No/unknown | 377 (24.3)$_a$ | 382 (31.5)$_b$ | 115 (26.6)$_{a,b}$ | 4,534 (30.1)$_b$ |
| Yes | 1,172 (75.7)$_a$ | 829 (68.5)$_b$ | 317 (73.4)$_{a,b}$ | 10,540 (69.9)$_b$ |
| Personal risk | | | | |
| No/unknown | 498 (32.1)$_a$ | 358 (29.6)$_a$ | 145 (33.6)$_a$ | 4,605 (30.5)$_a$ |
| Yes | 1,051 (67.9)$_a$ | 853 (70.4)$_a$ | 287 (66.4)$_a$ | 10,469 (69.5)$_a$ |
| Health risk*** | | | | |
| No/unknown | 824 (53.2)$_a$ | 662 (54.7)$_a$ | 258 (59.7)$_a$ | 5,249 (34.8)$_b$ |
| Yes | 725 (46.8)$_a$ | 549 (45.3)$_a$ | 174 (40.3)$_a$ | 9,825 (65.2)$_b$ |
| Harm risk*** | | | | |
| No/unknown | 1,029 (66.4)$_a$ | 766 (63.3)$_{a,b}$ | 272 (63.0)$_{a,b}$ | 8,955 (59.4)$_b$ |

| | | | | |
|---|---|---|---|---|
| Yes | 520 (33.6)$_{a}$ | 445 (36.7)$_{a,b}$ | 160 (37.0)$_{a,b}$ | 6,119 (40.6)$_{b}$ |
| Other risk | | | | |
| No/unknown | 1,242 (80.2)$_{a}$ | 993 (82.0)$_{a}$ | 339 (78.5)$_{a}$ | 12,295 (81.6)$_{a}$ |
| Yes | 307 (19.8)$_{a}$ | 218 (18.0)$_{a}$ | 93 (21.5)$_{a}$ | 2,779 (18.4)$_{a}$ |
| Risk level$^{***}$ | | | | |
| No apparent risk | 23 (1.5)$_{a}$ | 17 (1.4)$_{a}$ | 7 (1.6)$_{a}$ | 140 (0.9)$_{a}$ |
| Low | 138 (8.9)$_{a,b}$ | 141 (11.6)$_{b}$ | 25 (5.8)$_{a}$ | 1,414 (9.4)$_{a,b}$ |
| Medium | 1,174 (75.8)$_{a,b}$ | 870 (71.8)$_{b,c}$ | 345 (79.9)$_{a}$ | 10,463 (69.4)$_{c}$ |
| High | 214 (13.8)$_{a}$ | 183 (15.1)$_{a}$ | 55 (12.7)$_{a}$ | 3,057 (20.3)$_{b}$ |

*Note*. Within each row, numbers (and percentages) with different subscript letters represent statistically significant differences between the ethnicity groups. $^{***}$ $p < .001$. $^{*}$ $p < .05$.

## Appendix 9

Frequency data and significance for the 19 initial risk factors across the four ethnicity groups.

| Variable | Black | Asian | Mixed/other | White |
|---|---|---|---|---|
| | No. (%) | No. (%) | No. (%) | No. (%) |
| Initial risk 1*** | | | | |
| No/unknown | 397 (25.6)$_a$ | 404 (33.4)$_b$ | 126 (29.2)$_{a,b}$ | 4,796 (31.8)$_b$ |
| Yes | 1,152 (74.4)$_a$ | 807 (66.6)$_b$ | 306 (70.8)$_{a,b}$ | 10,278 (68.2)$_b$ |
| Initial risk 2*** | | | | |
| No/unknown | 846 (54.6)$_{a,b}$ | 617 (50.9)$_b$ | 255 (59.0)$_a$ | 8,645 (57.4)$_a$ |
| Yes | 703 (45.4)$_{a,b}$ | 594 (49.1)$_b$ | 177 (41.0)$_a$ | 6,429 (42.6)$_a$ |
| Initial risk 3*** | | | | |
| No/unknown | 1,379 (89.0)$_a$ | 1,122 (92.7)$_b$ | 396 (91.7)$_{a,b}$ | 14,059 (92.8)$_b$ |
| Yes | 170 (11.0)$_a$ | 89 (7.3)$_b$ | 36 (8.3)$_{a,b}$ | 1,015 (6.7)$_b$ |
| Initial risk 4*** | | | | |
| No/unknown | 1,386 (89.5)$_a$ | 1,045 (86.3)$_a$ | 375 (86.8)$_a$ | 11,500 (76.3)$_b$ |
| Yes | 163 (10.5)$_a$ | 166 (13.7)$_a$ | 57 (13.2)$_a$ | 3,574 (27.3)$_b$ |
| Initial risk 5*** | | | | |
| No/unknown | 1,149 (74.2)$_a$ | 887 (73.2)$_a$ | 296 (68.5)$_{a,b}$ | 10,066 (66.8)$_b$ |
| Yes | 400 (25.8)$_a$ | 324 (26.8)$_a$ | 136 (31.5)$_{a,b}$ | 5,008 (33.2)$_b$ |
| Initial risk 6*** | | | | |
| No/unknown | 1,335 (86.2)$_a$ | 1,045 (86.3)$_a$ | 372 (86.1)$_a$ | 13,583 (90.1)$_b$ |
| Yes | 214 (13.8)$_a$ | 166 (13.7)$_a$ | 60 (13.9)$_a$ | 1,491 (9.9)$_b$ |
| Initial risk 7* | | | | |
| No/unknown | 1,358 (87.7)$_a$ | 1,045 (86.3)$_a$ | 382 (88.4)$_a$ | 12,855 (85.3)$_a$ |
| Yes | 191 (12.3)$_a$ | 166 (13.7)$_a$ | 50 (11.6)$_a$ | 2,219 (14.7)$_a$ |
| Initial risk 8*** | | | | |
| No/unknown | 1,266 (81.7)$_a$ | 908 (75.0)$_b$ | 322 (74.5)$_b$ | 10,975 (72.8)$_b$ |
| Yes | 283 (18.3)$_a$ | 303 (25.0)$_b$ | 110 (25.5)$_b$ | 4,099 (27.2)$_b$ |
| Initial risk 9*** | | | | |
| No/unknown | 1,455 (93.9)$_a$ | 1,102 (91.0)$_b$ | 404 (93.5)$_{a,b}$ | 13,543 (89.8)$_b$ |
| Yes | 94 (6.1)$_a$ | 109 (9.0)$_b$ | 28 (6.5)$_{a,b}$ | 1,531 (10.2)$_b$ |
| Initial risk 10*** | | | | |
| No/unknown | 964 (62.2)$_a$ | 771 (63.7)$_a$ | 290 (67.1)$_a$ | 6,977 (46.3)$_b$ |
| Yes | 585 (37.8)$_a$ | 440 (36.3)$_a$ | 142 (32.9)$_a$ | 8,097 (53.7)$_b$ |

| | | | | |
|---|---|---|---|---|
| Initial risk 11** | | | | |
| No/unknown | 1,414 (91.3)$_{a,b}$ | 1,134 (93.6)$_{b}$ | 379 (87.7)$_{a}$ | 13,689 (90.8)$_{a}$ |
| Yes | 135 (8.7)$_{a,b}$ | 77 (6.4)$_{b}$ | 53 (12.3)$_{a}$ | 1,385 (9.2)$_{a}$ |
| Initial risk 12 | | | | |
| No/unknown | 1,503 (97.0)$_{a}$ | 1,172 (96.8)$_{a}$ | 420 (97.2)$_{a}$ | 14,461 (95.9)$_{a}$ |
| Yes | 46 (3.0)$_{a}$ | 39 (3.2)$_{a}$ | 12 (2.8)$_{a}$ | 613 (4.1)$_{a}$ |
| Initial risk 13* | | | | |
| No/unknown | 1,3978 (89.0)$_{a,b}$ | 1,058 (87.4)$_{b}$ | 395 (91.4)$_{a,b}$ | 13,513 (89.6)$_{a}$ |
| Yes | 171 (11.0)$_{a,b}$ | 153 (12.6)$_{b}$ | 37 (8.6)$_{a,b}$ | 1,561 (10.4)$_{a}$ |
| Initial risk 14*** | | | | |
| No/unknown | 1,304 (84.2)$_{a,b}$ | 1,051 (86.8)$_{b,c}$ | 388 (89.8)$_{c}$ | 12,391 (82.2)$_{a}$ |
| Yes | 245 (15.8)$_{a,b}$ | 160 (13.2)$_{b,c}$ | 44 (10.2)$_{c}$ | 2,683 (17.8)$_{a}$ |
| Initial risk 15 | | | | |
| No/unknown | 1,522 (98.3)$_{a}$ | 1,186 (97.9)$_{a}$ | 424 (98.1)$_{a}$ | 14,742 (97.8)$_{a}$ |
| Yes | 27 (1.7)$_{a}$ | 25 (2.1)$_{a}$ | 8 (1.9)$_{a}$ | 3302 (2.2)$_{a}$ |
| Initial risk 16 | | | | |
| No/unknown | 1,450 (93.6)$_{a}$ | 1,157 (95.5)$_{a}$ | 415 (96.1)$_{a}$ | 14,251 (94.5)$_{a}$ |
| Yes | 99 (6.4)$_{a}$ | 54 (4.5)$_{a}$ | 17 (3.9)$_{a}$ | 823 (5.5)$_{a}$ |
| Initial risk 17 | | | | |
| No/unknown | 1,398 (90.3)$_{a}$ | 1,119 (92.4)$_{a}$ | 390 (90.3)$_{a}$ | 13,612 (90.3)$_{a}$ |
| Yes | 151 (9.7)$_{a}$ | 92 (7.6)$_{a}$ | 42 (9.7)$_{a}$ | 1,456 (9.7)$_{a}$ |
| Initial risk 18*** | | | | |
| No/unknown | 1,346 (86.9)$_{a}$ | 1,073 (88.6)$_{a}$ | 384 (88.9)$_{a}$ | 11,843 (78.6)$_{b}$ |
| Yes | 203 (13.1)$_{a}$ | 138 (11.4)$_{a}$ | 48 (11.1)$_{a}$ | 3,231 (21.4)$_{b}$ |
| Initial risk 19 | | | | |
| No/unknown | 1,242 (80.2)$_{a}$ | 993 (82.0)$_{a}$ | 339 (78.5)$_{a}$ | 12,295 (81.6)$_{a}$ |
| Yes | 307 (19.8)$_{a}$ | 218 (18.0)$_{a}$ | 93 (21.5)$_{a}$ | 2,779 (18.4)$_{a}$ |

*Note*. Within each row, numbers (and percentages) with different subscript letters represent statistically significant differences between the ethnicity groups. *** $p < .001$. *** $p < .01$. * $p < .05$.

## Appendix 10

Further details regarding the statistical analyses for the allocation of risk.

Purposeful logistic regression analyses, using Hosmer, Lemeshow, and Studivant's (2013) seven step model building process, were performed to examine the relationship between 13 characteristics of interest and the allocation of risk. Three sets of analyses were performed to examine the allocation of (i) low risk vs. medium risk, (ii) low risk vs. high risk, and (iii) medium risk vs. high risk. The 13 characteristics comprised age (years), sex (female, male), ethnicity (Black, Asian, Mixed/other, White), and missing from (home/neighbourhood, other), as well as disability (no/unknown, yes), mental illness (no/unknown, yes), absconder order (no/unknown, yes), care order (no, yes), health risk (no/unknown, yes), vulnerability risk (no/unknown, yes), personal risk (no/unknown, yes), and other risk (no/unknown, yes).

The seven steps are:

(1) Performing analysis of variance and chi-square analyses to identify characteristics of interest that vary across the different levels of risk (low risk vs. medium risk, low risk vs. high risk, medium risk vs. high risk) with *p*-values less than 0.25.
(2) Entering the identified characteristics into an initial logistic regression model and removing any variables with p-values less than 0.05.
(3) Determining whether any removed characteristics should be re-entered into the model.
(4) Entering any characteristics of interest originally excluded into the initial logistic regression model to determine whether any have *p*-values less than 0.05.
(5) Creating a main effects logistic regression model.
(6) Identifying any significant interaction terms and creating the final logistic regression model.
(7) Testing the adequacy and fit of the final logistic regression model.

A p-value of .25 was used during Step 1 because research suggests use of a more traditional significance level (e.g. a *p*-value of .05) may fail to identify important predictor variables (Bendel & Afifi, 1977; Mickey & Greenland, 1989). Furthermore, all final logistic regression models in the report are main effects models in the interest of parsimony and our interest

in whether there is any evidence of investigative bias in the allocation of risk according to the ethnicity of the missing person.

Step 1 for **low risk vs. medium risk** identified 11 characteristics of interest for inclusion in the initial logistic regression model: age ($p < .001$), sex ($p < .001$), ethnicity ($p = .005$), missing from ($p < .001$), absconder order ($p < .001$), care order ($p < .001$), vulnerability risk ($p < .001$), personal risk ($p < .001$), health risk ($p = .061$), harm risk ($p < .001$), and other risk ($p < .001$).

Step 1 for **low risk vs. high risk** identified 13 characteristics of interest for inclusion in the initial logistic regression model: age ($p < .001$), sex ($p = .001$), ethnicity ($p < .001$), missing from ($p < .001$), disability ($p < .001$), mental illness ($p < .001$), absconder order ($p = .025$), care order ($p < .001$), vulnerability risk ($p < .001$), personal risk ($p < .001$), health risk ($p < .001$), harm risk ($p < .001$), and other risk ($p < .001$).

Finally, Step 1 for **medium risk vs. high risk** identified 13 characteristics of interest for inclusion in the initial logistic regression model: age ($p < .001$), sex ($p = .002$), ethnicity ($p < .001$), missing from ($p = .002$), disability ($p < .001$), mental illness ($p < .001$), absconder order ($p < .001$), care order ($p < .001$), vulnerability risk ($p < .001$), personal risk ($p < .001$), health risk ($p < .001$), harm risk ($p = .053$), and other risk ($p < .001$).

Appendices 9a, 9b and 9c present the descriptive data (mean and standard deviation / number and percentage) and significance for the characteristics of interest by risk level (low risk vs. medium risk, low risk vs. high risk, medium risk vs. high risk).

## Appendix 10a

Descriptive data and significance for the characteristics of interest by risk level (low risk vs. medium risk).

| Variable | Low risk<br>M (SD) | Medium risk<br>M (SD) |
|---|---|---|
| Age*** | 32.63 (16.17) | 25.41 (16.58) |
| | **No. (%)** | **No. (%)** |
| Sex*** | | |
| Female | 664 (10.8) | 5,469 (89.2) |
| Male | 1,234 (14.4) | 7,341 (85.6) |
| Ethnicity** | | |
| Black | 161 (12.1) | 1,174 (87.9) |
| Asian | 158 (15.4) | 870 (84.6) |
| Mixed/other | 32 (8.5) | 345 (91.5) |
| White | 1,554 (12.9) | 10,463 (87.1) |
| Missing from*** | | |
| Home/neighbourhood | 1,601 (14.0) | 9,811 (86.0) |
| Other | 304 (9.1) | 3,041 (90.9) |
| Disability | | |
| No/unknown | 1,575 (13.0) | 10,562 (87.0) |
| Yes | 330 (12.6) | 2,290 (87.4) |
| Mental illness | | |
| No/unknown | 1,531 (12.8) | 10,438 (87.2) |
| Yes | 374 (13.4) | 2,414 (86.6) |
| Absconder order*** | | |
| No/unknown | 1,845 (13.3) | 11,983 (86.7) |
| Yes | 60 (6.5) | 869 (93.5) |
| Care order*** | | |
| No | 1,771 (13.8) | 11,109 (86.3) |
| Yes | 134 (7.1) | 1,743 (92.9) |
| Vulnerability risk*** | | |
| No/unknown | 1,198 (27.5) | 3,161 (72.5) |
| Yes | 707 (6.8) | 9,691 (93.2) |
| Personal risk*** | | |
| No/unknown | 762 (15.8) | 4,066 (84.2) |

| | | |
|---|---|---|
| Yes | 1,143 (11.5) | 8,786 (88.5) |
| Health risk[†] | | |
| No/unknown | 871 (13.5) | 5,583 (86.5) |
| Yes | 1,034 (12.5) | 7,269 (87.5) |
| Harm risk[***] | | |
| No/unknown | 1,366 (15.2) | 7,635 (84.8) |
| Yes | 539 (9.4) | 5,217 (90.6) |
| Other risk[***] | | |
| No/unknown | 1,731 (14.1) | 10,573 (85.9) |
| Yes | 174 (7.1) | 2,279 (92.9) |

*Note*. [***] $p < .001$. [**] $p < .01$. [†] = $p < .25$.

## Appendix 10b

Descriptive data and significance for the characteristics of interest by risk level (low risk vs. high risk).

| Variable | Low risk<br>M (SD) | High risk<br>M (SD) |
|---|---|---|
| Age*** | 32.63 (16.17) | 38.73 (24.21) |
| | **No. (%)** | **No. (%)** |
| Sex** | | |
| Female | 664 (32.3) | 1,390 (67.7) |
| Male | 1,234 (36.9) | 2,106 (63.1) |
| Ethnicity*** | | |
| Black | 161 (42.9) | 214 (57.1) |
| Asian | 158 (46.3) | 183 (53.7) |
| Mixed/other | 32 (36.8) | 55 (63.2) |
| White | 1,554 (33.7) | 3,057 (66.3) |
| Missing from*** | | |
| Home/neighbourhood | 1,601 (36.6) | 2,768 (63.4) |
| Other | 304 (29.1) | 741 (70.9) |
| Disability*** | | |
| No/unknown | 1,575 (39.5) | 2,417 (60.5) |
| Yes | 330 (23.2) | 1,092 (76.8) |
| Mental illness*** | | |
| No/unknown | 1,531 (39.7) | 2,327 (60.3) |
| Yes | 374 (24.0) | 1,182 (76.0) |
| Absconder order* | | |
| No/unknown | 1,845 (35.5) | 3,355 (64.5) |
| Yes | 60 (28.0) | 154 (72.0) |
| Care order*** | | |
| No | 1,771 (34.4) | 3,370 (65.6) |
| Yes | 134 (49.1) | 139 (50.9) |
| Vulnerability risk*** | | |
| No/unknown | 1,198 (53.5) | 1,049 (46.7) |
| Yes | 707 (22.3) | 2,460 (77.7) |
| Personal risk*** | | |
| No/unknown | 762 (49.5) | 778 (50.5) |

| | | |
|---|---|---|
| Yes | 1,143 (29.5) | 2,731 (70.5) |
| Health risk*** | | |
| No/unknown | 871 (61.8) | 539 (38.2) |
| Yes | 1,034 (25.8) | 2,970 (74.2) |
| Harm risk*** | | |
| No/unknown | 1,366 (40.3) | 2,021 (59.7) |
| Yes | 539 (26.6) | 1,488 (73.4) |
| Other risk*** | | |
| No/unknown | 1,731 (40.3) | 2,565 (59.7) |
| Yes | 174 (15.6) | 944 (84.4) |

*Note*. *** $p < .001$. ** $p < .01$. * $p < .05$.

## Appendix 10c

Descriptive data and significance for the characteristics of interest by risk level (medium risk vs. high risk).

| Variable | Medium risk<br>M (SD) | High risk<br>M (SD) |
|---|---|---|
| Age*** | 25.41 (16.58) | 38.73 (24.21) |
| | **No. (%)** | **No. (%)** |
| Sex** | | |
| Female | 5,469 (79.7) | 1,390 (20.3) |
| Male | 7,341 (77.7) | 2,106 (22.3) |
| Ethnicity*** | | |
| Black | 1,174 (84.6) | 214 (15.4) |
| Asian | 870 (82.6) | 183 (17.4) |
| Mixed/other | 345 (86.3) | 55 (13.8) |
| White | 10,463 (77.4) | 3,057 (22.6) |
| Missing from** | | |
| Home/neighbourhood | 9,811 (78.0) | 2,768 (22.0) |
| Other | 3,041 (80.4) | 741 (19.6) |
| Disability*** | | |
| No/unknown | 10,562 (81.4) | 2,417 (18.6) |
| Yes | 2,290 (67.7) | 1,092 (32.3) |
| Mental illness*** | | |
| No/unknown | 10,438 (81.8) | 2,327 (18.2) |
| Yes | 2,414 (67.1) | 1,182 (32.9) |
| Absconder order*** | | |
| No/unknown | 11,983 (78.1) | 3,355 (21.9) |
| Yes | 869 (84.9) | 154 (15.1) |
| Care order*** | | |
| No | 11,109 (76.7) | 3,370 (23.3) |
| Yes | 1,743 (92.6) | 139 (7.4) |
| Vulnerability risk*** | | |
| No/unknown | 3,161 (75.1) | 1,049 (24.9) |
| Yes | 9,691 (79.8) | 2,460 (20.2) |
| Personal risk*** | | |
| No/unknown | 4,066 (83.9) | 778 (16.1) |

| | | |
|---|---|---|
| Yes | 8,786 (76.3) | 2,731 (23.7) |
| Health risk*** | | |
| No/unknown | 5,583 (91.2) | 539 (8.8) |
| Yes | 7,269 (71.0) | 2,970 (29.0) |
| Harm risk† | | |
| No/unknown | 7,635 (79.1) | 2,021 (20.9) |
| Yes | 5,217 (77.8) | 1,488 (22.2) |
| Other risk*** | | |
| No/unknown | 10,573 (80.5) | 2,565 (19.5) |
| Yes | 2,279 (70.7) | 944 (29.3) |

*Note*. *** $p < .001$. ** $p < .01$. † = $p < .25$.

## Appendix 11

Summary of the final logistic regression model predicting level of risk (low vs. medium).

| Variable | Final model | | | | |
|---|---|---|---|---|---|
| | ***B*** | ***SE*** | ***P*** | ***OR*** | **95% CI** |
| Age | -0.16 | .00 | < .001 | 0.98 | [0.98, 0.99] |
| Sex | 0.12 | .06 | .026 | 1.13 | [1.02, 1.26] |
| Ethnicity | | | - | | |
| Asian | - | - | - | - | - |
| Mixed/other | - | - | - | - | - |
| White | - | - | - | - | - |
| Missing from | 0.42 | .07 | < .001 | 1.52 | [1.32, 1.75] |
| Absconder order | 0.35 | .14 | .015 | 1.42 | [1.07, 1.88] |
| Care order | - | - | - | - | - |
| Vulnerability risk | 1.45 | .05 | < .001 | 4.26 | [3.84, 4.74] |
| Personal risk | 0.16 | .06 | .005 | 1.17 | [1.05, 1.30] |
| Health risk | 0.26 | .06 | < .001 | 1.30 | [1.16, 1.45] |
| Harm risk | 0.41 | .06 | < .001 | 1.50 | [1.34, 1.68] |
| Other risk | 0.58 | .09 | < .001 | 1.79 | [1.51, 2.11] |

*Note*. Reference categories: Sex = male, Ethnicity = Black, Missing from = other, Absconder order = no/unknown, Care order = no, Vulnerability risk = no/unknown, Personal risk = no/unknown, Health risk = no/unknown, Harm risk = no/unknown, Other risk = no/unknown.

## Appendix 12

Summary of the final logistic regression model predicting level of risk (low vs. high).

| Variable | Final model | | | | |
|---|---|---|---|---|---|
| | ***B*** | ***SE*** | ***p*** | ***OR*** | **95% CI** |
| Age | 0.01 | .00 | .001 | 1.01 | [1.00, 1.01] |
| Sex | 0.13 | 07 | .053 | 1.14 | [1.00, 1.31] |
| Ethnicity | | | - | | |
| Asian | - | - | - | - | - |
| Mixed/other | - | - | - | - | - |
| White | - | - | - | - | - |
| Missing from | 0.34 | .09 | < .001 | 1.41 | [1.18, 1.68] |
| Disability | 0.29 | .08 | < .001 | 1.33 | [1.14, 1.58] |
| Mental illness | - | - | - | - | - |
| Absconder order | - | - | - | - | - |
| Care order | -0.76 | .15 | < .001 | 0.47 | [0.35, 0.63] |
| Vulnerability risk | 1.33 | .07 | < .001 | 3.77 | [3.30, 4.31] |
| Personal risk | 0.68 | .07 | < .001 | 1.97 | [1.71, 2.28] |
| Health risk | 1.23 | .08 | < .001 | 3.42 | [2.94, 3.99] |
| Harm risk | 0.52 | .07 | < .001 | 1.67 | [1.46, 1.92] |
| Other risk | 1.00 | .10 | < .001 | 2.72 | [2.25, 3.28] |

*Note*. Reference categories: Sex = male, Ethnicity = Black, Missing from = other, Disability = no/unknown, Mental illness = no/unknown, Absconder order = no/unknown, Care order = no, Vulnerability risk = no/unknown, Personal risk = no/unknown, Health risk = no/unknown, Harm risk = no/unknown, Other risk = no/unknown.

## Appendix 13

Summary of the final logistic regression model predicting level of risk (medium vs. high).

| Variable | Final model | | | | |
|---|---|---|---|---|---|
| | ***B*** | ***SE*** | ***p*** | ***OR*** | **95% CI** |
| Age | 0.02 | .00 | < .001 | 1.02 | [1.02, 1.03] |
| Sex | 0.08 | .04 | .047 | 1.09 | [1.00, 1.18] |
| Ethnicity | | | - | | |
| Asian | - | - | - | - | - |
| Mixed/other | - | - | - | - | - |
| White | - | - | - | - | - |
| Missing from | - | - | - | - | - |
| Disability | 0.29 | .05 | < .001 | 1.33 | [1.21, 1.46] |
| Mental illness | - | - | - | - | - |
| Absconder order | -0.30 | .10 | .002 | 0.74 | [0.61, 0.90] |
| Care order | -0.77 | .10 | < .001 | 0.46 | [0.38, 0.56] |
| Vulnerability risk | -0.10 | .05 | .023 | 0.90 | [0.83, 0.99] |
| Personal risk | 0.44 | .05 | < .001 | 1.55 | [1.42, 1.71] |
| Health risk | 0.93 | .06 | < .001 | 2.54 | [2.29, 2.83] |
| Harm risk | 0.15 | .04 | < .001 | 1.16 | [1.07, 1.26] |
| Other risk | 0.48 | .05 | < .001 | 1.62 | [1.48, 1.78] |

*Note*. Reference categories: Sex = male, Ethnicity = Black, Missing from = other, Disability = no/unknown, Mental illness = no/unknown, Absconder order = no/unknown, Care order = no, Vulnerability risk = no/unknown, Personal risk = no/unknown, Health risk = no/unknown, Harm risk = no/unknown, Other risk = no/unknown.