

Report into Stop and Search Disproportionality in Hertfordshire April 2020 – March 2023

In Partnership with the Office of the Police and Crime
Commissioner for Hertfordshire

University of
Hertfordshire **UH**



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Main Points

- **Black people are over three times more likely to be stopped and searched than White people in Hertfordshire. People from a mixed or multiple ethnicity background are nearly twice as likely to be searched as the White population in Hertfordshire.**
- **A large portion of the over-searching of the Black community results from drug-related searches of Black males. Black women under 35 are searched at a lower rate than White women of the same age.**
- **Negative Binomial modelling suggests a highly significant positive correlation between the percentage of Black residents in a ward and the number of searches that take place there. This association disappears once the population and the number of crimes reported to the police in each ward are included in the model.**
- **Negative Binomial modelling suggests a highly significant positive correlation between the percentage of mixed or multiple ethnicities residents in a ward and the number of searches that take place there. This association remains once the population and the number of crimes reported to the police in each ward are included in the model. This may constitute discrimination.**
- **Binary logistic regression modelling suggests that the searches of those whom police officers perceive to be Asian and Black are less successful than those they perceive to be White. This suggests that police officers are unduly suspicious of these groups which may constitute discrimination.**

Contents

Main Points	2
1 Introduction	5
1.1 What is stop and search?	5
1.2 A controversial power: Disproportionality and Discrimination in the use of Stop and Search	6
1.3 The Current Project	7
2 Stop and Search in Hertfordshire	8
2.1 Gender, Age, and Ethnic Group Search Rates	8
2.2 Age and Gender Composition of Ethnic Groups	11
2.3 Search Objects and Ethnic Groups	15
3 Explaining disproportionality and discrimination in stop and search	17
4 The location of policing and searches	19
4.1 Deployment Decisions in Hertfordshire	19
4.2 Analysis of the location of searches conducted by Herts Police	22
4.2.1 Data and Analytical Approach	23
4.2.2 Findings	24
5 Police interactions with the settings	28
5.1 Data and Analytical Approach	29
5.2 Findings	29
6 Implications	36
6.1 Disproportionality	36
6.2 Discrimination	37
7 Limitations and Future Directions	39
7.1 Residents and the Available Population	39
7.2 Calculating Policing Rates	41
7.3 The Use of Hit Rates	41
7.4 Missing Data	42
Appendix	44
Appendix A Searches Per 1000 of the Population by Self-Defined Ethnic Group	44
Appendix B Age, Gender and Ethnic Composition of the Population in Hertfordshire	45
Appendix C Stop and Search Statistics for 2022 Wards in Hertfordshire	46
Appendix D Crosstab of Self-Defined Ethnicity with Officer-Defined Ethnicity	50
References	51

Tables

TABLE 1 EXPECTED, CONDUCTED AND EXCESS SEARCHES BY ETHNIC GROUPS	11
TABLE 2 SIMILAR POLICE FORCE COMPARISON OF SEARCH RATES PER 1000 FOR ETHNIC GROUPS	11
TABLE 3 SIMILAR POLICE FORCE COMPARISON OF SEARCH RATE RATIO FOR ETHNIC GROUPS VS WHITE.....	11
TABLE 4 EXPECTED, CONDUCTED AND EXCESS SEARCHES ACCORDING TO THE AGE-GENDER COMPOSITION OF ETHNIC GROUPS.....	13
TABLE 5 SEARCH RATE PER 1000 FOR ETHNIC GROUPS BY SEARCH OBJECT	15
TABLE 6 SEARCH RATE RATIO FOR ETHNIC GROUPS VS WHITE BY SEARCH OBJECT	16
TABLE 7 EXCESS SEARCHES BY SEARCH OBJECT AND ETHNIC GROUP	16
TABLE 8 WARD-LEVEL DESCRIPTIVES	25
TABLE 9 BIVARIATE SPEARMAN'S CORRELATION COEFFICIENTS FOR WARD LEVEL VARIABLES	25
TABLE 10 NEGATIVE BINOMIAL REGRESSION PREDICTING FREQUENCY OF SEARCHES WITHIN A CENSUS WARD	27
TABLE 11 UNADJUSTED AND ADJUSTED EXCESS SEARCH STATISTICS.....	28
TABLE 12 BINARY LOGISTIC REGRESSION PREDICTING THE OUTCOME OF A SEARCH, SELF-DEFINED ETHNICITY	33
TABLE 13 BINARY LOGISTIC REGRESSION PREDICTING SEARCH OUTCOME, OFFICER-DEFINED ETHNICITY.....	34
TABLE 14 SEARCH HIT RATE BY SEARCH OBJECT AND OFFICER-DETERMINED ETHNIC GROUP.....	35

Figures

FIGURE 1 GENDER SEARCH RATES PER 1000 OF THE SEARCHABLE POPULATION	10
FIGURE 2 AGE GROUP SEARCH RATES PER 1000 OF THE POPULATION.....	10
FIGURE 3 COMBINED SELF-DEFINED ETHNIC GROUP SEARCH RATES PER 1000 OF THE SEARCHABLE POPULATION	10
FIGURE 4 SEARCH RATES FOR THREE-WAY AGE, GENDER, AND SELF-DEFINED ETHNIC GROUPS PER 1000 OF THE POPULATION	14
FIGURE 5 OBJECTS OF SEARCH BY ETHNIC GROUPS.....	16
FIGURE 6 FORCE AND INDIVIDUAL SEARCH LEVEL PROCESSES LEADING TO FORCE LEVEL STOP AND SEARCH RATES	18
FIGURE 7 SEARCH OUTCOMES BY SELF-IDENTIFIED ETHNIC GROUP.....	31
FIGURE 8 SEARCH OUTCOMES BY POLICE-IDENTIFIED ETHNIC GROUP	32

1 Introduction

1.1 What is stop and search?

Police Stop and Search refers to statutory powers granted to police officers to stop and search individuals under specific legal provisions (Bowling & Weber, 2011; Delsol & Shiner, 2006). “*The primary purpose of the power is to enable officers to allay or confirm suspicions about individuals without exercising their power of arrest*” (Bowling & Phillips, 2007, p. 937). The UK's legal definition and framework for stop and search operations are primarily governed by the Police and Criminal Evidence Act 1984 (PACE)¹, which introduced guidelines and regulations governing stop and search procedures². The key points related to the legal definition of stop and search in the UK are reasonable suspicion, grounds for stop and search, terrorism stop and search, powers of detention, recording and reporting, accountability, and equality and non-discrimination (Bowling & Phillips, 2007; Nawaz & Tankebe, 2018; Parmar, 2011).

PACE 1984: Police and Stop and Search

The conditions underpinning police stop and search procedures with inferences to PACE s. 1. The authority and scope to stop and search: A constable has the authority to stop and search individuals, vehicles (including anything in or on the vehicle), provided they meet certain criteria (for instance, prohibited (stolen) items, any offences related to s. 12 of the Theft Act 1968, and actionable intelligence with references to the Terrorism Act 2000). A constable may detain a person or vehicle to conduct such a search. A constable must have reasonable grounds for suspecting that stolen or prohibited articles, or specified substances, before conducting the stop and search. If a constable discovers an article during a search that they reasonably suspect to be a stolen or prohibited article or substance, this can be seized. Prohibited articles include offensive weapons and items made or adapted for criminal offences, offences related to prohibited articles include burglary, theft, taking a motor vehicle without authority, fraud, and criminal damage (PACE, 1984, part 1).

It is noteworthy that a constable generally cannot search a person or vehicle without specific reasons and/or permissions. However, under S. 60 of the Criminal Justice and Public Order Act 1994, unlike PACE 1984, police officers have the statutory powers to conduct stop and search without needing

¹ For further information and the conditions underpinning police stop and search procedures and the accompanying PACE Codes of Practice, see Police and Criminal Evidence Act 1984. <https://www.legislation.gov.uk/ukpga/1984/60/contents>

² Section 23 of the Misuse of Drugs Act 1971 also provides officers the legal basis to stop and search any individual suspected of possessing controlled drug(s).

reasonable suspicion in specific circumstances (Bowling & Phillips, 2007; Keeling, 2017). S. 60 is often invoked to prevent or respond to incidents of serious violence or the threat of violence, particularly in public places. These stops and searches, however, require justifications, hence, S. 60 must be authorised by a senior officer, at the rank of superintendent or above. This authorization is usually based on intelligence or information indicating a risk of violence or “*prevent violent offences at sporting and other large-scale events*” such as mass protests (Bowling & Phillips, 2007, p. 938).

1.2 A controversial power: Disproportionality and Discrimination in the use of Stop and Search

Stop and search is a controversial power that has been the subject of considerable criticism³ (Delsol 2015). As Bowling and Weber (2011, p. 353) state it “*is a visceral manifestation of coercive and intrusive power and the most publicly visible interaction between state agent and citizen*”. However, the key driver of the controversy around stop and search is its association with disparities in how it is experienced by different ethnic groups (Bradford, 2017). Numerous studies (see e.g., Ashby, 2020; Bowling & Phillips, 2007; Bradford, 2017; Equality and Human Rights Commission, 2010) and official statistics (see e.g., UK Government, 2023) demonstrate that certain ethnic minorities and particularly those from a Black background are searched at considerably higher rates than those who are White in the UK. These findings come against a wider backdrop of concerns about the way ethnic minorities are treated in the criminal justice system, with first the Macpherson Report (1999) and later the Casey Report (2023) finding the Metropolitan Police Service is institutionally racist, with other police forces making similar admissions (see e.g., Crew, 2023; Livingstone, 2023) and findings from the Lammy report (2017) suggesting that ethnic minorities tend to experience disproportionately negative outcomes in the criminal justice system in England and Wales.

Discussions around ethnicity and the use of stop and search often focus on two concepts – *disproportionality* and *discrimination*. The first, *disproportionality*, is the less controversial of the two and portrays a sense of two things being out of proportion or uneven (Bowling & Phillips, 2007, p. 943). In relation to stop and search, it is frequently used to describe the ‘disparity’ and ‘imbalance’ in the rates of searches for different ethnic groups (Bowling & Phillips, 2007, p. 944). However, whether *disproportionality* constitutes *discrimination* is a more complicated issue. Some see *disproportionality* (particularly in the case of ethnic *disproportionality*) as evidence of *discrimination*,

³ For a detailed description and history of the controversy surrounding stop and search see Bradford (2017).

while others (including the police) often argue that statistics simply reflect social conditions (Bowling et al., 2019). The question, therefore, that many ask, is whether this disproportionality is the outcome of police bias or factors outside of the attitudes and behaviours of the police (Bradford, 2017). Some have argued that this distinction lies in whether disproportionality can be justified by legally relevant factors such as offending (Borooah, 2011). That is to say that if the police are searching with reasonable grounds for suspicion (as is legally required in most cases except for searches conducted under section 60) (Bradford & Loader, 2015), higher searches of certain groups would be expected if these groups were offending at a higher rate. In this instance, disproportionality would not be attributed to police bias. If there is no such justification for disproportionality then for many, including the authors of this report, this constitutes discrimination. In sum, disproportionality is a question of proportion, discrimination is a question of justification.

The question of justification in relation to ethnic disparities in the rate of stop and search is contentious. While official stop and search statistics show disproportionality along other dimensions, such as age and gender, there is a plethora of evidence from around the world that younger people (see e.g., DeLisi, 2015; Sampson & Laub, 2003) and males (see e.g., Moffitt et al., 2001) offend at higher rates than other groups and therefore the higher rates of searches for these groups are expected. The evidence of ethnic disparities in offending is not as strong. While certain ethnic groups are overrepresented in the criminal justice system this might be expected if the system is ethnically biased and so evidence of arrest, prosecution and conviction rates are seen by many as unreliable (Vomfell & Stewart, 2021). Outside of these official sources, there is very limited available data exploring ethnic differences in offending (e.g., self-report studies) (Leerkes et al., 2019).

1.3 The Current Project

Against this backdrop, the focus of this report is on exploring the issues of ethnic disproportionality and discrimination in the use of stop and search in Hertfordshire. This project takes a multi-stage approach beginning with a thorough descriptive analysis of the demographics of those searched by Hertfordshire Constabulary (HC) (*Section 2*) which presents clear evidence of ethnic disproportionality. The report then explores the mechanisms through which disproportionality and discrimination could occur and develops two hypotheses about the causes of disproportionality and discrimination (*Section 3*), firstly that *disproportionality and discrimination occur because of where policing is taking place*, and that secondly, *disproportionality and discrimination is occurring because of police officers' interactions with the settings they attend*. These hypotheses are then tested with

qualitative and quantitative data (*Sections 4 and 5*). *Section 6* explores the implications of these findings and *Section 7* discusses the limitations of this project and future directions for research.

2 Stop and Search in Hertfordshire

This project was concerned with stop and searches conducted within the county of Hertfordshire, by HC during the period from April 2020 to March 2023. Records of stop and searches are collected by HC and made publicly available at: data.police.uk, although the data used in this project was supplied by Hertfordshire Constabulary with the addition of the census wards in which searches took place. During this period 23,713 searches were recorded by hearts police. The record of each search should include the location, object, legislation and outcome and the records of each person or person and vehicle search should also include the age, gender, self-defined ethnicity, police defined ethnicity of the individual searched (this is not, however, always the case, discussed below). 338 searches were located outside of Hertfordshire and were therefore excluded from the project⁴. 5 recorded searches were excluded because they did not include an outcome of the search. This section is concerned with the demographics characteristics of the individuals searched by HC during the period of interest. Demographic data is not recorded for vehicle searches, so these 962 searches were excluded from this section of the analysis leaving a sample of 22,434 searches. This analysis in this section is divided into three parts. *Section 2.1* presents the age, gender and ethnic search rates and compares the data to that of other police forces. *Section 2.2* presents an analysis of the intersection of age, gender, and ethnicity in relation to rates of search and explores the effect that the age and gender composition of different ethnic groups have on the rates of searches. *Section 2.3* explores the rates of searches related to different search objects for different groups.

2.1 Gender, Age, and Ethnic Group Search Rates

Figures 1, 2, and 3 present the search rates for different gender, age and ethnic groups⁵ with the population demographics of Hertfordshire recorded in the 2021 Census (Office for National Statistics., 2021) used as the base rate to calculate the number of searches for each group per 1000 of the population aged over 10 (searchable population). As can be seen in *Figure 1*, there is a

⁴ Conversations with Herts Police suggested that these searches were generally conducted as part of motoring operations with other forces.

⁵ Demographics characteristics were missing from some searches. .3% of searches had no gender recorded, 3.2% of searches had no age recorded and 1.1% of searches had no ethnicity recorded.

substantial difference in the search rate of gender groups with females being searched at a rate of 5 per 1000 residents and men being searched at a rate of 38.1. *Figure 2* shows that there is also a substantial difference in the search rates for different age groups with 18–24-year-olds being searched most frequently at a rate of 91.7 searches per 1000 and those aged over 34 being searched least frequently at a rate of 6.3 searches per 1000 residents. Finally, *Figure 3* demonstrates that there are substantial differences in the search rates of different grouped ethnic groups^{6, 7}, with White people being searched at the lowest rate of 15.9 searches per 1000 residents, people with mixed or multiple ethnicities being searched at almost twice that rate at 29.4 searches per 1000 residents and Black people being searched over three times more frequently than White people at a rate of 53.9 searches per 1000 residents. *Table 1* presents the expected, conducted, and excess searches for each ethnic group. Expected searches are calculated by multiplying the percentage of the overall population made up of each ethnic group by the number of overall searches. Excess searches are calculated by subtracting the expected number of searches from the number of searches that were conducted. These findings suggest that there were 1400 excess searches of the Black group and 1728 fewer searches of the White group than would be expected given the size of their population.

Table 2 compares the rate of search per 1000 of the population for different ethnic groups in Hertfordshire and other similar police force areas and *Table 3* compares the ratio of search rates per 1000 for minority ethnic groups and the White group in Hertfordshire and other similar police force areas^{8, 9}. This data suggests that Hertfordshire has some of the lowest rates of search for minority groups and lowest ratios of minority to White searches within this group of police forces.

⁶ In addition to the self-defined ethnic groups in *Figure 3*, there is an additional category of self-defined ethnicity recorded by the Police 'Other ethnic group not stated'. This group accounted for 14.9% of searches but was excluded from this chart because there is not a comparable group within the 2021 census. A cross tab showing the police determined ethnicity (limited to Asian, Black, White or Other) attached to self-defined 'other not stated' group is provided in appendix D. It is possible that the exclusion of this group could lead to the undercounting of the searches of certain ethnic minority groups.

⁷ Appendix A provides a more detailed breakdown of the search rates of different ethnic groups.

⁸ A list of similar police forces for each police force is provided by His Majesty's Inspectorate of Constabulary and Fire and Rescue Services, available at <https://hmicfrs.justiceinspectors.gov.uk/police-forces/data/>. Avon and Somerset were not included in this analysis because of a considerable amount of stop and search data was not available. Thames Valley Police were not included in this analysis because the population area covered by this force was nearly double that of Hertfordshire Constabulary.

⁹ The data used in this analysis covers a shorter period than that in the main analysis (August 2020 – March 2023) because the March-July 2023 stop and search data for the other police forces was not available when this analysis was conducted.

Figure 1 Gender Search Rates per 1000 of the Searchable Population

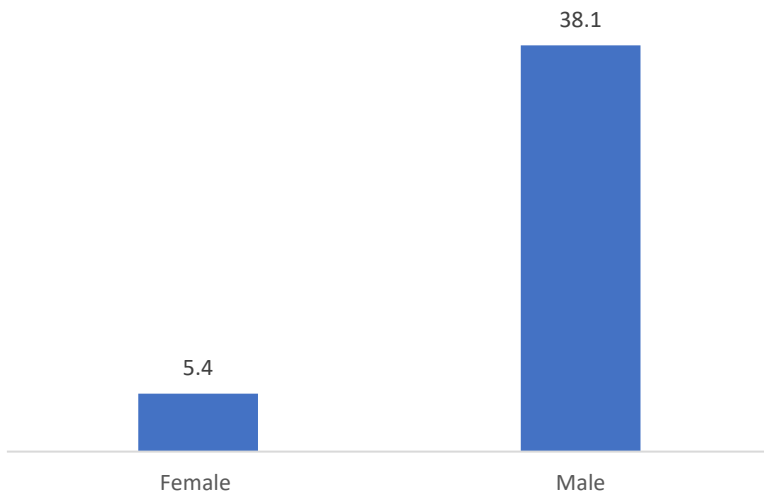


Figure 2 Age Group Search Rates per 1000 of the Population

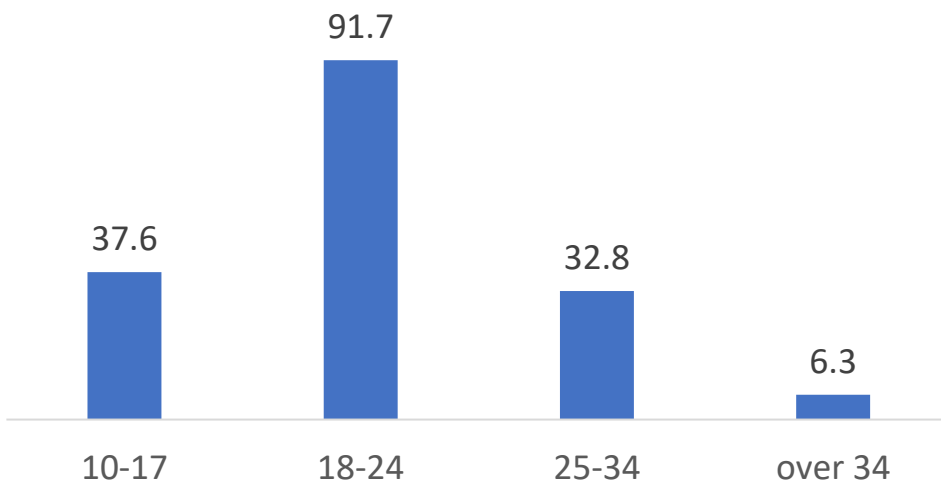


Figure 3 Combined Self-Defined Ethnic Group Search Rates per 1000 of the Searchable Population

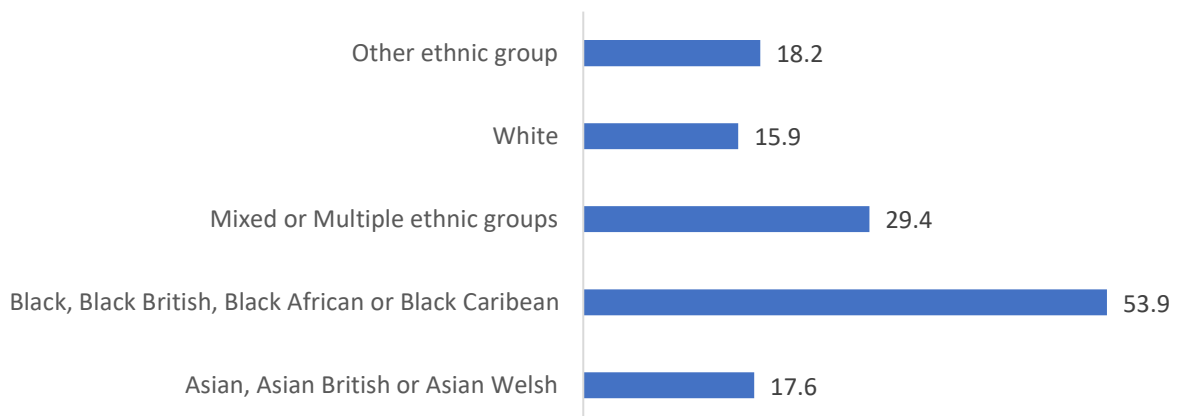


Table 1 Expected, Conducted and Excess Searches by Ethnic Groups

	Asian	Black	MME	White	Other ethnic group
Expected Searches	1596.8	698.3	548.7	15623.4	389.7
Conducted Searches	1566.0	2099.0	901.0	13895.0	396.0
Excess Searches	-30.8	1400.7	352.3	-1728.4	6.3

Table 2 Similar Police Force Comparison of Search Rates per 1000 for Ethnic Groups

	White	MME	Asian	Black	Other
Essex	21.4	37.6	23.1	73.2	28.4
Hampshire	16.4	43.1	18.2	120.3	29.7
Hertfordshire	13.0	23.9	14.4	44.6	16.0
Leicestershire	12.8	35.2	32.3	160.1	11.0
Staffordshire	11.6	38.7	34.0	62.1	22.6
Sussex	9.9	16.7	11.7	79.1	17.7

Table 3 Similar Police Force Comparison of Search Rate Ratio for Ethnic Groups Vs White

	White	MME	Asian	Black	Other
Essex	1.0	1.8	1.1	3.4	1.3
Hampshire	1.0	2.6	1.1	7.3	1.8
Hertfordshire	1.0	1.8	1.1	3.4	1.2
Leicestershire	1.0	2.7	2.5	12.5	0.9
Staffordshire	1.0	3.3	2.9	5.4	2.0
Sussex	1.0	1.7	1.2	7.9	1.8

2.2 Age and Gender Composition of Ethnic Groups

One plausible reason for the ethnic disparity in the rate of searches could be variance in the age and gender compositions of the different ethnic groups and that non-White groups have a higher rate of the most frequently searched age and gender groups within their populations (young men). If this were the case, we might expect to see lower levels of ethnic disparity within the high search groups. This is explored in *Figure 4*, which presents the search rate for different combined age, gender, and ethnic groups. This chart demonstrates that some of the highest rates of Black and White disparity are within the high search groups. For example, Black male 18–24-year-olds are searched at the most highly searched group and are searched at 3 times the rate of their White counterparts, in line with the overall ethnic rates of disparity. There was however a reduction of the disparity in search rates between White and mixed or multiple ethnicity groups. This is consistent with demographic data from Herts that suggested that the mixed or multiple ethnic population is substantially younger than the White population (see *Appendix B*). The highest rate of ethnic disparity between two age-gender

groups occurred between Asian and White 10–17-year-old females, with the latter being searched at over 20 times the rate of the former. This pattern is also apparent across other female age groups with White women aged under 34 being searched at a higher rate than females from any other ethnic group. The lowest rate of ethnic disparity between Black and White males was for the 10-17 age group and the disparities become larger as men get older.

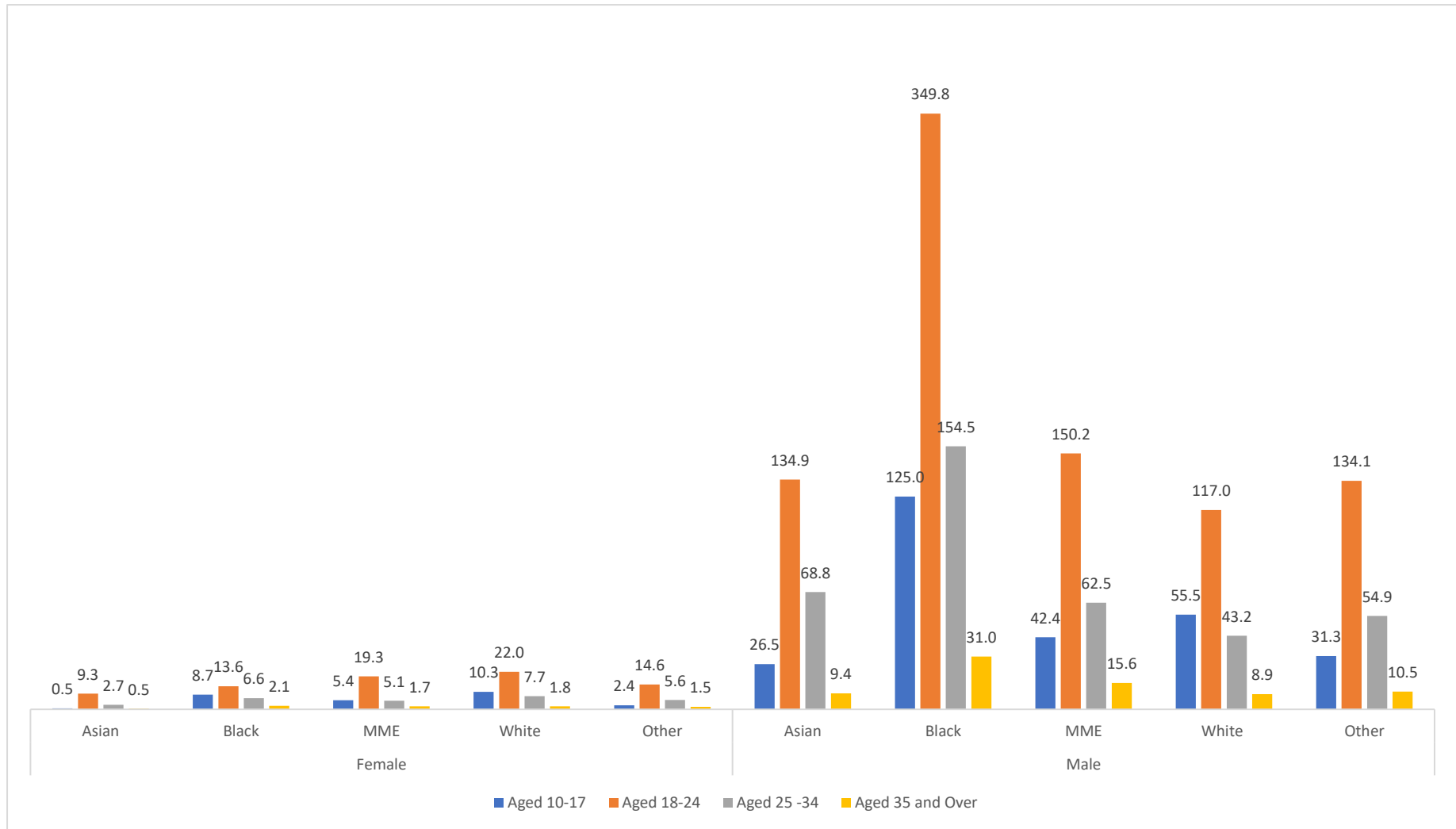
Table 4 presents the adjusted-expected, conducted, and adjusted-excess search rates of search of for each ethnic group according to their age-gender composition. The adjusted-expected searches were calculated by multiplying the percentage of each age-gender group made up of each ethnic group by the number of searches of that age-gender group (IE % males aged 10-17 who are white x number of searches of males aged 10-17) then adding together the number of expected searches for all age-gender groups for each of the ethnic groups. This number was then subtracted from the number of conducted searches to give the number of adjusted-excess searches. Calculating the expected and excess searches like this accounted for the differences in the age-composition of the ethnic groups. The table also presents the number of unadjusted excess searches calculated for each ethnic group without accounting for the different age-composition of the ethnic groups (IE number of white searches - % of the population who are white x number of searches in Hertfordshire, as in *Table 1*¹⁰). The lower levels of adjusted excess searches compared to unadjusted excess searches suggests that a small proportion of the unadjusted-excess searching of the black group and a substantial proportion of the unadjusted-excess searching of the mixed group is associated with the age-gender composition of these groups. Likewise, a substantial proportion of the under-searching of the white group is associated with the age-composition of this group. This is consistent with the Census data from Hertfordshire that suggested that the mixed or multiple ethnic population is substantially younger than the White population and the Black population is younger than the White population (see *Appendix B*). However, despite some of the lower rates of ethnic disparities between certain age-gender groups, these findings demonstrate there are still genuine differences in the search rates for different ethnic groups which are not explained by gender and age composition.

¹⁰ Although they are both calculated at the county level, the number of unadjusted excess searches and conducted searches in *Table 4* are slightly different to the excess searches and conducted searches in *Table 1* because not all the searches had a recorded age or gender and therefore could not be assigned to age gender groups for this analysis. In total there were 140 searches which were missing a recorded age or gender.

Table 4 *Expected, Conducted and Excess Searches According to the Age-Gender Composition of Ethnic Groups*

	Asian	Black	MME	White	Other
Expected (adjusted)	1684.3	811.8	788.1	15037.7	395.0
Conducted	1553.0	2070.0	895.0	13810.0	389.0
Excess (adjusted)	-131.3	1258.2	106.9	-1227.7	-6.0
Excess (unadjusted)	-32.0	1376.9	350.3	-1697.4	2.2

Figure 4 Search Rates for Three-Way Age, Gender, and Self-Defined Ethnic Groups per 1000 of the Population



2.3 Search Objects and Ethnic Groups

One possible explanation for the disproportionality in the use of stop and search is that it is being driven by particular search objects (items that the police are looking for). *Figure 5* presents the percentage of each ethnic group's searches that were related to the top four search objects¹¹. Across the whole sample, most searches were for drugs (61%), followed by articles for use in theft offensive weapons and objects for use in harm and the smallest portion was for stolen goods. There are several similarities between the ethnic groups. For all groups, drug searches make up the highest proportion of searches and stolen goods the lowest. There are also some differences including that for the mixed and Black groups offensive weapons and objects for use in harm was the second most frequent search object while for the White, Asian, and 'other' ethnic groups articles for use in theft was the second most frequent search object. The portion of searches for drugs also ranges from 55.8% for 'other' ethnic groups to 73.7% for the Asian group. *Tables 5* and *6* present the search rate per 1000 of the population and the ratio of the search rate for each ethnic group to the White group. Findings suggest that the Black group are searched at a substantially higher rate than the White group for all search objects, but differences are most prominent for 'drugs and psychoactive substances' and 'offensive weapons and objects for use in harm' (3.7 and 4.3 times higher than the White group respectively). These two objects also account for most of the excess searches of the Black group (see *table 7*)¹². The MME and other groups are also searched at a higher rate than the White group for all search objects. The Asian group are searched at a higher rate than the White group for drugs and psychoactive substances but at a lower rate than the White group for the other objects.

Table 5 Search Rate per 1000 For Ethnic Groups by Search Object

	White	MME	Asian	Black	Other
Drugs and Psychoactive Substances	9.5	18.7	13.0	35.3	10.2
Offensive Weapons and Harm	2.1	4.9	1.8	8.8	2.2
Articles for use in Theft	3.4	4.6	2.5	7.6	4.6
Stolen Goods	0.7	0.8	0.2	1.7	1.1

¹¹ For the purposes of this analysis some search objects have been combined for example drugs and psychoactive substances, and offensive weapons and objects for use in harm.

¹² These figures were calculated from the whole population, as in *Table 1*, and do not account for the different age gender composition of ethnic groups.

Figure 5 Objects of search by ethnic groups

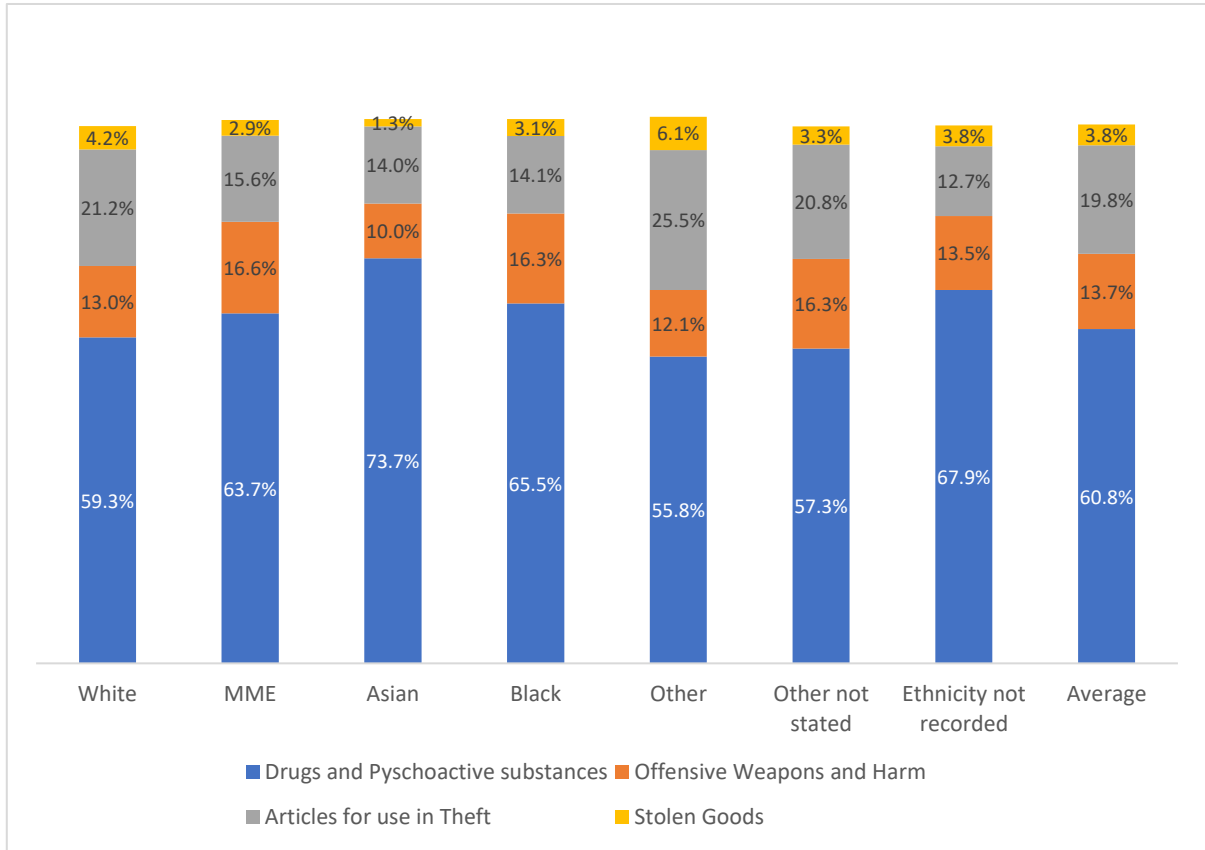


Table 6 Search Rate Ratio for Ethnic Groups Vs White by Search Object

	White	MME	Asian	Black	Other
Drugs and Psychoactive Substances	1	2.0	1.4	3.7	1.1
Offensive Weapons and Harm	1	2.4	0.8	4.3	1.1
Articles for use in Theft	1	1.4	0.7	2.2	1.4
Stolen Goods	1	1.3	0.3	2.5	1.6

Table 7 Excess Searches by Search Object and Ethnic Group

	White	MME	Asian	Black	Other
Drugs and Psychoactive Substances	-1340.0	237.3	174.2	946.5	-18.1
Offensive Weapons and Harm	-268.0	77.2	-55.9	250.3	-3.7
Articles for use in Theft	-122.5	33.2	-93.8	158.8	98.9
Stolen Goods	-11.7	4.9	-40.4	62.6	9.0

3 Explaining disproportionality and discrimination in stop and search.

The headline figures like those presented in *Section 2.1* come at the end of a succession of events. Identifying this causal chain is important if disproportionality in stop and search is to be properly understood (Vomfell & Stewart, 2021). By identifying and analysing these processes, where and how disproportionality occurs and whether it constitutes discrimination can be established and ultimately targeted through policy and practise. Failing to analyse these processes risks missing information with important policy implications.

Figure 6, which draws inspiration from the famous ‘Coleman’s boat’ (Coleman, 1990), is a simple diagram outlining the force and individual level processes in relation to a stop and search. The search (in *Box C*) occurs at the end of a process. Before a search can occur, an officer must interact with a setting and the individuals within it to decide to search them. Before this can occur, an officer must be in a setting (*Box B*). Before this can occur, an officer must travel to a setting and before this can occur operational decisions are made at a force level to decide where the officer goes (*Box A*). The outcomes of the individual processes in *Box B* and *Box C* can be aggregated to the force level. The time officers spend in different settings can be aggregated to produce force policing rates (*Box D*) and that is the aggregated time officers spend in different settings and ultimately the members of the public that they encounter over a period of time. Likewise, individual searches can be aggregated to the force level to give force search rates. From this simplistic diagram, it can be seen that there are two key processes through which a stop and search occurs, the operational decisions that lead an officer to be in a setting and the interaction between that officer with the setting that leads to a stop and search¹³. Disproportionality in stop and search, such as that presented in *Section 2*, must occur from either or both processes.

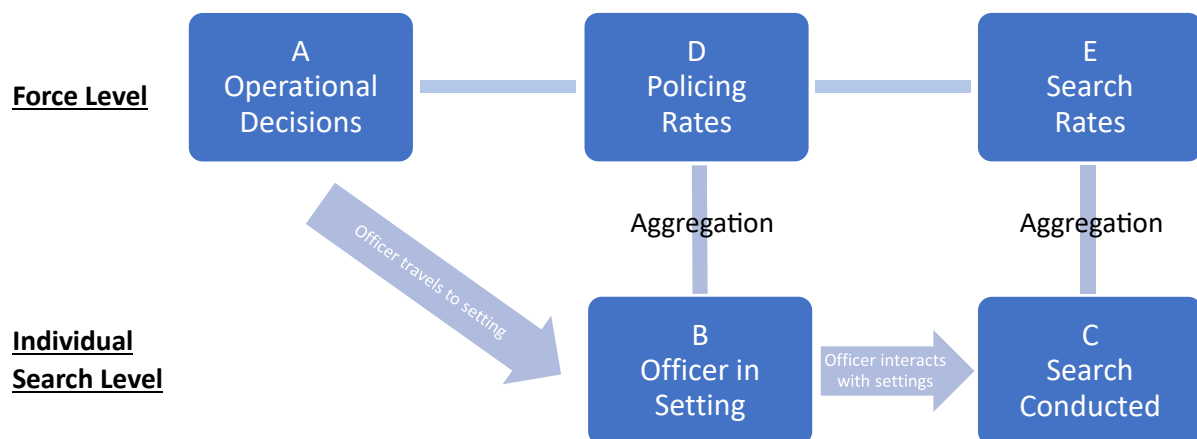
Using the definitions of disproportionality and discrimination outlined in *Section 3.1*, we can say that if disproportionality is occurring through the process by which officers come to be in the settings (box B) then at the force level we would expect to see that police officers were spending a disproportionate amount of time in settings which contain certain social groups (box D). This disproportionality would in turn constitute discrimination if it could not be justified by legally relevant factors. Disproportionality and discrimination that result from this process have been described as ‘institutionalized discrimination’ because it is caused by police policies and practises

¹³ Vomfell and Stewart (2021) make a similar argument in their analysis of disproportionality in stop and search.

(Bradford, 2017; see also Reiner, 2010). Evidence of the disproportionate geographical concentration of searches has previously been found in the UK. Suss and Oliviera (2023) found that areas with higher levels of non-White residents and economic inequality in London had higher levels of stop and search, even when the level of crime in these areas was controlled for¹⁴. Similarly, Vomfell and Stewart (2021) found that police over-patrolled areas with higher levels of ethnic minorities in the West Midlands, UK (see also Bradford, 2017).

The second process through which disproportionality could occur is through officers' interactions with the setting. If disproportionality was occurring because of the interaction between officers and their settings, then we would expect to see force-level search rates of certain social groups (box E) that were disproportionate to the settings in which officers spent time (box D). This would in turn constitute discrimination if the disproportionality could not be justified by legally relevant factors. This type of discrimination has previously been described as interactional discrimination because it results from officers reacting differently to people with different social characteristics (Bradford, 2017; see also Reiner, 2010). Evidence of this type of disproportionality has been found in the UK. Vomfell and Stewart (2021) found that officers in the West Midlands more frequently searched non-White people even when the demographic makeup in the areas they patrolled was controlled for.

Figure 6 Force and Individual Search Level Processes Leading to Force Level Stop and Search Rates



In line with the assertions of this section, this report will explore two hypotheses about the process through which disproportionality and discrimination could occur. The first hypothesis is that disproportionality and discrimination are being caused or at least partly caused by where the police

¹⁴ This study used the crime domain scores from the 2019 Index of Multiple Deprivation which measures rates of burglary, theft, violence, and criminal damage in previous years.

are policing (policing rates) (*Section 4*). The second hypothesis is that the disproportionality and discrimination are being caused by police interactions with settings and that the police are unduly suspicious of certain groups (*Section 5*).

4 The location of policing and searches

This section explores whether disproportionality occurs because of the operational decisions that lead to rates of policing in different areas of Hertfordshire. This is achieved in two steps. The first step investigates how deployment decisions are made by HC and how officers come to be in contact with the public (*Section 4.1*). This is explored in a series of interviews with senior officers with knowledge of deployment decisions in Hertfordshire. The second is a quantitative analysis of the demographic and legally relevant factors that predict the frequency of stop and searches within census wards in Hertfordshire (*Section 4.2*).

4.1 Deployment Decisions in Hertfordshire

To get an understanding of how police officers come to be in the settings in which stop and searches take place, two interviews were conducted with officers with knowledge of how deployment decisions are made in Hertfordshire¹⁵. The main focus of the interviews was on how officers were deployed across Hertfordshire, but other topics were covered and findings from these have been presented in other sections.

Answers in relation to deployment decisions suggested that within the 10 geographical operational areas in Hertfordshire, called Community Safety Partnerships, police officers were divided into different teams.

'In each CSP then you've got, and this is across the whole county. So, on a CSP you've got intervention teams, safer neighbourhood teams, local crime units, CIDs in the old days, and your scorpion teams. So, on your intervention teams, you've got 5 different intervention teams doing a rolling 24/7 shift pattern. Each intervention team should have roughly 10 to 12 PCs on and a Sergeant. Your SNT [Safer Neighbourhood Teams] teams they do, they just do earlies and lates, again seven days a week but earlies and lates no nights. And they're made up of. So, each team has a Sergeant, say 4 PCs and about the same number of PCSOs. PCSO's

¹⁵ Interviews were conducted through Microsoft Teams.

can't stop and search though. And then you've got local crime unit (your CID). Which is three teams, each one has a sergeant, and say 4 DCs and maybe a police staff civilian investigator. So about 5 people. If you have the right staffing. We don't always get the right staffing. So that's the normal standard staff you would get across as a CSP'.

Police Officer

Interviewees suggested that the majority of officers were in intervention teams that their time was spent responding to call-outs from the force's control room and that these were generally related to emergency calls from the public as well as dealing with mental health patients. The level of demand coming into the control room meant that even though there were plans for more general patrolling, there was no available capacity for these officers to engage in this type of work.

'Now all our officers are doing is going from job to job to job to job to job. Because there's so much demand coming into our control room. And you can see it on a graph. Since the advent of the mobile phone where calls into emergency services particularly police has just sky rocketed'.

.....

'... so, each of our CSPs has a patrol plan, so that chief inspector for that CSP will say these are my priorities. So, it could be I've got a spate of theft of motor vehicles in a certain area of Watford so there'd be a brief slide there with a map with the hotspot on it. And this is where we're having all our cars broken into. These are the time frames. It's between 5:00 in the afternoon and 10 o'clock at night. "Right, anybody who's spare please can you go and patrol W Watford? This is the description we've been given". That would be the best briefing slide you can ask for. There won't be anyone between 5:00 and 10:00 because they are all going to domestics, or they're set outside a hospital with a mental health detainee'.

Police Officer

In terms of the locations of stop and searches conducted by these officers, these would generally occur in the locations where members of the public had reported criminal behaviour although occasionally, they may occur if these officers spotted "suspicious behaviour" when travelling between jobs.

'...and you get a call from the control room saying "can you please go to this car park? There's a chap in a red coat who's trying door handles". That's a frequent one you get or somebody

going up a road trying car door handles. They'll be despatched they will go. They'll see a person in a red coat who the description. They'll stop and search them. That is normally the sort of average run-of-the-mill job you'll get in a stop and search. It is normally in response to a call from a member of the public.' [Or] Some specific intelligence about somebody who is a frequent customer of a particular are and everybody knows locally. Or it will be, and this is the rarity, to be honest, it will be a cop that's on patrol and will spot somebody and think you look out of place. That you know, why are you doing that/ why are you doing this.'

.....

'We do not have the luxury of just saying to officers go out there and just see what you find. It is not random.'

Police Officer

According to officers, more proactive stops and searches (IE not in direct response to an emergency call from the public) were conducted by the force's "Scorpion" teams, which are made up of a small number of officers ringfenced for this purpose. The location of their work was determined by intelligence relating to where crime might be occurring.

'...so, you'll find that most of our proactive stop and search is done by our scorpion teams.'

.....

'So, each CSP has a scorpion team made up of about four or five officers, and they are trying to do everything from checks on domestic violence victims to tests from motor vehicles or cuckooing addresses, those sorts of things'.

.....

'Our scorpion teams are all driven around intelligence. Threat, harm, and risk'.

.....

'So, they don't follow a shift pattern or anything, they're just deployed. And if we've got burglaries in the evenings in a certain area, they'll go and do lates in that area'.

Police Officer

In addition to the scorpion teams, there are also the safer neighbourhood teams that have specific areas in which they patrol and engage with the public to solve problems such as anti-social behaviour but also to gather intelligence. They will occasionally engage in stop and search resulting from the

information they receive but they generally do conduct stop and search and are more focused on community engagement and problem solving.

'The idea of Safer Neighbourhood officers is that they do engagement with the community, they work in partnership to solve issues, anti-social behaviour. But you know those sorts of things, not responding to jobs'.

'So, the ideal is that a safer neighbourhood PC will have their own area. Everybody will know who they are. They'll be out there talking to the community gathering intelligence. And it may be that Mrs Miggins will come up and say, "we've had some drug dealing behind that garage block", and the local PC will go, "right OK thank you very much", and on their patrols, they will go round there and if they see some people round there who smell of cannabis, they're gonna [sic] be copping their details and stopping and searching them. But most of the time the SNT teams are more problem-solving. They're not expected to do as much stop and search as say Scorpions and intervention'.

Police Officer

These findings imply that, according to officers, the majority of police resources are deployed directly to respond to calls from the public and the majority of stop and search likely occurs in these situations. Officers suggest that the force has limited scope for conducting proactive stop and search (not directly and immediately responding to a call from the public) and that when proactive searches are conducted, they are normally in response to a pattern of crime reports from the public (IE a spate of car thefts in an area) or from police intelligence on the location of offending and identity of potential offenders. Searches where officers are moving through a setting, spot something suspicious, and then conduct a stop (IE not in response to a call from the public or a piece of intelligence) are rare. A strong correlation would therefore be expected between the number of searches and the number of crimes reported to the police in a particular area in Hertfordshire. This is explored with empirical evidence in the following section.

4.2 Analysis of the location of searches conducted by Herts Police

This section tests hypothesis 1, that the disproportionality and discrimination are being caused by where policing is taking place. To test this hypothesis, it is necessary to analyse the relationship

between the type of people that are using a space and the frequency with which policing occurs there. If the police are policing areas with certain demographics of people more frequently than areas with different demographics of people, then this constitutes disproportionality. To determine whether any disproportionality also constitutes discrimination, the analysis then needs to explore whether any unequal rates of policing can be justified in terms of the offending that takes place in that area. This section outlines the data and analytical approaches needed to explore these issues (*Section 4.2.1*) and presents empirical findings from this analysis (*Section 4.2.2*).

4.2.1 Data and Analytical Approach

Analysing disproportionality and discrimination in the location of policing requires three key pieces of data – where and for how long police officers spend time on duty (and where they don't), what is the demographic makeup of the individuals in the different settings within the geographic expanse of interest and what are the rates of offending in these settings. Data on officers' movements and locations is the best data for determining where police are policing. Data of this kind is collected by the police and has previously been used in at least one stop and search study in the UK (see Vomfell & Stewart, 2021). However, conversations with HC revealed that while there was some provision for recording the movements and locations of police officers, there were several technical difficulties in recording this information and the data they do hold on this is unreliable. Instead, this report adopts a similar approach to Suss and Oliveira (2023), using the location of stop and searches to analyse the associations between the characteristics of areas and the frequency of stop and search in London. The second piece of information is the demographic makeup of the individuals in the settings in which police spend time. Instead, as a proxy, this project uses the demographic data of the residents in a particular area from the 2021 Census (Office for National Statistics., 2021). The final piece of information that is needed is the rate of crime in different settings. This project uses the records of crimes reported by the public to the police (available at data.police.uk).

For the analyses in this section, the county of Hertfordshire was split into its 179 census wards¹⁶. A two-step approach was used to explore disproportionality and discrimination in policing rates and the extent to which this contributed to the disproportionality in the use of stop and search reported in *Section 1*. The first step was a ward-level, stepwise, negative binomial regression predicting the number of searches conducted by the police in each ward. A negative binomial model allows for the

¹⁶ The Census wards are the 2022 census wards, not the 2021 census wards through which the 2021 census data was collected. This is because these were the boundaries along which the ONS released the data collected from the 2021 census.

measurement of the strength (size) and direction of the association (correlation) between two variables (such as the number of crimes reported to police in a ward and the number of searches in a ward). A negative binomial model was chosen because the number of stop and searches is a count variable and in many wards, the rate of searches was relatively low while in a few wards the rate of searches was extremely high resulting in highly skewed data. In these circumstances, a negative binomial model is more reliable than OLS regression (Hilbe, 2011; MacDonald & Lattimore, 2010). The step-wise approach was chosen because it allowed for the analysis of the association of the demographic characteristics of each ward with the frequency of searches and the extent to which this association could be explained by the level of crime reported to the police in each ward. This approach has previously been used to explore area-level predictors of stop and search by Suss and Oliveira (2023). The second step was to use descriptive analysis to analyse the levels of disproportionality that still exist when the population of the areas in which searches are taking place is used as the base rate.

4.2.2 Findings

Table 8 presents the descriptive statistics for the ward-level variables. The number of residents in the wards ranges from 2064 to 11937 with a mean of 6697.5. In the three years with which this project is concerned, there were 16,389 person or person and vehicle searches where a location in one of these wards was recorded. This is a reduced sample from the one described in *Section 2* because in addition to the exclusion of vehicle searches, searches where no location was recorded (IE missing data) were also excluded from this analysis because they could not be attributed to a particular ward. The rate of White to Black disproportionality is slightly lower in this sample than in the larger sample outlined in *Section 2* (3.3 vs 3.4 respectively) and the White to Mixed of Multiple Ethnicities (MME) disproportionality is substantially lower (1.4 vs 1.8 respectively).

There was substantial variance in the frequency of stop and searches in the wards over the three years with one ward experiencing no searches and another experiencing 1044 searches, with a mean of 91.6 and a median of 62. This produced highly skewed data with most wards having less than a hundred searches along with a small number of wards with a high number of searches (*Appendix C* has a list of all electoral wards with their rates of searches). One possible explanation for some or all the ethnic disproportionality outlined in *Section 2* is that the police are conducting searches disproportionately frequently in areas with higher numbers of Black and MME residents. *Table 9* presents bivariate Spearman's correlations between the searches and ward-level factors predicting the frequency of searches. In line with hypothesis 1, the percentage of Black and MME residents in a

ward is positively and significantly associated with the frequency of searches suggesting wards with higher levels of Black and MME residents have higher frequency of searches. All the control variables, including the percentage of unemployed residents, the total number of residents and the rate of crime reported to the HC are also positively and significantly associated with the frequency of searches suggesting that more highly populated wards, wards with higher levels of unemployment and crime reported to the police have a higher frequency of searches. Factors that were not significantly associated with crime and were therefore excluded from the analysis included the number of residents aged 10-24 and the rate percentage of Asian residents.

Table 8 Ward-Level Descriptives

	N	Minimum	Maximum	Mean	Std. Deviation
Residents	179	2064	11937	6697.5	2201.0
% Residents Black	179	0.3	16.4	3.2	2.7
% Residents MME	179	1.3	6.5	3.6	1.0
% Unemployed	179	0.9	3.6	2.0	0.5
Crimes	179	12.0	11071	1650.1	1301.4
Searches	179	0.0	1044	91.6	121.1

Table 9 Bivariate Spearman's Correlation Coefficients for Ward Level Variables

	Searches	% Black Residents	% MME Residents	% Unemployed Residents	Residents	Crime
Searches	1.00					
% Black Residents	.66***	1.00				
% MME Residents	.58***	.7***	1.00			
% Unemployed Residents	.61***	.75***	.58***	1.00		
Total Residents	.72***	.6***	.55***	.5***	1.00	
Crime	.88***	.73***	.62***	.69***	.77***	1.00

*** P<.001

Table 10 presents a series of negative binomial regressions¹⁷ predicting the number of searches in each ward. Model 1 analyses the association between the percentage of Black residents in a census ward and the frequency of searches. The percentage of Black residents is significantly¹⁸ and positively associated with the number of these searches in a ward and the Incident Rate Ratio (IRR) suggests

¹⁷ The dispersion was not fixed at 1 and was allowed to vary according to the model (for a discussion on the parametrization of negative binomial models see Greene, 2008; Hardin & Hilbe, 2014; Hilbe, 2014).

¹⁸ Significance refers to the likelihood the relationship is real and not just a chance occurrence and is measured with the P-Value. When the P-value is less than .05, signified by one asterisk, we can reject the null hypothesis that the relationship is a chance occurrence with 95% confidence and describe the association as statistically significant. If the P-value is less than .01 (signified by two asterisks) or .001 (signified by three asterisks) we can reject the null hypothesis with 99% and 99.9% confidence respectively and describe the association as statistically significant.

that a one standard deviation increase¹⁹ in the percentage of Black residents (an increase of 2.7%, e.g., an increase from 10% to 12.7% of Black residents) is associated with a 76% increase in searches. *Model 2* introduces the percentage of MME residents, which is a significant and positive predictor of search frequency, with the IRR suggesting that a one standard deviation increase in the percentage of MME residents (an increase of 1%) in a ward is associated with a 62% increase in searches. *Model 3* introduces the first control variable, the percentage of unemployed residents, which is positively and significantly associated with the number of searches. The introduction of the percentage of unemployed residents sees the association between the percentage of Black residents and searches reduce and become insignificant, while the association between the percentage of MME residents remains a positive and significant predictor of the number of searches. In *Model 4*, two more control variables are introduced, the total number of residents in each ward and the total number of crimes reported to the police are introduced, with both having significant positive associations with the number of searches in each ward. The introduction of these two variables to the model sees the association between the number of unemployed residents and the number of searches reduce and become insignificant, the percent of MME residents remains a significant predictor.

These findings suggest that areas with higher percentages of Black residents have a higher frequency of searches, but that the association is explained by the fact that these areas are more populous and have a higher frequency of crime reported to the police. This therefore would appear to meet the definition of disproportionality in terms of where searches are taking place, but not discrimination, as the disproportionality is explained by legally relevant factors, namely crime reported to the police. This is not the case for the disproportionately high levels of searches in areas with MME residents, which remain even after the number of crimes reported to the police and the population of the census wards are included in the model. This would therefore meet the definition of discrimination. It is however important to note that, as seen in *Table 8*, there is very limited ward-level variance in the percentage of MME, with a standard deviation of just 1. The MME group is also very diverse including people of many different mixed or multiple ethnicities. It seems unlikely that police officers would be aware that one area had a slightly higher level of people from mixed or multiple ethnic backgrounds.

The next part of exploring hypothesis 1 was to analyse the levels of disproportionality that still exist when the population of the areas in which searches are taking place is used as the base rate. *Table 11* presents unadjusted and adjusted excess search statistics. The unadjusted statistics were calculated for all the county level and therefore do not account for where abouts in the county the

¹⁹ For the purposes of analysis variables were standardized.

searches take place. The adjusted statistics were calculated at the ward level by computing the expected and excess searches for each ward individually (IE the expected and excess searches for each ethnic group, given the number of searches that took place in that ward and the number of residents from each ethnic group) and then adding them together. The data suggests that controlling for the location of searches sees a substantial reduction in the under-searching of the White population and the over-searching of the MME population and a small reduction in the over-searching of the Black population. The table does however suggest that there is still over-searching of the Black and MME population and under-searching of the White population that is not explained by the location of searches. In addition to this, *Appendix C*, which presents the ratio of MME and Black searches per 1000 to White searches per 1000, suggests that in 90 wards (out of 179) the MME population is searched at a higher rate than the White population and in 144 wards the Black population are searched at a higher rate than the White population. This disproportionality must therefore occur because of police officers' interactions with settings.

Table 10 Negative Binomial Regression Predicting Frequency of Searches within a Census Ward

	Model 1		Model 2		Model 3		Model 4	
	B	IRR	B	IRR	B	IRR	B	IRR
% Black	0.57***(0.08)	1.76	0.3*** (0.08)	1.35	0.07 (0.07)	1.08	-0.08 (0.05)	0.93
% MEM			0.48*** (0.08)	1.62	0.339*** (0.08)	1.4	.158**(0.05)	1.17
% Unemployed					.41*** (0.07)	1.5	0.08 (0.06)	1.09
No. Residents							0.31***(0.06)	1.36
No. Crimes							0.54*** (0.06)	1.72
AIC	1923.7		1890.6		1859.6		1720.4	
BIC	1933.3		1903.4		1875.5		1742.7	

***P<.001, **P<.01, *P<.05

Table 11 Unadjusted and Adjusted Excess Search Statistics

Searches	White	Mixed	Asian	Black	Other	Total
Conducted	10168	656	1085	1537	286	13732
Unadjusted Expected	11377.2	399.6	1162.8	508.5	283.8	13732
Unadjusted Excess	-1209.2	256.4	-77.8	1028.5	2.2	0
Adjusted Expected	10854.3	554.0	1352.9	629.2	341.5	13732
Adjusted Excess	-686.3	102.0	-267.9	907.8	-55.5	0

5 Police interactions with the settings

To analyse whether disproportionality is occurring because of officers' interactions with settings the rate of searches of different social groups relative to the population of that area must be analysed. Evidence in *Section 4* suggests that even when the locations of searches are accounted for, members of certain ethnic groups are searched at higher rates than others. One way to determine whether this disproportionality constitutes discrimination is to analyse whether the disproportionality can be justified on the grounds of differing levels of offending between ethnic groups. This requires self-report data on the offending of specific groups which is challenging to obtain. In place of this, criminal justice statistics could be used but as discussed in *Section 1*, these are not independent of the police and as a result may be an unreliable measure of offending. Given the difficulties with obtaining reliable data on ethnic differences in offending in an area, some scholars have used the outcomes of searches as a measure of the accuracy of police suspicions of certain social groups (Bowling & Phillips, 2007). One indicator, that the police are unduly suspicious of certain groups and therefore biased against them would be lower incidents of searches of these groups identifying criminal evidence related to the object of the search (a lower rate of successful searches) (Bowling & Phillips, 2007)²⁰. This section analyses the success rates of searches of different ethnic groups in Hertfordshire.

²⁰ Bowling and Philips (2007) are not proponents of this method and discuss some of its limitations. These are discussed further in *Section 7*.

5.1 Data and Analytical Approach

To analyse the success of the searches of members of different ethnic groups, this section uses the publicly available records of the stop and searches conducted by HC, that were previously used in *Sections 2 and 4*. For each search, an outcome is recorded as well as whether this search was related to the object. A successful search is considered one where further action occurred relating to the search object because this suggests that the officers' suspicions were correct because they found evidence of what they were looking for and initiated further action. This excludes searches where further action is unrelated to the search object because in these cases the police suspicions were not correct. Binary logistic regression is used to analyse the association between the ethnicity of the individual searched, the control variables age, gender, and search object and the likelihood that a search will lead to related further action (for a discussion on the use of logistic regression for dichotomous outcome variables, see, Nick & Campbell, 2007). The analysis is conducted twice, first using self-defined ethnicity, and then using officer-defined ethnicity. The reason for this is that while both factors are important, there is too much multicollinearity (too strong an association between the two to use in the same model). Self-defined ethnicity is possibly a more accurate measure of someone's ethnicity. However, it is ultimately a police officer's assumptions about someone's ethnicity that would be linked to any possible bias actions. Several control variables are also included in the modelling – age, gender, and search object.

5.2 Findings

Figure 7 presents the outcomes of searches by self-identified ethnic groups. Across all searches, the police took further action relating to the object of the search (suggesting a successful search) 18.7% of the time, further action not relating to the item of the search 4.6% of the time, and no further action 76.6% of the time. The rates of outcomes are relatively similar for the White, mixed, Asian, and Black groups, while the 'other' and 'other not stated' groups have a noticeably lower level of successful searches and the searches for which no ethnicity was recorded have a substantially lower level of successful searches, with only 1.3% searches resulting in further action relating to the search. *Figure 8* presents the outcomes of searches by police-determined ethnic groups. Again, the rates of outcomes are relatively similar for the White, Asian and Black groups with a slightly lower rate of

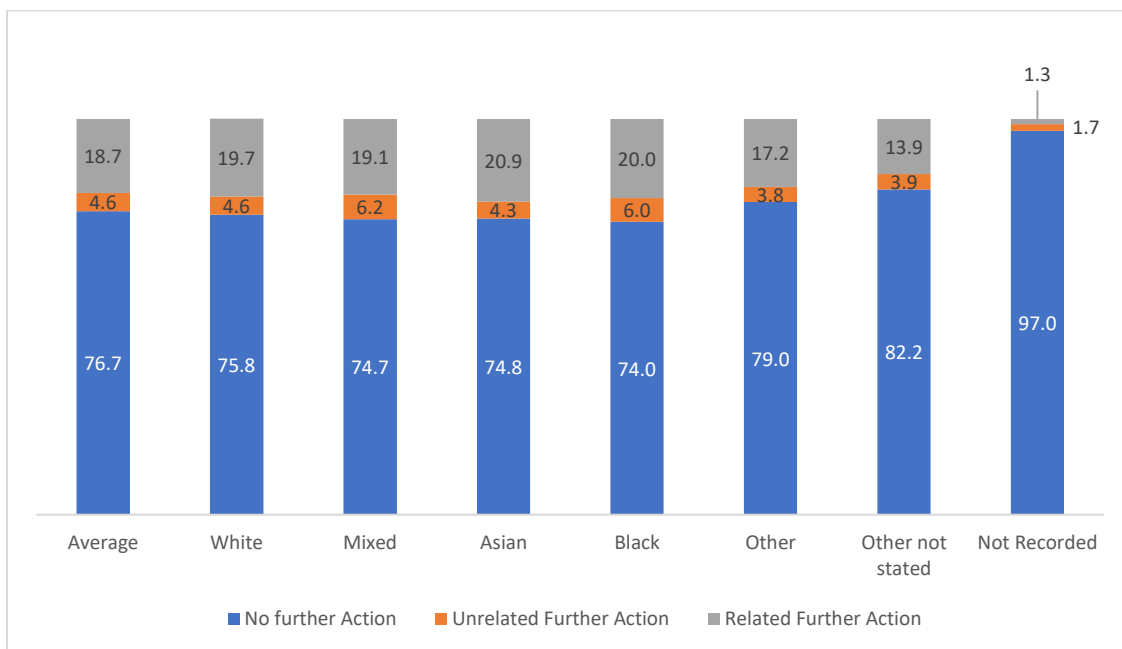
successful search rate for the 'other' group and for searches where no police-determined ethnicity was recorded.

Table 12 presents findings from a stepwise binary logistic regression predicting the likelihood of a search being successful (resulting in further action relating to the object of the search). *Model 1* introduces self-defined ethnicity as a categorical variable with the White group as the reference category, with parameters for other groups comparing the likelihood that searches of these groups would be successful with the likelihood that searches of the White group would be successful. In line with *Figure 9*, the model suggests that the searches of 'other not stated' group and ethnicity group 'not recorded' group were significantly less successful than the white group, with the odds ratios (OR) suggesting searches of these two groups were 34% and 95% less likely to be successful respectively. The very low Nagelkerke R-Squared suggests that the self-defined ethnicity of offenders has very little explanatory power in relation to the outcomes of searches. *Model 2* introduces the ages of offenders as a control variable, with the 10-17 age group used as the reference group. Results suggest that searches of the older groups are all statistically significantly more successful than those of the 10-17 age group, with the searches of the 18-24 group being 84% more likely to be successful. *Model 3* introduces gender as a control variable with results suggesting that searches of females are statistically significantly less likely to be successful (20% less likely). *Model 4* introduces the object of the search with drugs and psychoactive substances as the reference group. Findings suggest that searches with all other types of search objects are statistically significantly less likely to be successful than those for drugs and psychoactive substances with the searches for firearms as much as 87% less likely to be successful. The ethnicity of the individual being searched being either 'other not stated' or 'not recorded' remains a significant predictor of a less successful search. The inclusion of all the control variables by *Model 4* raises the Nagelkerke R-Squared to 0.08, which is still low suggesting the model has relatively little explanatory power in relation to the outcomes of searches.

Table 13 presents findings from four binary logistic regression models predicting the likelihood a search will be successful. *Model 1* introduces officer-defined ethnicity, with the White group as the reference group. Results show that only the searches where no officer-defined ethnicity was recorded are significantly less successful than the searches of the White group (21% less successful). This model has an extremely low Nagelkerke R-Squared suggesting that the model has relatively little explanatory power in relation to the outcomes of searches. *Models 2* and *3* introduce age and gender which produce similar results to those in *Table 12*, with searches of all age groups being more successful than those of people aged 10-17 and female searches being less successful than those of males. The introduction of age into the model sees the searches of the Asian group become statistically significantly less successful than those of the White group. The final model introduces the

search objects which have a similar association with the outcome of the search as those in *Table 12*. In contrast to *Table 12* however, the introduction of the search objects sees the searches of the Asian group become highly statistically significantly different and 20% less successful than those of the White group and those of the Black group become statistically significantly different and 13% less successful than those of the White group. The inclusion of all the control variables in *Model 4* raises the Nagelkerke R-Squared to 0.08, which is still low suggesting the model has relatively little explanatory power in relation to the outcomes of searches. A plausible explanation for the differences between the self-determined ethnicity and police-determined ethnicity analysis is that many of those searches for which the self-defined ethnicity was recorded as 'other not stated' or was not recorded had a Black or Asian officer-defined ethnicity. This is consistent with *Appendix D* which presents a cross-tabulation of self-defined ethnicities with police defined ethnicities.

Figure 7 Search outcomes by self-identified ethnic group



The significantly lower success rate of Black searches once the objects of searches are controlled for in *Model 4*, suggests that there are differences between police-determined ethnic groups in the rates of searches for different search objects and the success of searches for different search groups and that once this is controlled for, the searches of those the police consider to be Black and Asian are less successful than those they consider to be White. This is further explored in *Table 14*, which presents each ethnic group's search objects as a percentage of overall searches and the success rate of searches for the different search objects for each police-determined ethnic group. While Black searches are less successful than White searches for all search objects except for stolen goods for which they are the same, the most significant differences are for the offensive weapons searches.

Offensive weapons searches make up a higher proportion of Black searches than they do of White searches (3.3 percentage points) and these are 34.7% less successful for Black people searched than they are for White people searched. The difference between the White and Black groups in the frequency and success of the offensive weapons searches is one possible explanation for the significant differences between the success of Black and White searches in *Table 13*.

Figure 8 Search Outcomes by Police-Identified Ethnic Group

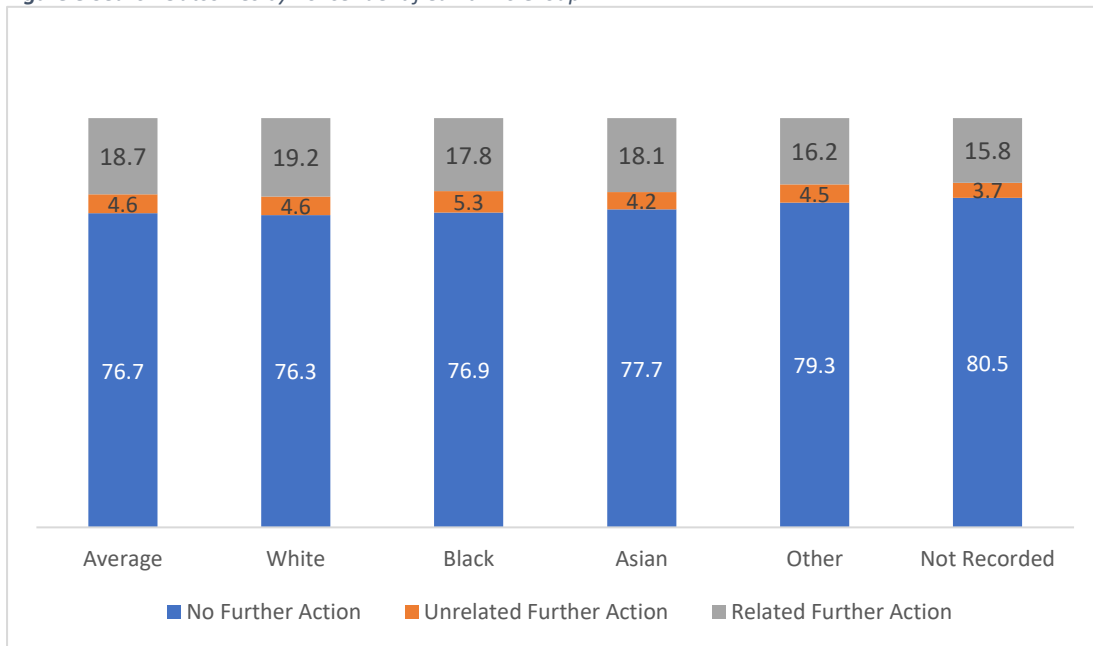


Table 12 Binary Logistic Regression Predicting the Outcome of a Search, Self-Defined Ethnicity

		Model 1		Model 2		Model 3		Model 4	
		B	OR	B	OR	B	OR	B	OR
S.D. Ethnicity	White								
	MME	-0.04 (0.09)	0.96	-0.05 (.09)	0.95	-0.06 (0.08)	0.94	-0.08 (0.09)	0.93
	Asian	0.08 (0.07)	1.08	0.01 (.07)	1.01	-0.02 (0.07)	0.98	-0.1 (0.07)	0.91
	Black	0.02 (0.06)	1.02	0 (.06)	1.00	-0.02 (0.06)	0.98	-0.05 (0.06)	0.95
	Other	-0.17 (0.14)	0.85	-0.22 (0.14)	0.81	-0.23 (0.14)	0.80	-0.21 (0.14)	0.81
	Other Not Stated	-0.42*** (0.05)	0.66	-0.32*** (0.06)	0.73	-0.33*** (0.06)	0.72	-0.31*** (0.06)	0.73
	Not Recorded	-2.95*** (0.58)	0.05	-1.45* (0.61)	0.23	-1.47* (0.61)	0.23	-1.57* (0.61)	0.21
Age	10 to 17								
	18 to 24			0.61***(0.05)	1.84	0.61***(0.05)	1.84	0.40*** (0.05)	1.50
	25 to 34			0.52*** (0.06)	1.69	0.52***(0.06)	1.69	0.37*** (0.06)	1.45
	35 and over			0.4***(0.06)	1.48	0.4***(0.06)	1.49	0.33*** (0.06)	1.39
	Not Recorded			-1.52***(0.3)	0.22	-1.53***(0.28)	0.22	-1.61*** (0.28)	0.20
Gender	Male								
	Female					-0.23*** (0.05)	0.80	-0.26*** (0.06)	0.77
	Not Recorded					0.26 (0.36)	1.30	0.33 (0.37)	1.38
Search Object	Drugs and Psychoactive substances								
	Hunting, fireworks, and offences under the act							-0.85* (.38)	0.43
	Offensive Weapons and Harm							-1.4*** (0.08)	0.25
	Articles for use in Theft							-0.78*** (0.05)	0.46
	Articles for use in Criminal Damage							-1.61*** (0.28)	0.20
	Firearms							-2.02** (0.59)	0.13
	Stolen Goods							-0.21* (0.09)	0.81
Nalgerke R Squared		0.01		0.03		0.03		0.08	

***P<.001, **P<.01, *P<.05

Table 13 Binary Logistic Regression Predicting Search Outcome, Officer-Defined Ethnicity

		Model 1		Model 2		Model 3		Model 4	
		B	OR	B	OR	B	OR	B	OR
S.D. Ethnicity	White								
	Black	-0.09 (0.05)	0.92	-0.08 (0.05)	0.93	-0.1 (.05)	0.91	-0.13** (0.05)	0.87
	Asian	-0.07 (0.06)	0.93	-0.12* (0.06)	0.89	-0.14* (0.06)	0.87	-0.23*** (0.06)	0.80
	Other	-0.2 (0.15)	0.82	-0.23 (0.15)	0.79	-0.25 (0.15)	0.78	-0.24 (0.15)	0.78
	Not Recorded	-0.24* (0.1)	0.79	-0.19* (0.1)	0.82	-0.19* (0.1)	0.83	-0.18 (0.1)	0.84
Age	10 to 17								
	18 to 24			0.61*** (0.05)	1.84	0.61*** (0.05)	1.85	0.41*** (0.05)	1.50
	25 to 34			0.53*** (0.06)	1.69	0.53*** (0.06)	1.69	0.38*** (0.06)	1.46
	35 and over			0.4*** (0.06)	1.49	0.4*** (0.06)	1.50	0.33*** (0.06)	1.40
	Not Recorded			-1.95*** (0.05)	0.14	-1.95*** (0.27)	0.14	-2.05*** (0.27)	0.13
Gender	Male								
	Female					-0.24*** (0.05)	0.79	-0.28*** (0.06)	0.76
	Not Recorded					0.2 (.36)	1.22	0.25 (0.37)	1.28
Search Object	Drugs and Psychoactive substances								
	Hunting, fireworks, and offences under the act							-0.87* (0.38)	0.42
	Offensive Weapons and Harm							-1.41*** (0.08)	0.25
	Articles for use in Theft							-0.79*** (0.05)	0.45
	Articles for use in Criminal Damage							-1.63*** (0.28)	0.20
	Firearms							-2.01** (0.6)	0.13
	Stolen Goods							-0.21* (0.09)	0.81
Nalgerke R Squared		0		0.03		0.08		0.08	

*** P<.001, ** P<.01, * P<.05

Table 14 Search Hit Rate by Search Object and Officer-Determined Ethnic Group

	White		Black		Asian		Other		Not Recorded		All Groups	
	% of Searches	% Successful	% of Searches	% Successful	% of Searches	% Successful	% of Searches	% Successful	% of Searches	% Successful	% of Searches	% Successful
Drugs and Psychoactive substances	58.6	24.5	64.8	23	72.2	21.4	59.2	22.6	55.3	22	60.8	23.8
Offensive Weapons and Harm	13.3	7.2	16.6	4.7	11.2	10	11.7	4.8	17.8	2.5	13.7	6.7
Articles for use in Theft	21.6	13.3	14.6	10.5	14.0	8.3	23.7	7.1	20.3	11.7	19.8	12.4
Stolen Goods	4.2	20	2.9	20	1.6	20	3.6	0	4.9	16.3	3.8	19.5

6 Implications

This section aims to synthesise and highlight the key findings from the different parts of this project concerning both disproportionality (*Section 6.1*) and discrimination (*Section 6.2*) in HC's use of stop and search. It also introduces some responses, obtained from the senior officers in the interviews described in *Section 4.1*, to the findings from *Sections 2, 4.2, and 5*.

6.1 Disproportionality

The evidence presented in this report suggests that there is ethnic disproportionality at all stages of the causal chain leading up to a search. Evidence from *Section 2* demonstrates that Black people from mixed or multiple ethnic backgrounds are more than three times more and nearly twice as likely to be searched as White people in Hertfordshire respectively, relative to the residential population. Part of this disproportionality appears to be associated with the age composition of the Black and mixed or multiple ethnicity groups. These populations are younger than the White population and people under 35 are searched at a higher rate than those aged 35 and over. However, even once the age composition of the ethnic groups is controlled for there is still a considerable amount of disproportionality. Part of this disproportionality is associated with where police are conducting searches. Census wards with a higher population of Black and mixed or multiple ethnicities experience a higher rate of search than those with lower populations of Black and mixed or multiple ethnicities. Controlling for this reduces the over-searching of the MME population groups, but there is still a considerable amount of over-searching of the Black group. The over-searching of the Black population appears to be gender specific. Black males are searched at a considerably higher rate than their White counterparts but Black females particularly those aged under 35 are searched at a lower rate than White females. The disproportionality also appears to be predominantly associated with search objects relating to drugs, which accounted for the majority of the excess searches for the Black group, although the search object with the highest ratio of Black to White searches was offensive weapons. When compared to similar police forces, Hertfordshire Constabulary had relatively low levels of searches of members of the Black community and relatively low levels of disproportionality between the Black and White communities.

6.2 Discrimination

As argued in *Section 1*, the question of discrimination is a question of whether the disproportionality outlined above is justified by legally relevant factors. In terms of the location of searches, there were reasonable grounds to suggest that the disproportionality, in relation to the higher levels of searching in areas with larger Black populations, was justified by legally relevant grounds, but the over-searching of census wards with higher mixed or multiple ethnicity residents was not. Statistical modelling suggested that while there was a strong relationship between the rate of searches and the proportion of Black residents, this association disappeared once the level of crime was introduced to the model. This suggests that there tends to be higher levels of crime reported by the public to the police in areas with a higher proportion of Black residents and that police searches are higher in areas with higher amounts of crime. This was also in line with the assertions made by senior police officers with responsibility for operational decisions who suggested that because of constraints, the majority of policing resources were focused on responding to reports of crime and the limited resources for proactive policing were concentrated on areas where there had been a significant level of crime reporting. The association between the level of mixed or multiple ethnicities residents and the rate of searches, however, remained significant even after the crime was included in models suggesting that high crime areas with a high population of mixed or multiple ethnicity people would receive a higher rate of search than a high crime area with a lower population of mixed or multiple ethnicity people. This would appear to constitute discrimination as it is not justifiable by legally relevant factors. Caution does however have to be exercised concerning this finding because of the relatively low between-ward variation in the percentages of MME residents.

Even once the location of searches is controlled for and the age composition of the ethnic groups is controlled for there is a considerable amount of over-searching of the Black group, which appears to be driven primarily by drug-related searches of Black males. When asked about this, one of the senior officers interviewed for this project suggested firstly that dealing with county lines drug dealing was a big priority for the police force because of the violence that accompanied it and that their intelligence suggested that a lot of the low-level drug dealers were young black males.

So, we have a control strategy. It's a bit like a speedo on a car and if you look at it you've got the most important things at the red end. You know we really want you to be dealing with

this...So, our top searches are for drugs... behind those drugs are groups of people who are carrying weapons and potentially murdering each other on the streets.

.....

The most prevalent intelligence that we brief is around drugs. And unfortunately, we do find that a lot of the people who were coming into the county who are involved in drugs, county lines, et cetera, et cetera, are from visible ethnic minority backgrounds.

.....

And you're talking about the lower-level dealers, not your higher-ups, they never touch it. They never see the stuff. But the lower-level street dealers unfortunately are a lot of them are your younger black lads.

Police Officer

Assessing these assertions with empirical data is difficult without self-report data on offending in Hertfordshire (discussed further in *Section 7*). However, there is some support for this account from Harding's qualitative study of county lines drug dealing in London and the Southeast of the UK, particularly concerning the early stages of setting up county lines drug dealing operations (2020, p. 44)²¹. Evidence from *Section 5* did however suggest that the police were unduly suspicious of those they perceived to be Black or Asian, with modelling showing that the searches of both these groups were significantly less successful than the searches of White people. Analysis of the accuracy of searches for specific search objects showed considerable disparity in the accuracy of searches for offensive weapons between people whom the police identify as White and Black. This evidence meets the definition of discrimination outlined in *Section 1.2* because it is not justified by legally relevant factors. The issue of police being overly suspicious of certain groups is something that HC likely want to address through policy and training.

When ethnicity was defined by the individuals searched, findings suggested that the searches of individuals from the 'other not stated' group were significantly less accurate than those of the White group and that searches, where no ethnicity was recorded, were substantially and significantly less successful than the White group. A possible explanation for this latter finding was put forward by a senior officer in the interviews described in *Section 4.1*.

²¹ This book also explores some reasons why this might be the case, but this is beyond the scope of this project,

'So, I imagine, where SDE (Self-Defined Ethnicity) isn't provided, it's because you've got members of the public that don't want to engage. Now for a younger officer that makes them feel really uncomfortable and they're not going to do a thorough search on that person. It's going to be a quick pat down and "OK, mate, on your way, on your way", because they don't, they feel really uncomfortable in that situation. And we know that from, like feedback from them. So, I imagine what those searches where you've got people like, "yeah, yeah, yeah, I'm, I'm, not telling you anything, mate. I'm not telling you anything. Just, you know, crack on and let me go. Young officers and they're we're talking 18 years old. So, the people they're stopping are much older than them. So, they're like intimidated, really intimidated, so they're not going to do a proper thorough search. It'll be a quick pat down and, "Yeah, cheers mate, on your way". And that's so I think that does play into the mix of that. We've got a really inexperienced workforce at the moment and that does have an impact'.

Police Officer

It is difficult to determine whether the evidence of the lower success rates of the searches of these groups constitutes discrimination because neither of these groups can be defined as a particular ethnic group.

7 Limitations and Future Directions

There are several limitations to the research in this project. These primarily relate to the suitability of the data used to explore the issues of disproportionality and discrimination.

7.1 Residents and the Available Population.

The first issue is the use of census data of residents as a baseline population with which to calculate the rates of search. Data of this kind does not allow for analysis of who was present in an area when the police were, nor can it be used to analyse who frequently uses the space (Bowling & Phillips, 2007). This is problematic because research has shown that the demographic characteristics of people who use a particular area at a particular time can vary substantially from the demographic characteristics of the residents (Waddington et al., 2004). This may be a particular issue in this research because, as senior officers pointed out in the interviews, Hertfordshire has several popular nightspots which attract people from across and outside of the county and has a university campus whose temporary residents may not be included in the census data. The police can only search the

people who are using the space, sometimes described as the 'available population', so an inaccurate measure of this may lead to an inaccurate calculation of the rate of searches (Bowling & Phillips, 2007). This can be a particular problem when calculating the rates of search for different ethnic groups because some research has shown that there can be a higher rate of people from ethnic minority groups than in the resident population, and if the resident population is used as a baseline can lead to an inflated calculation of the rate of search of ethnic minority groups (Miller et al., 2002).

In a hierarchy of data, precise data on exactly who is in settings while police officers are present (IE who exactly police officers are encountering) would be at the top. Clearly, however, this information would currently be almost impossible to collect. Each day there are thousands of police officers, spending different amounts of time in thousands of locations via foot patrols, car patrols, responding to calls, and visiting the scenes of crime. Determining who officers have come into contact with would be an almost impossible task. Unsurprisingly, as far as the authors of this report are aware no research of this kind has been conducted. However, in the age of body-worn cameras²² and AI, it is not beyond the realms of possibility that collecting this data at a future date would be possible, although there would be ethical implications. Next rung down on a hierarchy of data would be demographic data about the people that generally use a particular space. At least two attempts have been made at collecting this kind of data in the context of stop and search. Both Miller and colleagues (2002) and Waddington and colleagues (2004) used footage from cameras mounted on moving vehicles and in the case of the latter footage from CCTV as well to establish the demographics of the 'available population', who could therefore plausibly be searched by police in these spaces. This approach has clear advantages over using the population of certain areas (discussed below) because it provides a more accurate estimate of the people who might be using certain spaces and therefore could plausibly be searched, rather than including people who could not be searched (IE people who live in an area but are not using space outside their homes) or excluding people who could be searched (IE people who don't live in a particular area but use the space). However, there are also several disadvantages. Firstly, it does not tell us who exactly was present when the police were present, it instead provides an estimate of this. Secondly, it is not necessarily easy to obtain the demographic characteristics of individuals just by looking at footage of them (this is likely also the case for patrolling police officers too) (Miller et al., 2002; Waddington et al., 2004). Thirdly this is incredibly labour intensive and as such these studies have a very small coverage area and tend therefore to just focus on stop and search hotspots (see e.g., Miller et al., 2002; Waddington et al., 2004), which risks missing important information about settings outside of

²² Footage from body worn cameras has been used to access procedural justice during stop and searches (see Nawaz & Tankebe, 2018).

these areas. Nevertheless, this may be a fruitful approach for future research in Hertfordshire to better understand who is using the space around the county and to establish a more accurate base rate with which to calculate rates of search.

7.2 Calculating Policing Rates

The second issue is the use of data on where searches take place as a proxy for where policing takes place. This is not a perfect substitute because it cannot be used to determine whether the search rate is higher in one area than another because the police spend more time in that area or because their interactions with those settings more frequently lead to stop and searches. It is plausible that police could spend lots of time in certain settings without conducting searches. This makes it difficult to determine whether any disproportionality is occurring because of the processes that lead the police to encounter certain settings and the individual within them, or the processes of interaction with these settings. Developing ways of collecting more accurate data on where police officers are spending time would allow for a more accurate test of the hypothesis relating to the mechanisms leading to disproportionality and discrimination. In addition to this, more accurate information on the nature of how police came to perform a particular search could be recorded. For example, recording whether a search was conducted because of police responding to a call out, as part of 'safer neighbourhood team' work or because of a proactive policing operation. This would provide empirical evidence with which to evaluate the assertions made by senior officers in *Section 4.1*, about the deployment decisions in relation to stop and search.

7.3 The Use of Hit Rates

There are some issues with the use of 'hit rates' as a measure of discrimination. Officers exercise discretion when deciding whether to take further action such as arrest and further action such as arrest does not necessarily lead to conviction (Bowling & Phillips, 2007). This means that arrest does not "provide conclusive evidence of criminal involvement" (Bowling & Phillips, 2007, p. 951), while no further action does not necessarily provide conclusive evidence of no criminal involvement. For example, a police officer could choose not to record the finding of a small quantity of cannabis on an individual from one particular social group and take no further action, while recording this information and taking further action in the case of someone from another social group. In the age

of police body-worn cameras, however, it is difficult to know how prominent these issues are. Clearly, however, an alternative measure for discrimination would be useful. One source of data that would be useful would be self-report data on offending in Hertfordshire.

7.4 Missing Data

The final issue is that there was a fair amount of missing data from the records of stop and searches. Part of this, as suggested by the officer above, is likely down to the fact that individuals are not legally compelled to give officers their details when being searched. However, some of this, particularly the large number of searches for which no location was recorded, is down to problematic recording practices. This was also recognised by one of the officers interviewed.

Every officer is issued with a force laptop. And a force mobile phone right now on this amazing mobile phone we have the TuServ systems and that's what we record all our stop searches on. So, if I'm out on patrol, I have to use TuServ to record my stop and search. Now, if I'm stopping you and you've potentially got a knife on you or something. Am I going to be doing this? You're not are you, I want my hands free, and I want to be looking at you, right?

.....

So, I've just tried to log into TuServ, and the signal is rubbish, it doesn't connect. There are all sorts of issues with it, so there are technical issues with the TuServ system. So, what officers do, is, they'll stop and search and they'll scribble all the details down in their pocket notebook because that's much safer. And then when they have finished their shift, they'll go back to the nick, and they'll log onto their laptop, and they will then put the stop and search on TuServ there. But TuServ auto defaults to the location of where their laptop is or where their phone is. So, you'll find our stop search hotspots are our police stations. Which is of no use for anyone. So, we put out loads and loads and loads of guidance around "look if you have to put your stop search on TuServ in the police station because your phone batteries dies or the signal's rubbish or whatever, this is how you manually put in High Street, Watford or whatever else". So, location data is a real pain because if the signal's rubbish, the batteries died or the system just won't connect, it's not a foolproof system.

.....

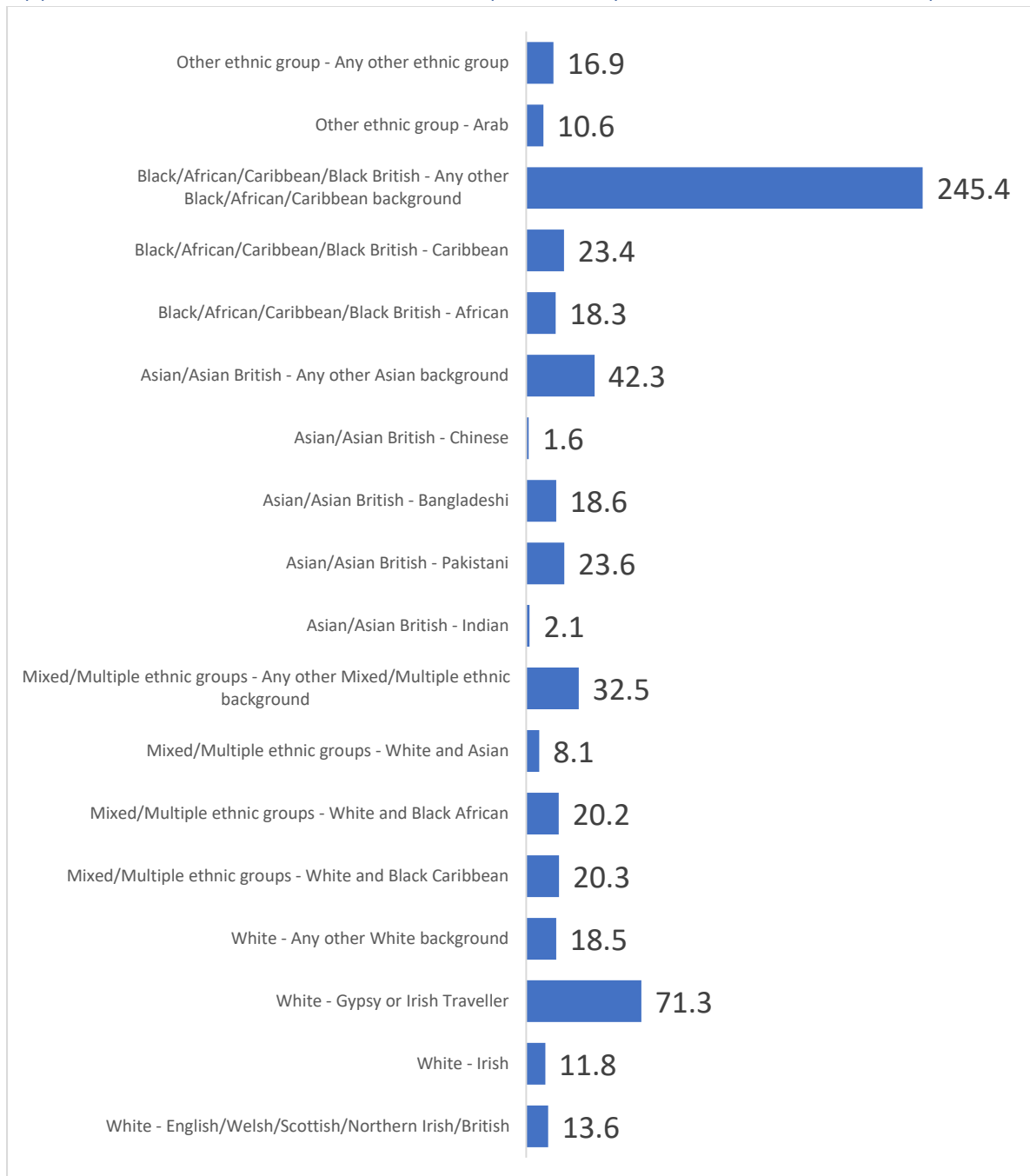
So those are some of the things around why it's why we don't get as much data as we would like to have.

Police Officer

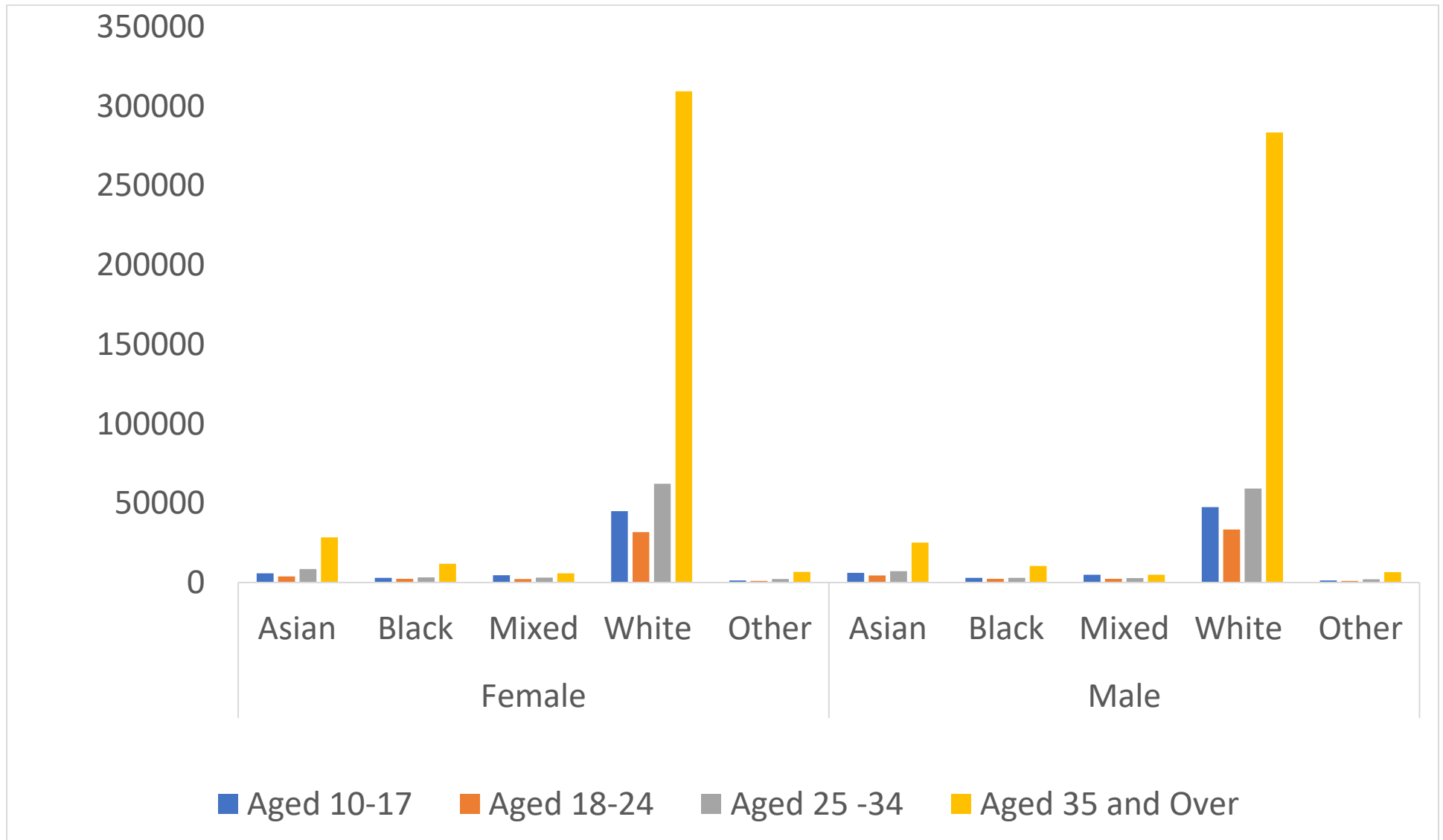
A large amount of missing or inaccurate data is problematic for any research so improving recording practises and reducing the missing data where possible will allow for a more accurate picture of stop and search in Hertfordshire.

Appendix

Appendix A Searches Per 1000 of the Population by Self-Defined Ethnic Group



Appendix B Age, Gender and Ethnic Composition of the Population in Hertfordshire



Appendix C Stop and Search Statistics for 2022 Wards in Hertfordshire

2022 Ward	Total: All usual residents	Crimes	Searches	Ratio MME to White Searches Per 1000	Ratio Black to White Searches per 1000
Central (Watford)	10462	11071	1044	1.7	3.3
Bedwell	8058	6745	710	1.1	1.2
St Peters (St Albans)	8446	4572	616	0.9	8.1
Hemel Hempstead Town	7195	6403	582	0.7	2.1
Waltham Cross	11938	4647	386	1.1	1.3
Old Town (Stevenage)	8579	3845	366	0.9	2.2
Cheshunt South and Theobalds	9363	2802	282	1.9	2.1
Hitchin Bearton	8615	2057	278	1.3	3.5
Hertford Castle	9637	3443	243	1.0	4.2
Handside	6938	3640	215	1.7	5.5
Peartree (Welwyn Hatfield)	7961	3647	206	0.5	1.1
Borehamwood Cowley Hill	9497	3356	205	2.0	1.7
Pin Green	6499	2025	195	1.5	2.2
Cheshunt North	9430	2538	194	0.5	1.4
Cunningham	8022	2022	189	2.9	3.9
Borehamwood Hillside	8603	2876	188	0.9	2.8
Wormley and Turnford	11406	2715	185	1.4	1.8
Holywell (Watford)	9884	2443	184	0.8	2.9
Roebuck	7133	3723	183	2.3	1.6
Hatfield Villages	10635	3761	179	1.0	1.6
Hoddesdon Town and Rye Park	10159	3006	171	1.4	3.6
Hatfield Central	8317	4962	169	0.6	1.8
Park (Watford)	8630	1712	169	0.6	4.6
Apsley and Corner Hall	10301	3281	166	1.0	1.8
Hitchin Highbury	8335	2779	159	0.6	3.0
Adeyfield East	6074	3019	154	0.3	4.8
Bishop's Stortford Meads	6873	2300	153	1.7	4.2
Rickmansworth Town	7660	1893	149	0.5	3.9
Harpenden West	8098	1897	147	1.2	6.1
Boxmoor	8735	1597	144	0.8	6.9
Verulam	7539	1840	144	2.2	20.1
Flamstead End	8812	2676	140	1.0	1.4
Shephall	6480	1830	140	1.8	0.4
Borehamwood Brookmeadow	8837	3553	138	1.6	1.7
Bishop's Stortford Central	9686	2966	128	1.9	6.9
South Oxhey	7872	2141	126	0.0	0.8
St Nicholas	8148	2056	119	1.8	1.6
Vicarage	9153	2379	116	1.3	0.9
Woodfield	5962	2338	116	2.0	3.8
Rosedale and Bury Green	9776	2589	115	0.6	1.0
Leverstock Green	9710	2100	113	0.4	1.4

Highfield (Dacorum)	5894	1623	112	0.8	0.7
Borehamwood Kenilworth	9382	2898	110	1.1	0.9
Meriden (Watford)	8066	2376	109	1.5	2.0
Bernards Heath	8149	1548	106	1.3	7.2
Clarence	8181	1357	106	1.4	8.4
Sopwell	7710	2020	104	2.3	5.4
Hatfield East	8108	2380	103	1.9	1.2
Hatfield South West	11406	3074	102	5.0	4.0
Hollybush	7057	2129	101	2.0	0.6
Martins Wood	6421	709	100	1.2	2.9
Letchworth East	6682	2147	97	0.8	3.8
Chorleywood North & Sarratt	6975	1019	96	2.0	3.9
Oxhey	7172	1518	96	1.3	8.9
Tudor (Watford)	7113	2158	96	2.2	3.7
Leggatts	8402	1573	94	2.4	1.4
Shenley	5399	1885	92	6.2	4.4
Bovingdon, Flaunden and Chipperfield	9492	1355	90	2.3	5.0
Letchworth South West	7602	2323	89	0.9	2.8
Hitchin Oughton	5103	1187	88	1.8	2.5
Hoddesdon North	9790	1853	88	0.6	2.3
Gade Valley	6935	1565	87	1.0	4.7
Potters Bar Parkfield	4995	2130	86	1.0	4.3
Bishop's Stortford All Saints	8441	1578	83	0.8	2.8
Nascot	9071	1517	83	2.2	2.6
Chorleywood South & Maple Cross	7941	1491	81	0.3	13.7
Woodside (Watford)	7968	2184	81	1.8	4.6
Broxbourne and Hoddesdon South	9038	1893	80	1.1	4.0
Dickinsons	6461	1072	80	1.0	7.7
Penn & Mill End	7205	1548	80	0.0	6.0
Letchworth South East	7254	1604	79	1.9	0.8
London Colney	8068	2208	79	1.5	5.2
Callowland	8704	2096	78	1.6	2.4
Carpenders Park	6948	1368	77	1.0	1.1
Royston Palace	6134	1448	76	2.8	3.3
Oxhey Hall & Hayling	7570	1528	75	1.7	2.2
Batchwood	7740	1764	73	1.1	4.6
Howlands	7396	1547	73	1.5	3.0
Redbourn	5706	1166	72	1.3	5.7
Grovehill	7996	2355	71	1.1	1.5
St Stephen (St Albans)	8225	1540	69	0.5	2.9
Ware Christchurch	5711	1559	68	0.8	2.3
Abbots Langley & Bedmond	6463	1108	67	0.5	2.5
Potters Bar Furzeield	5801	1343	67	1.4	1.6
Chaulden and Warners End	9281	1896	66	1.7	2.3
Hertford Sele	5912	1463	65	1.3	1.6
Manor (Stevenage)	6433	14	65	3.0	1.8
Bushey North	8013	1979	63	0.9	4.0

Hitchin Walsworth	8315	1273	63	0.5	6.5
Haldens	6578	2050	62	1.1	2.4
Leavesden	8567	1886	62	0.8	1.2
Aldenham West	5095	1062	61	0.7	5.2
Baldock Town	7735	2122	60	0.6	2.5
Longmeadow	6022	1161	58	0.7	4.8
Park Street	8163	2437	57	1.7	4.0
Hertford Bengeo	7900	1482	56	0.8	5.7
Hill End	7590	1380	56	2.4	4.8
Adeyfield West	5950	1164	55	2.1	4.2
Bushey St James	7697	1991	54	0.4	0.9
Bennetts End	6041	1278	53	0.5	1.1
Chells	6838	1852	52	0.5	0.0
Elstree	5100	1059	50	0.6	1.9
Bishop's Stortford Silverleys	6970	1056	48	1.4	0.8
Sawbridgeworth	8737	1441	48	0.0	2.2
Stanborough	7568	1363	48	2.7	1.2
Bandley Hill	6884	1427	47	1.6	2.1
Sandridge & Wheathampstead	7969	1327	47	2.8	6.3
Bentley Heath & The Royds	5977	1014	45	1.5	5.9
Aldenham East	4964	892	44	0.0	5.0
Kings Langley	5280	907	44	0.0	7.2
Knebworth	5443	1019	44	1.5	17.3
Goffs Oak	9267	1379	43	0.0	6.9
Berkhamsted Castle	6117	926	42	4.2	17.0
Symonds Green	6082	1463	42	0.7	0.8
Harpenden East	7884	1172	41	0.8	5.2
Thundridge & Standon	3278	583	41	0.0	11.8
Hertford Kingsmead	5984	1170	40	0.0	1.4
Woodhall Farm	7016	1704	40	1.3	0.4
Berkhamsted East	6137	1085	39	4.9	14.9
Berkhamsted West	6540	959	39	1.5	29.4
Welham Green and Hatfield South	7668	2138	39	1.3	7.5
Cadwell	2358	364	36	1.1	16.1
Hunsdon	3569	356	35	0.0	25.3
Hitchwood, Offa and Hoo	7765	1188	34	1.6	12.1
Letchworth Grange	7337	1397	34	1.4	3.7
Potters Bar Oakmere	5789	1475	33	1.6	1.9
Great Amwell	2746	422	32	0.0	4.7
Marshalswick East & Jersey Farm	7357	12	32	0.9	7.9
Bishop's Stortford South	9274	846	31	0.0	7.5
Buntingford	8303	1401	31	0.0	6.1
Harpenden North & Rural	8182	924	31	1.4	3.3
Hertford Heath	3541	497	31	1.2	8.5
Moor Park & Eastbury	6130	634	31	0.0	3.9
Ware Chadwell	3260	632	30	0.0	5.4
Watling (Dacorum)	5800	935	30	3.1	9.5
Gadebridge	5803	1135	29	0.0	6.4

Hitchin Priory	4837	379	28	5.6	32.0
Arbury (North Hertfordshire)	2828	392	27	0.0	0.0
Durrants	7068	620	27	0.0	3.1
Harpenden South	7260	554	27	3.4	25.6
Welwyn East	6640	871	26	2.8	23.0
Sherrards	5971	1050	25	3.2	0.0
Bushey Park	7294	1204	24	2.0	0.0
Marshalswick West	5117	849	24	1.1	7.5
Colney Heath	2761	850	23	0.0	23.9
Royston Heath	5619	803	23	3.9	4.5
Tring Central	5390	1012	22	0.0	25.7
Welwyn West	6161	1012	22	0.0	14.2
Stanstead Abbots	3098	719	21	0.0	5.9
Northaw and Cuffley	6092	994	20	2.5	2.3
Panshanger	6053	1162	20	0.0	0.0
Aldbury and Wigginton	2404	387	19	6.0	13.9
Brookmans Park and Little Heath	6894	900	19	0.0	4.6
Ermine	2788	400	19	0.0	17.4
Nash Mills	3782	595	19	1.2	0.0
Much Hadham	3092	489	18	0.0	0.0
Bushey Heath	5429	1027	17	0.0	9.6
Chesfield	7410	1023	16	0.0	3.1
Tring West and Rural	5177	724	16	0.0	0.0
Little Hadham	2510	390	15	6.4	27.0
Ware St Mary's	5130	771	15	4.5	16.2
Letchworth Wilbury	5452	1078	14	4.5	2.4
Hertford Rural North	2271	240	13	0.0	0.0
Watton-at-Stone	2621	339	12	0.0	0.0
Braughing	2737	348	11	0.0	0.0
Hertford Rural South	2641	490	11	0.0	0.0
Northchurch	2828	351	10	0.0	67.0
Puckeridge	2974	356	9	0.0	22.7
Royston Meridian	5691	444	9	0.0	0.0
Ashridge	2695	297	8	8.7	0.0
Weston and Sandon	2066	250	8	0.0	0.0
Baldock East	2873	217	7	0.0	0.0
Mundens and Cottered	2587	347	7	0.0	0.0
Ware Trinity	5534	993	7	10.0	0.0
Codicote	2679	259	6	0.0	0.0
Datchworth & Aston	2353	352	6	0.0	0.0
Tring East	3419	519	5	0.0	0.0
Walkern	2801	355	5	0.0	0.0
Kimpton	2261	183	0	1.0	1.0

Appendix D Crosstab of Self-Defined Ethnicity with Officer-Defined Ethnicity

		Officer-Defined Ethnicity					Total
		White	Black	Asian	Other	Not Recorded	
Self-Defined Ethnicity	White	13482	74	46	39	254	13895
	Mixed	166	471	130	41	93	901
	Asian	19	26	1411	83	27	1566
	Black	41	1982	29	9	38	2099
	Other	133	54	69	85	55	396
	Other not stated	1516	800	526	96	402	3340
	Ethnicity not recorded	128	68	24	5	12	237
Total		15485	3475	2235	358	881	22434

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