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Drug policing of youth
DRUG POLICING OF YOUTH
Drug policing of youth
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By Susanne Egnell

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SUSANNE EGNELL

Drug policing of youth
Examining pre- and post-stop conditions and outcomes

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ABSTRACT

Given the strong focus on minor drug offenses in Swedish drug control policy and the risk of disparate drug enforcement that may follow from such policies, this thesis explores drug enforcement and the use of coercive measures (enforced drug tests and body searches) towards youths aged 15-20 years. The first study focuses on the circumstances of the detection of minor drug offenses, the grounds for suspicion and use of coercive measures. The second study explores ethnic disparities in exposure to drug tests, as well as ethnic disparities in relation to hit-rates for drug tests and body searches. The results show that about one-third of the minor drug situations were detected in a reactive policing manner, and approximately 30-40 percent were detected in association with other offenses. The findings suggest that the grounds for enforcing drug tests and body searches often were based on subjective cues. Results from the second study show that youths subjected to a drug test were male, born outside Europe, and had unemployed fathers to a significantly greater extent than the drug-using youths in the school survey. Additionally, youths born outside Europe were more likely than youths born in Sweden to be submitted to coercive measures that produced a negative result. This finding was dependent on the definition of ethnic background that was employed.

The findings suggest that future research should investigate a number of pre- and post-stop conditions and outcomes. Research on pre-stop conditions should further explore: 1) the distribution of "criminal" signs between different sociodemographic groups and their probability for a hit, 2) the importance of concurrent offending for the detection of drug offenses, and 3) the nature of drug use, transactions, and dealing in association with the risk for suspicion. Research on post-stop conditions and outcomes should explore: 1) ethnic disparities in hit-rates of body searches and drug tests with more detailed data on ethnic background (specific region-based vulnerabilities), and 2) neighborhood effects
on searches and drug tests, including hit-rates, both on an individual level and a
neighborhood level.

Research on various forms of police bias in drug enforcement should integrate
both neighborhood- and individual-level processes in relation to pre-stop and
post-stop conditions and outcomes to understand the mechanisms behind ethnic
disparities. Finally, future research should focus on the "gender gap" found in this
study and previous studies on drug enforcement.
LIST OF PAPERS


II. Egnell, S. (manuscript). Examining ethnic disparities in enforced drug testing and body searches: An analysis of youth suspected of minor drug offenses
In Sweden, as in a small number of other countries where drug use is criminalized, the police may enforce a drug test to prove a drug consumption offence (EMCDDA 2018). Over recent decades, Sweden has seen a sharp increase in the number of registered minor drug offences, which is the result of an increased focus from the police on drug enforcement (CAN 2014), in combination with an intensification in the enforcement of drug consumption offences and the use of enforced drug testing (Brå 2016; Estrada et al. 2022).

Sweden has historically promoted a restrictive drug policy, which became increasingly strict in the late 1970s, with control policies targeting the demand side of the drug market at the street level (Tham 1998). This culminated in the criminalization of drug consumption in 1988, which would later result in the police being able to enforce drug tests if there was a suspicion of drug use. Since 1988, there has been a sharp increase in reported minor drug offences, coupled with an expansion of enforced drug tests by the police upon suspicion of drug use (Brå 2016; Estrada et al. 2022). Young people have increasingly become a target of drug enforcement in Sweden, as the median age of the population that is forced a drug-test has decreased (Brå 2016). In addition, the hit-rates for drug tests (whether positive or negative) has decreased. Indeed, Estrada et al. 2022 showed that the risk for a negative test has increased for all youth aged 15-20 since 2006, but even more so for those with low- and middle- income households.

There is an extensive international body of research on proactive policing practices such as stop- and- search, traffic stops and street-level drug enforcement. Of interest for this thesis is factors that are assumed to influence officer decision making in relation to stops and the use of coercive measures. In 1. INTRODUCTION
addition, research shows that there are more unexplained ethnic disparities\textsuperscript{1} in relation to drug offences than other forms of crime (Blumstein 1982; Shiner et al. 2018). This has led some authors to discuss the policing of drug crime as a possible driver of increased racial disparities in the criminal justice system (Blumstein 1993; Fellner 2009; Mitchell 2009; Tonry 2011; Tonry & Melewski 2008; Spohn 2015). Scholars have argued that greater disparities are due to the discretion and proactivity inherent in enforcement practices focused on minor drug offences, which opens up the way for various forms of bias to influence the decisions of police officers (Beckett et al. 2005; Blumstein 1982; Brownsberger 2000; Kochel et al. 2011; Nguyen & Reuter 2012; Piquero 2008; Shiner et al. 2018). Despite decades of research on ethnic disparities in the criminal justice system and in drug enforcement, however, there is as yet no consensus in the scientific community on the causes of these disparities. Theories have explored explanations at the individual and structural level, as well as investigating effects at the neighbourhood level.

The studies included in this thesis should be seen in the context of the increasing use of enforced drug tests among the general population in Sweden, and more specifically among young people, and an increase in the focus of drug enforcement practices on consumption offences and possession for personal use. This project has been divided in two parts, with the first exploring the circumstances associated with the detection of minor drug offences and the grounds for suspicion and use of body searches and enforced drug tests among youths aged 15-20 are based. The second part explores ethnic disparities in drug enforcement, focusing on drug tests and body searches based on a suspicion of drug use or drug possession, and the outcomes of these measures.

This thesis contributes to the field of drug enforcement research via an analysis of the police documentation associated with registered drug offences among young people aged 15-20 (drug use and possession). This is central to extending the knowledge about how minor drug offences are detected, and about the way enforced drug tests and body searches are used in relation to young people, and the success rates and possible ethnic disparities associated with the use of these

\textsuperscript{1} With regard to terminology, this thesis uses different terms such as race, racial, ethnic background, racial minority and so on, depending on the terms used by the authors of the referenced studies. The concept of race is very common in US-based research, and is a more versatile concept than e.g., minority/majority background. This reflects the availability of more detailed levels of background for research, and also the complexity of north American society in terms of its history and demographic processes. In the Swedish and European context, the race concept is used more rarely. When describing the thesis’ aims and research questions, and the samples employed in the thesis, I use the terms ethnic or native/non-native background and ethnic disparities. This reflects the terminology that has been used in previous European research, but also the fact that native/non-native accurately reflects group characteristics, i.e., (recent) migration experience or not.
coercive measures. Relatively little is known about either the circumstances surrounding the detection of minor drug offences and the use of coercive measures in Sweden (although see Brå 2023a). In addition, only a small number of Swedish studies have focused on hit rates associated with these measures (Brå 2016; Brå 2023a; Estrada 2022; Pettersson 2005), and on possible disparities in hit rates depending on individual background characteristics and/or neighbourhood characteristics.

Studies and research questions

The aim of the thesis is to examine pre- and post-stop conditions and outcomes in relation to the detection of reported drug offences among youth. The first study presented in the thesis explores the circumstances associated with the detection of minor drug offences among youths aged 15-20. It investigates in how young people are detected and the documented grounds for suspicion and the use of coercive measures. In essence, the central aim is to understand what “triggers” stops and further actions taken by the police in a sample of youth registered for minor drug offences in 2018. Finally, the article reports the hit rates for enforced drug tests grounded on suspicions of drug use. As such, the article focuses not on the individuals involved but rather the situations in which the suspicion arises and the police measures that are then taken. By contrast, the second article focuses on the young people subjected to enforced drug tests and body searches. The aim in this study has been to investigate possible disparities in the ethnic background of those subjected to coercive measures (drug tests and body searches). To begin with, the study analyses the risk for being forced to take a drug test in relation to ethnic background, gender and socioeconomic indicators. This is achieved by comparing relevant background factors among a sample of youth subjected to enforced drug tests and a survey population of youth with self-reported drug use. A second research question involves analysing the importance of ethnic background for disparities in the hit rates for drug tests and body searches, while controlling for repeat drug offending, gender, indicators of socioeconomic background and the neighbourhood (drug) crime context.

Research questions study 1:

1) What characterizes the circumstances in which suspected minor drug offences are detected in terms of place and the mode of policing practice? 2) Under what circumstances and on what grounds are young people identified as suspects and
submitted to coercive measures? 3) What are the hit rates for enforced drug testing?

Research questions study 2:

1) How do the sample registered for drug use offences by the police differ in terms of ethnic background, available measures of socioeconomic background and gender when compared to a school sample of youths who have used drugs?

2) Does ethnic background matter in relation to disparities in hit rates for drug tests and body searches when controls are included for socioeconomic background, gender, repeat drug offending and neighborhood (crime) context?
2. BACKGROUND

The thesis draws its inspiration from two central research traditions: police research and drug enforcement research. While its focus of interest is certainly associated with the more general literature on policing (discretion, stop and search, street-level practice), the links to drug policy and the literature on drug law enforcement are very central. This background section is divided into several segments that cover drug policy as a concept, drug policy in Sweden, and drug policy and drug control in an international perspective. This is followed by segments addressing research on drug enforcement strategies and quantitative measures of ethnic bias in policing. The final segment describes and discusses central theoretical debates and the way theory is applied in this thesis.

Drug policy

Drug policy is a concept with many different layers and varying content. We find broad definitions in the literature, such as that from Babor et al. (2018): “drug policy is broadly defined as any targeted effort on the part of governments to reduce or prevent illicit drug use and drug-related harm” (p. 114). Ritter et al. (2016) describe “drug policy regimes” and provide a framework for comparing drug policies. According to this scheme, drug policy includes not only the overarching strategy as presented by the government but also drug laws, the implementation of these laws in terms of case law, enforcement, social welfare policies and democratic principles. These are all factors that may explain outcomes related to drug policy, such as drug-related harm, drug enforcement harm, and levels of the use of illicit substances and drug offences.

Youth and young people are often the target group for drug control policies, but knowledge on how different control policies affect user patterns is scarce (Benedetti et al. 2021). Changes in cannabis legislation witnessed over recent
decades have provided researchers with opportunities to conduct natural experiments, which have led to an increase in the attention focused on the subject of control policy and adolescent substance use (Laqueur et al. 2020; Benedetti et al. 2021; Carl Gabri et al. 2022; Melchior et al. 2019; O’Grady et al. 2022; Rubin-Kahana et al. 2022; Shi et al. 2015; Stevens 2019). The results have been mixed and uncertain, but there is no clear evidence of increasing recreational use or an increase in the prevalence of drug use as a result of a liberalization of cannabis policies. The importance of drug policy in reducing drug use and problematic drug use has been questioned (Reuter & Stevens 2007; Ritter et al. 2016). Reuter and Stevens (2007), for example, argue that other cultural and social factors are more important for understanding stability and changes in levels of use and problematic use. Similarly, changes in drug legislation may have no impact on levels of use in either direction (EMCDDA 2018). Stevens (2010) has attributed the relatively low levels of drug use in Sweden and the Netherlands to extensive welfare policies and low levels of inequality rather than their (at times contrasting) drug policies. Sweden and the Netherlands are often described as opposites in terms of their respective drug policies, but as Colson and Bergeron (2020) have noted, this is a somewhat dated view that does not take account of the complexity of drug policy.

A substantial amount of law enforcement resources are focused on controlling the supply of drugs, which means focusing on dealers, traffickers and producers (Babor et al. 2018). Another aspect of the use of law enforcement to control supply is a focus on users and small-scale dealers, which focuses on reducing demand rather than directly affecting supply, for example by increasing the costs associated with buying drugs (both economic costs and costs in terms of risk) (ibid.). As Ritter (2022) has noted, the distinction between users and suppliers is a little arbitrary, since many users also possess and sell drugs in order to finance their personal use. According to some estimates, drug-use-related enforcement, rather than measures focused on the supply side, accounts for the majority of the resources used by drug enforcement in Europe, the US and Australia (Ritter 2022).

For both drug policy in general and drug enforcement in particular, little is known about what works (Babor et al. 2018; Ritter 2022; Stevens et al. 2022). The first question to ask when speaking about the possible effects of policy is “policy for whom and for what?” (Babor et al. 2018:8). Drug policy is characterized by goal conflicts (Ritter 2022). For example, is the goal to reduce drug use at the population level, to reduce harm/public order disturbances/drug-related crimes at
the societal level, to reduce heavy drug use or harm among individual users? The fact that prohibition has been and remains the main policy form used to deal with intoxicating substances other than alcohol (with the exception of about 30 countries that have decriminalized some form of use of certain substances (Ritter 2022)), means that there have been few opportunities to draw conclusions about alternative policy (enforcement) regimes. Another issue with the research on drug policy and alternatives to criminalization is a one-sided focus on the prevalence of drug use as the outcome variable (Stevens et al. 2022).

**Swedish drug policy**

From the 1970s to the present day, Swedish drug policy has been characterized by the goal of a drug free society (Regeringens skrivelse 2021/22:213; Träskman 2005). In the 1960s, Swedish drug policy was influenced by theories about the way drug use and addiction “spread” like an infectious disease, which led to a strong focus on demand combined with systems for both voluntary and involuntary treatment (Lenke & Olsson 2002; Tham 2021; Tham & Edman 2023). Previously, the drug problem had been seen as a limited, individual problem involving only a small number of people who were in need of medical expertise (Edman & Olsson 2014). In the 1960s and 70s, the drug issue assumed a more prominent role in the political debate. Drugs and drug use were framed as an epidemic societal problem rather than an individual problem, which had to be dealt with by means of a strict control policy (Edman 2017; Lenke & Olsson 2002). The police-oriented drug control strategy was put in place in the late 1970s, with a focus on street-level drug offences, in order to stop the spread of the “drug disease” (Lenke & Olsson 2002). The move towards a stricter control policy was also influenced by NGOs, such as the temperance movement and The National Association for a Drug Free Society (ibid.). Lenke & Olsson (2002) have argued that these movements played an important role in promoting strict drug controls and the involvement of the police as a means of “solving” the drug problem.

The understanding of the drug problem that has provided the foundation for drug policy has shifted over the course of the last century, from a medical to a social view, and then back to a more medicalized understanding, at least in the treatment sector (Edman 2017; Edman & Olsson 2014). Nonetheless, drugs as a social and public problem has been the most prominent in the political framing of the drug problem (Edman 2017). The restrictive drug policy that emerged in the late 1970s and early 1980s has continued, in combination with an ideological and political
consensus on the seriousness of the drug problem and the threat it poses to society (Edman 2013).

The description of Sweden as repressive and paternalistic in its handling of “the drug problem” stems from the use of relatively severe penal sanctions for minor drug offences such as consumption, a history of the use of coercive treatment, and a lack of harm reduction measures by comparison with other Nordic and European countries (Bjerge et al. 2016; Chatwin 2003; Edman 2017; Tham 2021). Yet, as Steven (2010) point out, USA and Sweden have had similar strict drug control policies, but face completely different challenges in relation to levels of drug use and social problems. This should be seen in the light of differences in both levels of inequality, welfare spendings and imprisonment rates for drug offences (ibid.).

Sweden does not have a separate policy for illicit substances. Illicit drug policy is instead embedded in a larger strategic policy focused on alcohol, drugs, doping, tobacco and gambling. In the most recent policy document (Regeringens skrivelse 2021/22:213), the section on illicit drugs is formulated around the idea of a drug free society and expresses a zero vision in relation to illicit drugs and medicinal drug overdoses. The criminalization of drug consumption and possession for personal use is explicitly tied to the overarching goal of achieving a drug free society (ibid.). The criminal justice system has a number of responsibilities in relation to the illicit drug strategy, which are linked to measures to reduce supply and penal sanctions for consumption, possession and dealing. Demand reduction efforts are linked to prevention, treatment and social measures related to health, risk consumption and addiction (ibid.). Yet, the strict targeting of drug consumption offences constitutes an essential part of Swedish legislation and enforcement practice (Bjerge et al. 2016). From the late 1990s, reported drug offences in Sweden have increased from around 35-40,000 to 110,000 per year, of which the absolute majority are possession and use offences. Around 32 000 drug tests in relation to suspicion of drug use were analysed in 2022 (RMV n.d.). Estimates of the annual number of policing man hours focused on drug offences increased from 869 in the year 2000 to 1,846 in 2013 (CAN 2014). Such annual figures represent a very rough estimate, but may give some indication of police prioritizations and their use of resources.

Additional drug penalizations were introduced in June 2023 (Prop. 2022/23:53). These changes include the criminalization of attempting or preparing to commit minor drug offences. What this will mean in practice is a matter that will become
clear as case law develops, but may it include the sanctioning of actions such as attempting to buy drugs or the tools necessary to consume drugs (Attunda District Court 2021). In addition, the minimum penalty for all drug sales, regardless of the amount and perceived harmfulness, has been set to 6 months imprisonment.

The assumed mechanisms underlying prohibitions on the possession of drugs for personal use are that they increase the cost of drugs, thus reducing demand, and also produce a deterrent effect via stigma (by reinforcing norms against illicit drug consumption) and legal risks (Ritter 2022; Stevens et al. 2022). This was one of the arguments presented in connection with the criminalization of drug consumption in Sweden in the late 1980s. Another argument was diversion – that being apprehended by the police would increase access to treatment, for example in the form of compulsory care. Youths below 18 who are suspected of drug consumption are referred to the social services, also in cases of a criminal conviction. A study by National Board of Health and Welfare (2022) showed that three-quarters of youth aged 15-17 who were convicted of drug offence were already known to the social services prior to being registered by the police, and the majority of these had previously received some form of care intervention. One conclusion drawn in the study is that police drug interventions may have helped to draw attention to drug use in relation to about one-quarter of the convicted youths, who had previously not been known to the social services (ibid.). As such, enforcement activities in relation to minor drug offences among youth may have a preventive effect through referrals into health interventions.

Having said this, there is little knowledge about the effects of these legal referrals (Anderberg et al. 2022), and the study by the National Board of Health and Welfare (2022) did not evaluate the effects of the care interventions received by the convicted youths.

**Swedish drug control policy and drug offences for personal use**

A number of countries in Europe and Latin America, and states in the US and Canada have depenalized/decriminalized or legalized drugs for personal use (Colson & Bergeron 2020; Greer et al. 2022; Santos 2020). At the same time, there are contradictory legislative movements, with other countries, such as Denmark, Sweden and the Netherlands, instead moving towards re-penalization and more repressive drug laws (Grund & Breukema 2017; Moeller 2020). There are visible divisions in this regard between countries on the different continents and between states within the US. Sweden is moving in a different direction. The legislative changes in 2023 meant a further penalization of minor drug offences,
which stands in contrast to the efforts to decriminalize personal consumption that are underway in other parts of the world. The recent changes to Swedish drug control policy were introduced in a “gang-package”, focused on combatting organized crime (Prop. 2022/23:53).

The major focus on drug possession and drug consumption in a Swedish context is evident in the table below.

**Figure 1. Changes in reported offences for different categories of drug offending over time in Sweden.**

![Graph showing changes in reported drug crimes over time](image)

Reported consumption offences start to appear in the reported crime statistics in the late 1990s, when they were registered as a separate offence in the crime statistics. As can be seen from the figure, over time, more time and resources have been devoted to identifying consumption offences as well as possession offences.

Few western countries conduct enforced drug tests in the way Sweden does. The consumption of illicit substances is criminalized in about half of European countries, but the implementation and enforcement of these laws varies to a great extent (EMCDDA 2018). All the Nordic countries with the exception of Denmark have criminalized the consumption of illicit substances, but only Sweden uses enforced drug testing (Tham 2021). Norway has historically used urine/blood sampling to prove illicit use. More recently, however, the Norwegian Director of Public Prosecutions has circulated new guidelines to the police that prevent the use of enforced drug testing in order to investigate consumption offences alone (Riksadvokaten 2021).
England and Wales have a diversion scheme that includes drug testing upon arrest (Home office 2012). This policy allows the police to take a drug test if the individual is arrested or charged with a “trigger offence” (e.g., theft, burglary, handling stolen goods), or if the police suspect that an offence was related to the use of a Class A drug (heroin, cocaine or crack). The police will only test for these substances, and if the test is positive, the charged individual may be assessed for treatment (Connor et al. 2020). What differentiates this practice from Swedish drug testing practice is firstly that the approach used in England and Wales is explicitly a diversionary practice that targets adults (18+) with a problematic use of more harmful substances in order to assess their treatment needs. Secondly, the practice is not meant to be used as an investigative measure to identify people who may then be charged with drug offences, but rather to test people who have been arrested for other, non-drug offences. While the Swedish police do refer individuals to the social services who have tested positive for drugs following a suspicion of drug use (any drug), this only applies to youths under the age of 18 (youth below 18 will still receive a criminal record for drug offending). Others will be given a fine (which is in many ways a less intrusive reaction) and a criminal record for drug offending.

The literature contains very few studies evaluating drug testing practices by law enforcement. Most studies on drug testing focus on drug testing in schools, workplaces and in treatment or correctional services. Since the introduction of the UK diversion scheme, studies have shown mixed results for drug use and related offending (Connor et al. 2020). A meta-review of similar diversion schemes for Class A drugs, primarily from the US, showed a small impact on drug use, but the low methodological quality of the studies included in the review casts doubt on the validity of this finding (Hayhurst et al. 2015).

Research on drug law enforcement strategies and effects

The belief in prohibition rests on a core belief in deterrence as a causal mechanism (Stevens et al. 2022). According to Babor et al. (2018), there are four main ways in which law enforcement can reduce drug crime: 1) reducing supply, 2) reducing demand, 3) driving a wedge between supply and demand, and 4) reducing the harmfulness of drug use.

Reducing supply is assumed to result in increased prices, thus reducing the demand for drugs. Law enforcement can also affect demand by decreasing the
availability of drugs, which increases the “search costs” associated with finding a drug dealer (Babor et al. 2018; Caulkins & Reuter 2009). Equally, demand is assumed to decrease as result of the fear of being sanctioned for drug use and the stigma attached to this use. Reducing the harmfulness of drug use can be thought of in different ways, but Caulkins and Reuter (2009) have argued that “harm-reduction offers a framework for explicitly taking into account both the benefits and the potential adverse consequences of policing” (p. 21). Law enforcement can reduce harm to individual drug users by assisting health services rather than arresting, by warning users about bad batches of drugs and by managing intoxicated users who are a danger to themselves or others (Caulkins & Reuter 2009). Another harm reduction measure involves specifically targeting violent dealers in order to prevent violence related to drug markets (Kammersgaard 2019; Caulkins & Reuter 2009).

While general policing strategies and methods have received an increased amount of attention in various research fields over recent decades, researchers argue that research on drug law enforcement remains poorly developed, with weak links to empirical data and evaluations of existing policing strategies (Babor et al. 2018; Caulkins 2017; Mazerolle et al. 2007; Ritter 2022). The existing literature on drug law enforcement is beset by several issues, including 1) a scarcity of empirical studies on the effects of different drug law enforcement strategies outside the US (Mazerolle et al. 2007), 2) conceptual ambiguity regarding strategy-related terminology and the aims and outcome measures associated with different strategies (Mazerolle et al. 2007; Pollack & Reuter 2014), and shaky assumptions about the functions of drug markets and the behaviour of users and distributors (May & Hough 2004; Potter 2009).

There are studies that can provide some indications about the effectiveness of specific strategies (Ritter 2022). Some aspects of street-level policing may be effective in reducing drug offences (sales), such as problem-oriented policing focused on drug markets in combination with third-party partnerships (Mazerolle et al. 2020; Ritter 2022). Geographically targeted enforcement is more effective in reducing drug offences (with the exception of calls-for-service) than unfocused standard enforcement, and targeted enforcement should be focused on larger areas rather than micro-areas (Mazerolle et al. 2020). Interventions such as raids or crackdowns show little effect in reducing drug offences (Ritter et al. 2022).

While proactive and focused police work has been shown to be effective in reducing crime in general, few studies have been dedicated to understanding
when, where and how the police actually dedicate themselves to proactive policing strategies (Wu & Lum 2016). In part, this may be due to the fact that there is a lack of reliable and valid data on police activity and the time spent on different activities in different contexts (ibid.). Proactive policing is an umbrella term that includes intelligence-led policing, problem-solving, strategic planning and the targeting of certain geographical areas or individuals (Wu & Lum 2016; Bacon 2016). It may also include pedestrian and traffic stops and stop-and-search strategies. Thus, proactive policing is a rather broad concept that is often contrasted to what it is not proactive, i.e., more traditional, reactive policing (Wu & Lum 2016). This conflation of concepts was evident in Bacon’s (2016) ethnographic study, in which officers working with intelligence-led drug policing used terms such as problem-solving, intelligence-led and proactive interchangeably, with the meaning of these different terms sometimes being lost.

Much criminological research on drug law enforcement has focused on reductions in drug (-related) offences as the outcome. There are good reasons for this, since the primary task of the police is to prevent crime and maintain public order, which is also often the relevant outcome of interest for criminologists. There are criminological studies focused on how drug law enforcement (such as changes in officer practice, Motivational Interviewing) may further health-related outcomes for people with problematic drug use measured in terms of repeat offending (see for example Magnusson 2023). Other studies have focused on the relationship between punitive law enforcement, the prevalence of intravenous drug use and HIV among drug users, on the application of harm reduction principles to drug law enforcement, on how drug market violence is affected by drug law enforcement, and on the harms caused by police crackdowns on drug markets (Caulkins & Reuter 2009; Friedman et al. 2006; Kammersgaard 2019; Maher & Dixon 1999; Werb et al. 2011). The range of outcomes examined in the research literature mirrors the at times conflicting goals embedded in drug policy and drug law enforcement.

Another research issue relevant to this thesis is the question of ethnic disparities in drug enforcement. Restrictive drug policy and high levels of enforcement focused on low-level drug offences (the so-called war-on-drugs), has come under scrutiny for exacerbating racial disparities in the criminal justice system (see for example Blumstein 1993; Daniels et al. 2021; Mitchell 2009; Spohn 2015). Arrests for possession and use offences started to increase in the 1970s in the Western world, which coincided with changes in the rates of drug use (Babor et al. 2018). The increasing arrest rates also reflected policy decisions to deter drug
use by means of tougher enforcement and stricter penalties (Babor et al. 2018). Tougher street-level enforcement against use and minor possession offences has increased arrest rates among drug users (Lynch 2012), and research shows that increasingly strict enforcement practices place people of non-native and poorer backgrounds at higher risk of suspicion/control (Eastwood et al. 2013; Estrada et al. 2022; Moeller 2010, 2020, Tonry 2011).

The research on ethnic disparities constitutes a field within the broader spectrum of drug enforcement research that is aligned with a long tradition of studies that have investigated ethnic bias within policing. The question posed is not “what works to reduce drug offences and offending” but rather how drug policing may cause unjustifiable ethnic disparities in relation to drug control, searches and arrests. Another factor that drove the specific interest in drug policing was the harsh control policies implemented in the US in the 1980s, which included the intensive street-level policing of low-level drug offenders and mandatory sentencing. These policies led to a sharp increase in drug offending arrests in general, but disproportionately affected Black Americans (Fellner 2009; Mitchell 2009; Tonry 2011; Tonry & Melewski 2008).

Since the police are the first of a sequence of actors in the criminal justice system, and those who first encounter potential suspects and initiate contacts with possible drug offenders, they constitute a potential source of ethnic bias (Engel et al. 2012; Piquero 2008). Piquero (2008) has argued that the police are “afforded far more discretion that any other formal agent of social control” (p. 69) and that the decisions of police officers risk producing disparate effects that accumulate through the criminal justice system. This notion is particularly relevant for scholars of drug enforcement research, who deal with both proactive policing strategies and the issue of police discretion.

While the “war on drugs” functioned as a catalyst for the (US-based) research on drug enforcement and racial disparities, Blumstein (1982) had already produced a seminal work on racial disparities in the United States prison population in 1979, noting even then that drug offences were associated with much more unexplained racial disparities than other offence types. Blumstein attributed this to discreional decision making and other factors rather than to the offence itself, but also raised the importance of having a prior criminal record (which could be shaped by race) (ibid.). Tonry and Melewski (2008) replicated Blumstein’s study using data from 2004. In the Blumstein study, 48.9 percent of the racial disparities
in imprisonment could not be explained by arrest patterns, a proportion that had increased to 57.4 percent in Tonry and Melewski’s study.

Since the work by Blumstein, numerous studies have been devoted to the issue of drug policing and race (Beckett et al. 2005, 2006; Donnelly et al. 2022; Eitle & Monahan 2009; Engel et al. 2012; Gase et al. 2016; Gaston 2019a; 2019b; Koch et al. 2016; Mitchell & Caudy 2015, 2017; Nguyen & Reuter 2012). While the interest in ethnic disparities in drug enforcement has historically been linked to US-based studies, an increasing interest (and concern) can be seen in Canada and Europe (Brå 2023a; Eastwood et al. 2013; Estrada et al. 2022; Moeller 2010, 2020; Owusu-Bempah & Luscombe 2021; Pettersson 2005; Shiner et al. 2018).

**Police discretion – factors that impact officer behaviour**

The issue of discretion has attracted a great deal of research interest since its “discovery” in the early research on policing (Reiner 2010). The police can and do exercise discretion, which means that they are largely free to choose their course of action in encounters with the public. Much policing is about taking informal choices about what actions to take, for example whether to disperse a crowd, calm a situation, or provide assistance in health-related situations or domestic disputes (Reiner 2010). Drug policing is characterized by considerable room for discretion that is absent or smaller in relation to more serious offences (Blumstein 1982; Brownsberger 2000). Drug enforcement is often assumed to be a proactive activity, since drug offences are a victimless crime in the sense that they involve a consensual transaction between a seller and a willing buyer, and there are often few witnesses and little technical evidence. This provide more room for officer discretion (Blumstein 1982; Reiner 2010). Indeed, a substantial proportion of stop-and-search practices are targeted at drug offences, about 60% percent in a report from the UK (Shiner et al. 2018).

In the context of drug enforcement practice, police officers often form suspicions based on circumstantial and more or less subjective cues such as the behaviour of the suspect, nervousness, the smell of cannabis etc. (Grace et al. 2022; Houborg et al. 2016). These cues can be categorized as situational factors that contribute to officers’ suspicion formation and choices of action (Skogan & Frydl 2004).

Other factors that influence officer decisions include legal aspects, such as the seriousness of the offence, and the presence of witnesses, victims and evidence
(Lum 2010; Skogan & Frydl 2004), which have been shown to heavily influence officer actions. Personal characteristics such as ethnicity, sex, gender and socioeconomic status or neighbourhood context are also relevant for understanding officer decision making (Bolger & Lytle 2018; Holmberg 2000; Kochet et al. 2011; Lum 2010; Skogan & Frydl 2004). These extra-legal factors may seem unrelated to a suspected crime incident, but they have been shown to influence suspicion formation and choices of action. Research has also noted that hit rates for drug offences are lower than for other types of offences (Shiner et al. 2018). This further indicates that police practice is more discretionary in relation to drug enforcement than other forms of enforcement.

The police have the capacity to report a crime, or to choose not to and instead take other measures that are deemed appropriate to the situation (Schulenberg 2016). Holmberg (2000) has defined discretion as the power of suspicion and the power of prosecution. The police have the power to choose what kind of behaviours and individuals to control and search, and if their suspicions are deemed correct, they have a range of action alternatives to choose from (ibid.). This is of course somewhat simplified, since individual officers are governed by organizational priorities regarding where to work geographically and to some extent also what they should focus on, which shape what kinds of behaviour and people will be subject to control. Similarly, there are guidelines and regulations regarding what measures to take in what situations.

The power of prosecution is even more relevant in relation to low-level offences such as minor drug crime. In some jurisdictions, such as Denmark and the UK, the police may issue warnings instead of fines. In Sweden, personal use offences (consumption) may result in fines imposed via a simplified procedure that avoids the need for a court prosecution (summary sanction orders). Procedures of this kind delegate the power of prosecution from the court system to the police and prosecutors.

As Greer et al. (2022) have noted, police discretion may on the one hand be viewed as effective and as saving justice system resources, while also providing action alternatives that open up for a higher degree of leniency. Wider discretionary powers might also result in more accurate police decisions/suspicion formation (Tillyer & Klahm 2011). At the same time, scholars in the fields of policing and drug law enforcement have also argued that wider room for discretion may lead to decisions that are to the detriment of certain groups in society, as decisions become more reliant on the subjectivity of police
officers (Greer 2022; Reiner 2010; Shiner et al. 2018). Further, wider discretion can lead to inconsistent behaviour from the police and may threaten the predictability of the law enforcement process (Greer et al. 2022). The opportunities for officer discretion in the enforcement of low-level drug offences, and the inherent subjectivity in such enforcement practices, has been viewed by some researchers as a driver of ethnic disparities (Shiner et al. 2018).

Officer decision making is also influenced by the context in which the officers work, particularly patrol officers (on whom much of the research on discretion and decision-making has focused). Officers work in an environment that requires them to make quick decisions, often with limited information to hand (Bowling 2007). As Bowling (ibid.) has noted, fair and just decision making requires deliberation, the gathering of information from different sources, and a consideration of different alternatives for action. In relation to low-level crimes such as minor drug offences, which are a frequent occurrence in the everyday work of police officers, this kind of deliberation is not realistic. There are pressures related to the need for efficiency and the need to make on the spot decisions about what measures to take (such as searches and drug tests). Given this background, predictive errors or misjudgements in relation to choices of action are an inevitable consequence of everyday police work (ibid.). Previous knowledge about places and people and the interactions between the two also serve as generalized cues for suspicion formation (Holmberg 2000; Quinton 2011). Experiential knowledge shapes how certain cues, people and places are interpreted, and also the response to these cues. Decisions are therefore often based not on legal factors or assumptions about intent, but on stereotypical information and prior knowledge, which Holmberg (2000) has defined as “typological guilt”. This can lead to discriminatory practices, but the use of stereotypes is both rational and justified Holmberg argues, given the conditions in which the police work (ibid.).

Measuring ethnic bias in police behaviour – two main approaches in quantitative research

Despite decades of research on police discretion and possible bias, the debate is still ongoing how to best measure biased enforcement. Two common approaches that have been used in the quantitative literature to analyse ethnic bias in policing are benchmarking tests and outcome tests (or hit-rate test) (Neil & Winship 2019; Ridgeway & MacDonald 2010), both of which are used in this thesis. The
benchmarking test compares the drug-tested population to a sample of youth who have self-reported illicit drug use, and the hit-rate test explores disparities in the success rates of body searches and drug tests.

The issue of how to best measure ethnic bias in policing has been a central debate in the research to date. Much of the early research focused on comparing the proportion of minority groups in the criminal justice system (often in prison populations) to their proportion in the general population (Piquero 2008). This form of benchmarking approach has been refined over the years, but it still poses challenges to researchers who want to make claims about racial bias in policing (Glaser 2014). The method employed by Piquero (2008) constitutes a form of external benchmarking (Ridgeway & MacDonald 2010) in its most basic form, with the entire population of a nation being used as the denominator. Studies use benchmarking tests in order “to compare racial distributions of police contact conditional on an appropriate risk set” (Neil & Winship 2019, p. 75).

One important issue associated with the benchmarking test centres on the question of which population should be used as the comparison, and who comprise the population that is at risk of coming in contact with the police (Shiner et al. 2018). In other words, who comprise the population that the police would have stopped in the absence of ethnic bias? This then constitutes the available population, or the population at risk, which is the proper benchmark for a comparison with those who are actually stopped. Still, even this comparison could hide important factors that might lead to under- or overestimates of ethnic bias. Simple benchmarking tests are best used as a measure of disproportionality rather than as evidence of officer bias (Shiner et al. 2018). They are nonetheless still valuable, since they may help to explain disproportionality, either fully or in part (ibid.). Since the technique has evolved, by taking more factors into account and developing methods that provide more accurate assessments of the population at risk, the test, despite its shortcomings, may still provide an indication of the presence or absence of ethnic bias.

When using benchmarking, researchers need to take account of the fact that certain behaviours that influence police decisions may be more common in some groups than in others (Ridgeway & MacDonald 2010). Driving patterns and behaviour may differ between different ethnic groups, as might the frequency and extent of drug use/drug dealing. In addition, the nature of drug dealing (outdoor/indoor, type of drug) may vary between groups, which may influence exposure to the police. The benchmarks chosen are a reflection of underlying
assumptions about police activity, what the police do, and what they react to (Neil & Winship 2019). Choosing a crime-based denominator (which is very common given that population-based denominators appear to provide a relatively poor basis for comparisons) means assuming that the police only stop criminals, which is also a problematic assumption (ibid.). Another common issue is that the knowledge about places, that is, about where the police work and the intensity of this work (which affects who will be exposed to the police) is not easily accessible (ibid.).

Some studies have attempted to take many of these issues into account (see for example Beckett et al. 2005; 2006; Engel et al. 2012), with a study by Beckett et al. (2006) providing an interesting example. To estimate the racial-ethnic composition of low-level drug dealers (the available population at risk of apprehension by the police), these researchers used needle-exchange survey data and ethnographic observations at two outdoor drug markets. Among other things, this approach makes the benchmarking sensitive to the context and to the visibility of potential suspects (who is involved in outdoor dealing that is visible to the police). This is arguably a carefully chosen denominator, which is crucial if we want to make conclusions about bias and not merely disproportionality (Glaser 2014).

In order to circumvent the issues associated with the benchmarking test, which include controlling for many more or less easily observable factors/variables that may influence a stop and/or decision to conduct a search/make an arrest, researchers turned to the outcome test. This test, which was initially proposed in 1957 by Becker to examine lending decisions, is used in police research in the form of tests of hit rates – that is, the extent to which the police find contraband when conducting searches (Neil & Winship 2019). The basic assumption is that if policing decisions were free of ethnic bias, hit rates would be equal across different racial groups. Differences in hit rates imply that lower thresholds/less rigorous standards are used in decisions to search certain groups of people. This means that pre-stop considerations are of less interest, since variations in hit rates provide evidence of miscalculation/incorrect predictions by the officer per se.

While the outcome test has important advantages, authors have pointed out a number of issues associated with these tests, and in particular the problem of infra-marginality (Ayres 2002; Neil & Winship 2019). What the test does is to detect an average search threshold (probable cause) that the police use when
deciding whether to conduct a search (Ayres 2002). The critical point is that real life circumstances may confound the test results.

If Black people are searched on the basis of lower thresholds than White people, but the distribution of “criminal cues” – each with its own probability for finding contraband - that underlie these thresholds differs between the two groups, there is a possibility that the hit rate test may fail to detect ethnic bias (Neil & Winship 2019; National Academies of Sciences, Engineering, and Medicine 2018). In addition, if the average risk of carrying contraband differs between the two groups, and this risk also differs within the two groups, this may also confound the results of a hit-rate test (Simoui et al. 2017; National Academies of Sciences, Engineering, and Medicine 2018). In both of these examples, the problem is that the average hit rate is not necessarily equal to the hit rates at the margins, especially not if the distribution of criminal cues vary a lot between and within-groups (Neil & Winship 2019; National Academies of Sciences, Engineering, and Medicine 2018).

The issue of infra-marginality is most problematic when both the decision and the outcome are dichotomous (for example search/no search, hit/no hit) since the structure of the data only allows for average observations, which masks information on marginal cases (Ayres 2002; Neil & Winship 2019). Several studies have discussed this issue and have proposed solutions (Knowles et al. 2001; Anwar & Fang 2006; Simoui et al. 2017; Pierson et al. 2018). Nevertheless, Ayres (2002) has argued that these problems does not completely undermine the test as such, but that like benchmarking tests, hit-rate tests can provide evidence of a disparate racial impact, but not necessarily of whether or not this disparate impact may be justifiable, given the lack of knowledge about thresholds of those at the margins of being stopped and searched (ibid.).

Central theoretical debates on ethnic disparities

This section outlines research and the theories that are usually used to understand the research questions addressed in this thesis. It is followed by a section that outlines the theories and assumptions that serve as an underpinning to the thesis, and describes why these have been chosen. The thesis does not apply or test a specific theory, but the theoretical assumptions that underlie the thesis are informed by previous research and are used as an explanatory framework.

Piquero (2008) has noted that few researchers question the view that minorities (in the US) are overrepresented in the criminal justice system, but there is still
disagreement about how and where these disparities arise (Goff & Kahn 2012; Sampson & Lauritzen 1997). Two meta-analyses on arrest and search decisions have found that race is an important variable in relation to officer decision making (Bolger & Lytle 2018; Kochel et al. 2011), but also noted considerable methodological differences between studies, making comparisons difficult. This limitation has also been noted in previous reviews of disparities in the justice system (Engen et al. 2002).

Goff and Kahn (2012) have argued that despite the substantial research literature on policing and racial bias, few studies are actually able to provide an answer to whether there is bias in policing. Goff and Kahn (2012) have suggested that research has failed to distinguish between racial disparities and racial discrimination in policing research. The existence of disparities does not equate to discriminatory policing practices, and there is little evidence to suggest systematic racial bias in enforcement on the individual level (Goff & Kahn 2012; Sampson & Lauritzen 1997). Another issue with the policing research is that few if any studies have linked discriminatory behaviour to ethnic bias in the attitudes of police officers (Goff & Kahn 2012). Experimental research using direct measures of ethnic bias are rare, and the few studies that have been conducted have primarily focused on the use of excessive force and shootings by police officers (Glaser 2014; Spencer et al. 2016; Neil & Winship 2019).

Studies of ethnic disparities in relation to (drug) law enforcement have differed in their focus. They can be categorized into studies that have focused on 1) ethnically discriminatory policing and officer bias, 2) police deployment patterns, and 3) the differential drug offending model. These approaches represent theoretical frameworks that focus on different levels of analysis and actors as a means of understanding racial disparities.

1) The *ethnically discriminatory policing and racially biased policing model* holds that ethnic disparities in drug enforcement are a consequence of explicit or implicit ethnic bias. This theoretical position can be roughly divided into two separate branches, conflict theory and the implicit bias model. In conflict theory, the explanations operate at an institutional level with a focus on systemic factors and macro-level processes (Black 2014; Spohn 2015), whereas the implicit bias model are derived from social psychological models (micro-level processes) (Spencer et al 2016; Spohn 2015). Very broadly, conflict theory views the law as an aspect of social control, with power being exercised towards marginalised groups through the use of formal sanctions (Black 2014). Viewed from this
perspective, drug law enforcement serves as the means by which the group in power controls and sanctions the behaviour of subordinate groups that threaten their position (Spohn 2015). As such, racism is embedded in the criminal justice system per se. Although relatively scarce, there are studies that have focused on conflict theory in relation to (drug) policing (see for example Chambliss 1994; Donnelly et al. 2022; Eitle & Monahan 2009; Gaston 2019a, 2019b, 2020; Petrocelli et al. 2003). These studies focus on the influence of neighbourhood ethnic and socioeconomic context and police organizational factors on police behaviour in relation to stops, searches and arrests. The focus on macro-perspective processes is found elsewhere in the drug enforcement literature that is not explicitly based in conflict theory. Sampson & Lauritzen (1997) have for example argued that disparities are a product of indirect discrimination, which is the result of macro-level processes and cumulative disadvantage over time. Most research has focused on individual-level officer bias, which they argue is where we are least likely to find any strong contribution of racial disparities (ibid.).

The implicit bias model focuses not so much on institutionalized racism but on the way officer decision making is shaped by stereotypes and implicit assumptions about the links between crime and ethnicity (Spohn 2015). This perspective holds that differential treatment is a result of the effects that unconscious stereotyping or “cultural scripts” (Beckett et al. 2005) linking certain behaviours, visible traits or ethnicity to crime has on suspicion formation (Beckett et al. 2005; Bowling 2007; Glaser 2014; Holmberg 2000; Quinton 2011; Spencer et al. 2016). Officer stereotyping, or typological suspicion formation, is assumed in part to be shaped by previous experiences of repeated encounters with citizens/suspects who share some common characteristics or behaviours (Holmberg 2000). This accumulated experiential knowledge (Quinton 2011) then shapes the way future situations and individuals are perceived, and influences whom officers take action against in what situations. Quinton (2011) has suggested that experiential knowledge from previous encounters is interpreted via the legal and organizational contexts in which it is embedded. As such, experiential knowledge and the way it is interpreted is not “neutral” and independent of the values and norms found in the larger social and legal setting.

Spencer et al. (2016) argue that implicit bias against certain groups influences officer judgements, but is not a direct cause of differential enforcement. Ethnic bias may influence what officers look for in an environment, but biases may also be reinforced via encounters with members of certain ethnic minorities who commit crimes (ibid.). Several authors have discussed how stereotyping and
Typologies serve to guide decision making and control activities, particularly when decisions must be taken quickly (Glaser 2014; Granér 2004; Holmberg 2000; Hydén 2006). Quinton (2011) has also noted that police officers’ broad interpretation of criminal cues may serve to reinforce and legitimate the biases they hold. While there is clear evidence for the existence of implicit bias (Glaser 2014), its influence on direct, systematic discriminatory enforcement is less well-documented, although experiments have been conducted that confirm its influence on behaviour (Glaser 2014; Spencer 2016). Much (drug) enforcement research has relied on observational designs that do not allow for the direct measurement of explicit or implicit bias, which is a problem for researchers who wish to confirm the existence of ethnic bias (Goff & Kahn 2012). The implicit bias model is distinct from the more systemic conflict perspective. Even though this perspective acknowledges structural injustice and power asymmetries to some extent, it has its roots in social psychology (Engel et al. 2012).

2) The police deployment patterns model explains differences in arrest/detection outcomes in terms of organizational mechanisms and/or the geographical distribution of crime. Reported drug offences are not evenly distributed across different communities, and findings suggest that socially disadvantaged neighbourhoods have a higher share of reported drug offences and stop-and-search practices than more affluent areas (Brå 2023a; Marco et al. 2017; Shiner et al. 2018). Organizational priorities and/or the geographical distribution of crime are assumed to steer the direction of police resources to specific areas and neighbourhoods, resulting in higher detection and/or arrest rates in those areas (Briggs & Keimig 2017; Brownsberger 2000; Engel et al. 2012; Gase et al. 2016; Gaston 2019a; Meng 2014; Mitchell & Caudy 2015; Shiner et al. 2018). The deployment of the police to certain neighbourhoods, often socioeconomically disadvantaged, high-crime urban areas, is assumed to contribute to an overrepresentation of certain groups among those passing through the justice system (Briggs & Keimig 2017; Brownsberger 2000; Engel et al. 2012; Shiner et al. 2018).

Engel et al. (2012) have argued that too few studies have incorporated deployment variables as a means of understanding ethnic disparities in policing. This is an important issue for drug enforcement research since minority status tends to be associated with living in poorer areas characterized by higher levels of crime, and more specifically drug crime (Marco et al. 2017; Ridgeway & MacDonald 2010). Indeed, studies have found that ethnic minorities are at higher risk of arrest for drug offences in poorer and ethnically heterogeneous
neighbourhoods with higher crime rates (Beckett et al. 2005; Gaston 2019a). The picture is more complex however. Shiner et al. (2018) found an elevated risk for being stopped and searched on suspicion of a drug offence for all ethnic groups in more deprived areas. At the same time, Black people were exposed to stop-and-search practices at a higher rate, no matter the socioeconomic status of the area, which was not true for White and Asian people (ibid.).

Officer deployment in certain neighbourhoods and communities may also affect ethnic disparities in (drug) enforcement in other ways. The perception of place may itself (such as physical and social characteristics) shape the way officers perceive the people residing in a given area and their behaviour (Gaston & Brunson 2020; Fagan 2016, 2022; Lum 2010). A certain behaviour in a high crime area with an open drug market may not be interpreted in the same way as the same behaviour in a low crime area, which may have consequences for suspicion formation and control (Quinton 2011). This suggests that officer responses to certain cues should be seen in the light of a wider context, in which officers may have knowledge about frequent dealing or frequent use (ibid.). A context of deprivation and high crime has also been shown to be associated with more punitive forms of policing (Skogan and Frydl 2004).

This notion overlaps with the implicit bias model, suggesting that place-based characteristics such as crime or poverty serve as generalized cues for officers, making them more prone to view specific behaviours or out-of-place people as suspicious (Fagan 2022). This may disproportionately affect certain minorities if they live in high crime, deprived areas to a greater extent than others. Officers’ perceptions of people and their intentions may also vary depending on the ethnic composition of an area. Research shows that Black people are at higher risk of drug arrest in areas dominated by Whites (Gaston 2019a; Gaston et al. 2020; Meng 2014; Shiner et al 2018). It could be argued that these findings align with and provide support for conflict theory which sees drug law enforcement as a form of formal social control that is focused on Black people in order to protect the White dominant class. This is manifested in Black people being arrested in predominantly White neighbourhoods.

A finding that seems to contradict conflict theoretical assumptions, however, is that White people have been found to be more likely to be arrested in predominantly Black neighbourhoods (Gaston 2019a). This lends more support to “out-of-place-policing” or “incongruity policing” arguments, which suggest that officers’ enforcement practices focus on people or behaviours that they
interpret as being “off” in relation to the context in which those people or behaviours are found or occur (Gaston 2019a; Holmberg 2000).


On the basis of this perspective, ethnic disparities in drug enforcement are viewed as being the result of ethnic variations in the frequency of use, type of drugs used and in whether individuals are dealers or merely users of illicit substances (Beckett et al. 2005; Koch et al. 2016). The settings in which drug use and drug sales take place is also assumed to contribute to disparities in arrests (Beckett et al. 2005, 2006). The argument here is that individuals who use and sell drugs in public (as against private) spaces are more vulnerable to police surveillance and detection, resulting in higher levels of arrest in these arenas. Research has focused on different types of drugs as drivers of racial disparities in drug arrests (Beckett et al. 2005). Drawing on several data sources and ethnological observations, Beckett et al. (2005) found that Black and Latino crack cocaine users were overrepresented in drug arrests, and that this overrepresentation could not be explained by the frequency of crack transactions, or outdoor transactions (ibid.). They argued that crack has historically been associated with minority substance use and has come to represent “the drug problem” in the eyes of law enforcement. The results of the study emphasize the need to include type of substance in analyses of disparities, as well as using multiple methods and data sources to control for relevant non-ethnic factors.

There is limited evidence to support the differential drug offending model. Researchers have tended to collect data on drug use from surveys (Beckett et al. 2005, 2006 being an exception), which are less likely to capture more serious drug use (Mitchell & Caudy 2015). Since problematic use is associated with an elevated risk for detection, differential patterns of problematic use might explain ethnic disparities in drug enforcement (ibid.). The nature of drug use and drug transactions have been examined more rarely (ibid.). There is some evidence of ethnic differences in risky drug transactions, with African Americans being more likely than White Americans to buy cannabis outdoors from a stranger, and to buy at some distance from their homes (Ramchand et al. 2006). Theoretically,
this would only explain a small fraction of the ethnic disparities found in arrest rates however (ibid.).

The use of theory in this thesis

The first study presented in the thesis is descriptive and empirical, and does not include any particular theory-based hypothesis. The study explores reactive and proactive patterns of policing and how police interventions are justified as described in the police documentation. Reactive policing is assumed to partly limit officer discretion, and shape the context of detection of minor drug offences (Gaston & Brunson 2020). The geographical deployment of police officers (either through police priorities or calls for service) to high crime areas, hot-spots and/or socially disadvantaged areas with a high proportion of residents of immigrant background has consequences for the composition of the people who pass through the justice system (Engel et al. 2012; Briggs & Keimig 2017).

The second study explores ethnic disparities and incorporates control variables informed by previous research and theoretical models. The results are then discussed in light of theories and models that have attempted to explain ethnic disparities in drug enforcement.

What is central to this thesis is the assumption that both individual background characteristics and crime context matter in relation to the decision to enforce suspicions relating to drug crime. Drug enforcement relies on proactive strategies that involve police officers looking subjectively at situations and behaviours that are often open to various interpretations (Holmberg 2000; Houborg et al. 2016). This leaves considerable room for police discretion. The assumption is that police officers act upon cultural scripts (Beckett et al. 2005) about who constitute problem users and what threat they pose to social order. Additionally, officers acquire experiential knowledge (Quinton 2011) that is shaped by previous encounters with the public and that will influence officers’ future choices of action in relation to individuals in particular contexts. Experiential knowledge is not value neutral but is shaped by values and norms embedded in organizational and societal settings (Quinton 2011), and this will also influence officers’ choice of action in relation to individuals.

Further, geographical context is also assumed to be of importance for suspicion formation. The context is important because it can influence how individual officers interpret individuals’ behaviour (Fagan et al. 2016). The same cues or behaviour may be interpreted differently depending on the context in which they
occur. In places with high levels of (drug) crime, certain behaviours may be more “easily” interpreted as indications of intoxication or possession. Further, research on ethnic disparities in the criminal justice system highlight that socioeconomic background may overlap with ethnicity (Engen et al. 2002; Koch et al. 2016), and has been included as a control variable, together with other variables identified as important for office decision-making. This includes previous offending and gender. (Engen et al. 2002; Estrada et al. 2022; Nyen & Reuter 2012). Lastly, the differential drug offending model is explored in the second study. The exact measures are developed in the method section.
3. METHOD

The thesis is a cross sectional study using data collected in one year, 2018. It uses three sources of data; police documentation on reported drug offences (use and possession), register data from Statistics Sweden (SCB) and school survey data on drug use collected by Region Scania. The first article uses drug offence reports related to drug use, whereas the second uses all three sources. The first article explores the circumstances in which detection takes place and police reasons for the use of coercive measures by means of document analysis, whereas the second article explores ethnic disparities in drug testing and in hit rates for drug tests and body searches.

The use of police documents as source of data to answer questions about police officers’ decision-making is not uncommon in the existing literature, including police data on stop-and-search practices and traffic stops (Gaston & Brunson 2020; Houborg et al. 2016; Shiner et al. 2018; Tillyer & Klahm IV 2015). Common approaches also include ethnographic and observational studies (Bacon 2016, 2022; Beckett et al. 2005, 2006; Quinton 2011).

The type of police data used varies between studies and is largely dependent on the availability of data and access to the police organization (Goff & Kahn 2012). Researchers with well-developed collaborations with the police organization obviously have the ability to be more creative in their choice of design and data collection practices. In some cases, police organizations collect data that are very useful for researchers, such as carefully recorded traffic stops or stop- and search data (Fagan 2022; Tillyer & Klahm IV 2015) that provide a good basis for investigating citizen-police interactions.

Accessibility to the police organization and documents has also guided the research design in this thesis, but most of all the design was guided by the research questions in the first and second study. While observations might
theoretically have been an option (although perhaps not realistically, given the restrictive nature of the police organization), the thesis’ interest in demographic variables relating to suspects and in the outcome of drug tests and body searches made drug crime reports and additional documentation related to the reported incidents a natural choice. The choice to use a (mostly) quantitative approach was as well informed by the nature of the research questions.

The second article uses benchmark testing to compare the youths required to take an enforced drug test with a second population comprising youths who self-reported drug use. The same approach has been used in a report from Brå (2018). In addition, the second article utilizes an outcome measure for enforced drug tests and body searches in order to investigate ethnic disparities. This is a promising measure for examining the presence of possible police bias according to some researchers (Goff & Kahn 2012; Fagan et al. 2016; Knowles et al. 2001), since it does not rely on establishing why a search or drug test was conducted in the first place.

**Sampling and data**

The sample is limited to young people aged between 15 and 20 who were reported for drug use and possession offences in 2018 in Malmö municipality.

The reported individuals have all been reported for drug offences in Malmö, but they do not necessarily live in Malmö. The sampling criteria were related to the aim of the study, with its focus on the use of drug-related coercive measures towards young people who are suspected of use (crime code 5011) or possession not intended for sale (crime code 5010). Use and possession offences comprise approximately 90 percent of the total number of reported drug offences in Sweden (Brå 2023b). Demographic background variables were later added to the data on this population who had been reported for drug use or possession.

The age range of the study population was determined based on the fact that the use of enforced drug tests has increased over recent decades (Brå 2016; Estrada et al. 2022), and that the accuracy of drug tests is decreasing and is lower in younger age groups (Brå 2016). This warrants developing improved knowledge about the way coercive measures are used in relation to younger individuals, in what circumstances and with what level of accuracy.
Reported drug offences and related documents

Initially, 646 unique case reports were collected from the police related to use and possession offences for 2018. A single case report can include several offences, both use and possession and related non-drug offences. Furthermore, a case report can include a single individual or several persons linked to the same situation. It is important to remember that these are reported offences, not individuals, which means that the material includes repeat drug offenders. 16 case reports were excluded due to the age of the suspect being wrong, the incident having occurred in a different city, or a lack of information relevant to the study.

The analytical unit used in the first article is situations, not individuals. One case file may contain several individuals, but two or three case files containing one individual may be associated with the same encounter. Since the aim of the first study was to investigate the circumstances surrounding detection and intervention, it made sense to merge case files that relate to the same crime incident. 535 situations were identified in the case files. The focus of the second article is individuals rather than crime incidents. After excluding individuals with incomplete or foreign personal identification numbers, the final sample comprised 432 identified individuals. Of these 432 individuals, 384 had been drug tested and/or body searched on suspicion of possession, and these comprise the final sample for the second study. Approximately 20 percent of these individuals appear in the material more than once.

The case files contain a text summary of the event/intervention/encounter (free text) from the police report, information about the date and time of the incident, reported offences, the name and personal identification number of the suspect(s), the geographical location of the incident, the use of coercive measures and the reasons for this, and decisions relating to case processing (investigation is either ongoing, finalized or dropped). Additional documents include protocols relating to coercive measures, and test results relating to seized drugs and enforced drug tests.

In addition to the case files described above, data were collected on reported use and possession offences (N=5851) with geographical coordinates for the years 2017 and 2018 for all ages. These data were used in the second study to measure enforcement intensity across small geographical areas (DeSOs). The DeSO is a geographically stable unit that was constructed by Statistics Sweden, and for every DeSO-unit SCB provides open access to demographic, economic and social statistical data for researchers to download and process. Crime coordinate data
from the police data were also aggregated in ArcGis Pro to DeSO-levels (N=192 in Malmö), and were used as a scale variable for neighbourhood-level enforcement intensity.

*What is a “hit”?*

The police documentation provides information about whether or not a drug test has been performed and the results of these tests in the form of a lab report on the substances found in the individual’s urine or blood. In a similar manner, the performance of body searches can be deduced from body search protocols contained in the police file and/or via information included in the free text of the police report. A positive body search is confirmed via a lab report on confiscated substances and the material often includes explicit information on where the drugs were found. The lack of such a lab report indicates that the body search did not yield a “hit”. The police files may also contain explicit information noting whether the body search produced a result. A hit for a body search is defined broadly, since it includes confiscations of drugs found not only on the body of the individual in question but also on the ground, or in cars or apartments related to the body search. This make sense since it indicates that the decision to intervene and actually conduct a body search (sometimes in combination with other measures) was accurate.

*Types of body searches*

The material includes several different types of body searches: regular body searches based on a suspicion of drug possession, body searches that are the result of a suspicion about non-drug related crime, body searches performed in accordance with Paragraph 19 of the Police Act, which have a lower legal threshold (and relate to suspicions concerning weapons or immediate danger), and body searches that are performed in custody or on arrest or in case of immediate perceived danger. Based on the documents examined, it is not always easy to understand 1) whether a body search had been performed and 2) whether or not the relevant suspicion was drug-related. With some uncertainty, 177 individuals (note that these individuals may have been body searched more than once during 2018) had been body searched. A search protocol relating to drug suspicion was identified for 99 of these.² In the remaining cases, there was no protocol, and these were not included in this analysis even though for some of

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² The 99 body searches include a number of Paragraph 19 body searches and searches made in case of perceived immediate danger.
them, the free text in the police report indicated that they may be drug related. A report by Brå (2023a) confirms that search protocols are sometimes lacking in the police documentation on body searches based on a suspicion of drug possession.

The second study includes only discretionary searches (with a few exceptions) that include a search protocol related to a suspicion of drug possession (crime code 5010). This decision was made based upon the uncertainties regarding the nature of the searches included in the data, and because Bolger and Lytle (2018) have noted that previous studies do not always differentiate between mandatory and discretionary searches, which may have consequences for the significance of ethnic background. In addition, the hit-rate test involves an inherent assumption that officers use discretion when deciding whom to search (Pierson et al. 2020; Engel et al. 2023).

**Demographic background variables, Statistics Sweden**

For the second study, which focuses on ethnic disparities, demographic background variables were added for the 432 individuals with correct personal identification numbers. The background variables included relate to the socioeconomic conditions of both the suspected youths and their parents, region of birth and the level of education of the suspected youths’ parents. Information about place of residence was also included, but at the micro-area level (DeSO) and not specific addresses. DeSO-level information made it possible to construct a socioeconomic index for every DeSO using open data available from Statistics Sweden. The residential neighbourhood SES variable was in the end not used in the regression model because the model included other indicators of SES that pointed in the same direction. The demographic background variables were chosen for the purpose of the study, which was to investigate ethnic disparities in hit rates, while controlling for socioeconomic status (among other variables).

**School survey, region Scania**

The school survey was used to investigate the possible overrepresentation of different groups in enforced drug tests by using comparison groups comprising school-survey respondents who had reported drug use in the last 30 days. This is a so-called benchmark test, which explores the differential drug offending model as explained in the theoretical section.

The school survey employed in the analysis is a repeated cross-sectional health survey performed every fourth year in Region Scania. For the purpose of this study, two waves were chosen (2016 and 2021) since they included questions on
use in the last 30 days. To align this sample with the drug tested youth, only 9th graders and students in upper secondary school (n=6,947) who lived or went to schools in Malmö were included.

The intention was also to include neighbourhood information in order to explore where the self-reported drug using youth lived compared to the places in which the police-reported use offences had taken place. Unfortunately, a variable on neighbourhood of residence was only included in the last wave of the school survey, and the number of responses was too small to allow for a meaningful analysis.

**Analytical approach**

This thesis uses document analysis and statistical analysis to answer the specified research questions. The first study primary employs a quantitative content analysis (White and Marsh 2006), using a thematic approach to the first research question (circumstances of detection of minor drug offences). The second research question (grounds for intervention) is answered by means of a descriptive presentation of a sample of the cases. These cases were selected via stratified random sampling. The third research question (hit-rates for drug enforced drug tests) is answered using descriptive cross tabulations of the hit rates associated with enforced drug tests. The second study employs a quantitative approach, using chi-square tests and multinomial logistic regression to answer research question 1 (benchmark-test) and 2 (hit-rate test).

**Methodological discussion**

The different data sources used in the thesis are associated with both strength and weaknesses. The strength of this thesis is the use of a range of data sources that allow for the use of several different analytical approaches. Police documents provide an insight into how drug crimes are discovered and provide a lot of additional information, such as additional offences registered at the same time. They also provide an opportunity to study situations rather than individuals, since different cases may be linked to one another. In addition, while hit rates for drug tests can be investigated by examining drug test results, as used by Estrada et al. (2022), the examination of body searches is more robust when further documentation is available. A lab report is not sufficient when studying body searches since in order to observe hit rates, we need to know that a body search has been conducted, that it was conducted based on suspicion of drug possession,
whether it resulted in the identification of suspicious substances, and that the confiscated substances were actually illicit. This requires more documentation. The use of police reports also allows the researcher to see what kind of body search was conducted, since there are different types of body search (based on different legal provisions) that may lead to a confiscation. The use of police documents also allows for the exploration of the circumstances surrounding a reported drug crime without using time-consuming fieldwork.

The nature of the data provides an important opportunity to explore both exposure to drug tests and the hit rates of both drug tests and body searches, and few studies have done this in the Swedish and Nordic context (see for example Brå 2023a; Pettersson 2005; Estrada et al. 2022). As for the use of both benchmarking and outcome tests, these are very commonly used in police research, and have both strengths and limitations, as described in the background section. They provide indications of bias but are subject to limitations with regard to the conclusions that can be drawn on the basis of the disparities identified.

Much of the data used in this thesis was not intended for use in research, or was not collected by the principal researcher. The use of documents poses several challenges, such as not knowing about the content and quality of the documents (Bowen 2009), and the variables need to be constructed retrospectively. This problem may also occur in connection with other data collection processes, however, such as interviews to some extent observations. This discussion is relevant to the current thesis in so far as the "free texts" in the police reports, which summarize the crime incidents, vary a great deal in their quality, quantity and content, which affects the reliability of the study. Some case files contain a substantial amount of text, while others include only very brief descriptions, such as in the following fictitious example:

_During a routine control, x was stopped due to odd behaviour. Signs of intoxication: Red eyes, nervous, and constant talk. Decision to conduct body search._

Obviously, what has not been written down cannot be analysed. In their study on the grounds for suspicion of drug offences, Houborg et al. (2016) found that police officers verbalized their reasons for a stop somewhat differently from the way these grounds were described in writing in the relevant police report. The passages in police reports serve as an indicator of the circumstances associated with detection and the grounds for intervention, but they are not the “whole truth”.

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The summaries did however include certain wordings/phrasing that made it possible to categorize them, and to contrast them with one another.

As is described more in detail in Study 2, it was at times difficult to understand whether a body search had been performed and on what grounds. Study 1 includes all the registered possession offences and performed body searches, while study 2 excluded body searches that could not be confirmed to have been conducted on the basis of a suspicion of drug possession.

Bowen (2009) has noted another issue, described as “biased selectivity”, which refers to which documents a researchers obtains access to, and whether the collection of documents obtained is complete. This requires knowledge about documentation practices on the part of the researcher, but also a “willingness” on the part of the organization granting access to documents. The issue is of relevance to the current thesis, since the documents provided by the police that describe the crime incidents are sometimes in the form of a summary. More detailed descriptions may exist in other memoranda that have not been made accessible. At a later stage of the research process, access was obtained to a sample of memoranda, and about 30 percent of the requested case files included such memoranda. It is difficult to know how much this has affected the study’s results and conclusions, since memoranda need not necessarily contain further descriptions of the crime incidents but may rather detail other actions taken by officers, such as phone calls they have made. A reliability check on whether or not a body search had been performed resulted in changes to about 10 percent of the cases with memoranda, which provides some kind of indication in this regard.

The use of secondary data, such as the school survey, raises other issues, but these are still a result of having a lack of control over the planning phase and the data collection process. In contrast to the police documents, the school survey was planned for the purpose of conducting research and producing reports, and the available information about the survey questions and technical reports provide assistance in assessing validity and reliability, which are crucial when dealing with secondary data (Hox & Boeije 2005). Further, because the data were collected by someone else, there is a lack of detailed knowledge about the data collection process, which sometimes provides important insights about limitations in the research design that may be of importance when interpreting the data (Cheng & Phillips 2014). Another issue with secondary data is that they have been collected for specific purposes, and on the basis of specific research questions and a plan to use specific analytical approaches (ibid.). This became
evident in the context of this thesis, when a research question based on knowledge about the school survey respondents’ area of residence had to be abandoned because the information available from the survey was insufficient.

A second problem with the school survey data is that the non-response levels stated in the technical reports relate to the survey as whole, which included all schools in Region Scania, while the data used in the thesis relate only to schools in Malmö. The overall response rate for the school survey (both waves), is good enough and serves as an indicator of the survey’s generalizability.

A third issue with school surveys relate to problems associated with asking sensitive questions, and possible underreporting. A recent study (Andersson et al. 2023) used an indirect survey method (the randomized response technique, RRT) to assess the underreporting of cannabis use among Swedish young adults aged 18-29. The study showed that the underreporting of cannabis use was substantial when using the traditional survey method. Underreporting in the traditional survey method was particularly high for individuals who were born outside Europe. Apart from the wider implications this may have for the usefulness of traditional surveys and the estimation of levels of drug use in Sweden, it may also have implications for this thesis. The second study uses benchmarking to assess the risk of being exposed to drug testing, and if the denominator is biased as a result of systematic underreporting among youth born outside Europe, this may impact the results of the benchmarking test.

**Ethical considerations**

As regards the more formal aspects of ethics, the two studies have been reviewed and approved by the Swedish Ethical Review Authority (Application no. 2021-05720-02). The data comprise police documents (Studies 1 and 2), register data (Study 2) and survey data (Study 2). Individuals in the studies were not directly asked to provide consent. Instead an opt-out method was chosen, and was approved by the Ethical Review Authority. Individuals included in the project were informed via an advertisement on the project’s homepage. Information was provided about the project, how the data would be used, potential risks, and the strategies employed to minimize these risks, including information on how the data would be stored. Individuals could then choose to opt out by contacting the researcher by phone or email.

*Police documents:* Personal data were gathered in the form of personal identity numbers and names. In addition, sensitive data were gathered on offending,
health status in relation to suspected intoxication, and other behaviours that might be the subject of police attention. The geographical information collected comprises the coordinates of the suspected drug offence. The process of collecting the data from the police was both time-consuming and complex, and included a great deal of communication with a police lawyer. The police organization encountered challenges in relation to requirements for storing and processing sensitive data outside the police organization. In the end, the responsibility for data confidentiality was transferred to the researcher in the project, with strict requirements with regard to how the raw data were to be stored and processed.

Statistics Sweden: As described in the method section, sociodemographic variables on the suspected youths (socioeconomic status and ethnic background) were collected from SCB. Geographical information was collected in relation to where individuals lived at the time of their offences, but at the DESO-level, and no addresses or exact geographical locations were provided. Personal identity numbers were replaced by SCB with a serial number.

Survey Region Scania: no personal data were collected for the school survey used in the second study, since these data had already been collected by Region Scania, and the data were provided to the project with personal information removed.

Apart from the more formal aspects of research ethics, a number of other ethical considerations were encountered along the way. Since much of the project relies on police documentation, there is a potential issue associated with not knowing what kinds of data have been received and what information these data contain. This is related to the issue of working with documentation that was not intended for research purposes, as described in the methodological discussion. In addition, the documents may contain sensitive information that was not expected by the researcher. Without knowing what the data contain, risk assessment becomes more complex, in much the same way as with interview data (where one cannot know where a conversation will lead). The documents contain sensitive data not only in the form of offences, but also information relating to health issues and other vulnerable situations in which individuals may find themselves, as perceived and described by police officers.

This is particularly relevant for the first study, which explored the grounds for interventions. In this regard, ethical considerations have primarily concerned the possibility of the reverse identification of suspected individuals. For this reason, the descriptions of situations presented in Study 1 have been brief, and
adjustments have at times been made to prevent the possibility of reverse identification. The age of the involved individuals is not presented, only whether or not the individual is a minor. As a result of the small number of girls included in the study, Study 1 does not present descriptions of situations involving girls. The second study is based on aggregated data, and the analyses are conducted at the group level, which makes identification less likely.

In general, projects based on documents and register data pose few direct risks to the participants. There are important benefits associated with being able to explore both police strategies and officer interpretations, and the way coercive measures are used, against whom and with what outcomes. It is essential to explore government decisions and the consequences of certain policies and practices, and the project has provided additional knowledge that researchers will subsequently be able to elaborate, and which will be of benefit in future studies. Hopefully, this project may provide the police organization with insights into the ways in which coercive measures are applied and how their consequences in terms of success rates are distributed across different sociodemographic groups. Finally, the possibility of conducting research on governmental actors such as the police organization is important for the legitimacy of the criminal justice system as a whole, and may also help to improve equity in law enforcement practices.
4. MAIN FINDINGS

The two studies explored the circumstances under which minor drug crimes are detected, on what grounds young people are identified as suspects and submitted to coercive measures, the hit rates associated with coercive measures, and the ethnic disparities noted in hit rates and exposure to enforced drug tests. The research questions should be seen in the context of an increase in the level of enforcement focused on minor drug offences among youth that has occurred in Sweden in combination with an extensive use of coercive measures. The studies contribute to the field of police research by exploring pre- and post-stop aspects of police behaviour in relation to drug enforcement against youth.

The advances made in this thesis constitute an attempt to explore the context of suspicion formation and police decision making in relation to coercive measures, and the accuracy of these suspicions as reflected in the success rates of both drug tests and body searches. The first study focuses on situations involving police interventions in relation to suspicions of minor drug offences, whereas the second study integrates sociodemographic variables and the neighbourhood crime context to analyse ethnic disparities in both levels of exposure to drug tests and hit rates. In the Swedish context, these remain relatively unexplored aspects of drug law enforcement, although there have been a number of recent advances in the field, particularly in relation to sociodemographic and ethnic disparities.

The detection of minor drug offences and grounds for suspicion and use of coercive measures

Five modes of detection (MoD) were observed in which situations involving minor drug offences were identified: vehicle-related (33 %, n=177), house
searches (3.4 %, n=18), checks and patrol (24 %, n=131), officer response (34 %, n=183) and other (4.8 %, n=26). Around 34 percent of the situations can be categorized as reactive, in that they were related to calls for service. This is a minimum estimate, since reactivity might exist in other themes without having been explicitly documented. The proportion of reactive detection activities is confirmed in the sense that between 31 and 40 percent of the drug crime situations were related to other types of crime or public order disturbances. 82 percent or the 472 drug tests included in the total sample were positive for illicit substances, either in the form of single-use or poly-use. The grounds for the use of coercive measures were often subjective and reliant on the officers’ interpretations of cues for intoxication. Behavioural cues were noted in the documents, such as nervous behaviour or avoidance on the part of the suspect. At times, more objective cues could be noted, such as the drugs being visible nearby or the smell of cannabis. Often, cues would be noted after contact had been made by the police officers, and what actually triggers an initial control/contact attempt by officers is difficult to establish on the basis of the police documentation (especially in the more proactive modes). Drug tests were documented more thoroughly than body searches. Most interventions were made in relation to vehicles, public areas, and semi-public spaces such as malls or stores. Few minor drug crime situations were detected in relation to bars and clubs.

Given the nature of minor drug offences, i.e., that they are consensual and include no direct victims, often in combination with few witnesses, the enforcement of such offences entails considerable room for discretion. As the first study shows, officers often need to rely (although not exclusively) on subjective cues that shape suspicion formation. This may open up for the risk for various kinds of bias. Police documentation is not a good source for investigating bias, primarily because neither explicit nor implicit stereotypical thinking is likely to be documented as the grounds for control or further action. To investigate whether different thresholds are applied in police actions in relation to individual background characteristics such as gender, ethnic background or socioeconomic status, we therefore need to turn to other methods. Thus, indications of bias were investigated in the second study, which explored the importance of ethnicity in drug law enforcement.
Ethnic disparities in the use of coercive measures

Initially, a benchmarking test was conducted to compare sociodemographic characteristics between the drug-tested youth and the surveyed youth who had answered “yes” to the question about having used illicit substances during the last 30 days. The results showed that youth subjected to an enforced drug test were male, born outside Europe and had unemployed fathers to a significantly greater extent than the drug-using youth in the school survey.

The second approach was to use a hit-rate test to investigate the association between sociodemographic characteristics, neighbourhood crime context and the accuracy of drug tests and body searches conducted on suspicion of drug use. The results of the initial bivariate analyses examining native/non-native background in relation to hit rates are dependent on the definition of non-native background that is employed. Results found using different definitions go in the opposite direction to one another. When non-native background is defined as being born outside Europe, the accuracy of coercive measures is lower among non-native youth than among youth born in Sweden and in Europe. When non-native background is instead defined as having parents born outside Sweden, the accuracy of coercive measures is lower for the native than the non-native group.

A logistic regression analysis was conducted and included the variables ethnic background, gender, socioeconomic status, repeat drug offending and neighbourhood enforcement intensity. The results showed that youth born outside Europe were more likely than youth born in Sweden to be submitted to coercive measures that produced a negative result. The higher an individual’s socioeconomic status, the more likely it was that the person would be found in the “low accuracy” category. The assumption that being reported in an area with a high level of drug enforcement intensity was likely to produce lower hit rates was not confirmed in the regression model.

Implications of the results are discussed in the following section.
5. DISCUSSION

This section discusses the studies’ results in relation to previous research and possible implications for policy and future research. The section is divided in more general themes, based on the findings from the two studies.

Reactivity and proactivity in drug enforcement

As the results from Study 1 show, there is a fair amount of reactivity in the ways in which minor drug crimes are “discovered”. Drug crimes are identified in connection with other crimes (or vice versa), and in many situations, the police are at the scene as a result of calls for service or other non-drug-related matters. As such, one might discuss whether the data reflect drug law enforcement or more “regular policing”. In addition, while it is often argued that registered drug crime largely mirrors police prioritizations and proactive activities, registered drug possession and use offences seem in part to be a by-product of enforcement activities focused on other types of crime. It is not always possible to tell which offence was discovered first (the direction of the association), since other offences are also discovered as a result of drug controls. Nevertheless, it is fair to say that there is a substantial amount of reactive policing involved in the detection of drug offences.

In addition, body searches were also conducted on the basis of Paragraph 19 of the Police Act, which requires a lower threshold of suspicion, and is normally used when searching for weapons. The body searches performed in connection with other crimes and disturbances may explain some of the lack of detail found in relation to body searches, since the relevant information may exist in other documents related to these non-drug incidents, or when body searches were performed upon arrest (mandatory). The proportion of reactive activities is also in line with that found in previous research (Brå 2023a; Gaston & Brunson 2020;
Grace et al. 2022; Gaston et al. 2020; Houborg et al. 2016). In a study of police decision making in relation to cannabis offences, Grace et al. (2022) found that there was often little proactivity involved. Cannabis possession was often detected in connection with other offences or because the suspect was already known to the police. Although the first study does not include data on previous convictions or encounters with the police, previous research shows that prior knowledge about both places and people shapes which places and people are targeted by the police, above and beyond legal factors (Estrada et al. 2022; Grace et al. 2022; Holmberg 2000; Quinton 2011).

The police deployment model seeks to explain disparities in (drug) enforcement in part by reference to differential deployment patterns that distribute police officers unevenly across different neighbourhoods (Beckett et al. 2005, 2006; Brownsberger 2000; Engel et al. 2012; Gaston 2019a; Mitchell & Caudy 2015), often with a concentration to socially disadvantaged areas with a higher proportion of minorities and high crime rates (Brå 2023a; Marco et al. 2017). Although this thesis does not test the deployment hypothesis on ethnic disparities, the share of reactive policing activities (responses to alarm calls, calls from public security staff or being deployed in relation to another matter) may be assumed to have consequences for which individuals are controlled and suspected of minor drug offences. It is not that every call for service leads to a search/arrest, as Engel et al. (2012) have noted, but rather that calls for service and crime rates are likely to be used by the police to plan their deployment practices. While the research on deployment effects in relation to drug enforcement and their consequences for ethnic disparities is still rather limited, and has produced mixed evidence, research suggests that deprived (but not necessarily high crime) neighbourhoods are subject to more drug policing than others (Brå 2023a; Estrada al. 2022; Gaston 2019a; Marco et al. 2017; Mitchell & Caudy 2015; Shiner et al. 2018).

While acknowledging the indications of reactivity in drug policing, it is important to bear in mind that the majority of the drug interventions in this thesis are most likely to have been a product of proactive policing, such as stop-and-search practices. These practices are not always easily distinguishable from other police activities3, since the underlying strategies are not reliably detailed in the police

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3 In other jurisdictions, such as the UK and the US, stop-and-search practices are regulated and recorded, which means that researchers (and others) are able to access data not only about searches and arrests but also about the individuals who were stopped. This provides better opportunities to study discretion and ethnic disparities in searches and arrest because there is a there is information about people who are stopped without officers taking further actions. Equally, some jurisdictions require officers to fill out a form specifying pre-defined reasons (based on legal provisions) for the stop (Fagan 2022). This standardized procedure has the benefit that researchers can more easily categorize the legal reasons for a stop and the justification for the use
documents. Despite these uncertainties, the degree of proactivity is in line with previous Swedish and international research on reactive/proactive patterns. Proactive strategies such as stop and search are strongly associated with drug enforcement, with Shiner et al. (2018) reporting that about 60 percent of all the stop-and-searches performed in the course of a year were related to drugs. It is in the context of these proactive police practices against minor drug crimes that most discretion is exercised, and that we are likely to find the greatest ethnic disparities.

**Discretion in drug enforcement**

The results of the second study show that compared to the youth who reported more frequent drug use in the school survey, the youths subjected to an enforced drug test were born outside Europe to a significantly greater extent. This finding should be discussed in the light of the previous discussion on the police’s reactivity/proactivity. The proportion of cases in the first study that involved concurrent offences indicates that which people are registered for drug offences is to some extent influenced by other factors, which limits officer discretion (Gaston & Brunson 2020).

The compositional differences between those who are drug tested and those who self-reported drug use may be a result of (among other things) concurrent offending. The question of whether ethnic disparities are the result of differential drug offending/offending patterns has been discussed in many previous studies (Kakade et al. 2012; Koch et al. 2016; Mitchell & Caudy 2015; Nguyen & Reuter 2012;). Although differential drug offending patterns have little explanatory power in relation to ethnic disparities in drug enforcement, previous non-drug-related offending is likely to be more important (Pettersson 2005; Estrada et al. 2022). Similarly, concurrent offending may contribute to ethnic disparities in drug enforcement, if we assume that there are ethnic differences in concurrent offending. The identification of illicit substances may be an accidental by-product of a search originally performed on the basis of other forms of suspicion or a mandatory arrest process.

Another indicator of a limited effect of officer discretion in the Swedish context is the relatively high hit rate for both drug tests and body searches. Previous international studies have reported hit rates for drugs, weapons, stolen goods and arrests ranging from 5 percent (arrests) to between 18 and 45 percent (drugs, of searches. A downside to standardized procedures, however, is that additional information relevant to police decision-making (that may also have influenced a stop/search) can be lost because of pre-defined categories.
weapons, stolen goods) (Eastwood et al. 2013; Engel et al. 2009; Engel et al.
2023; Fagan 2022; Feigenberg & Miller 2022; Gelman et al. 2007; Gross &
Pierson et al. 2020; Ridgeway 2007; Shiner et al. 2018). The hit rates found in
the current study range between 60 and 80 percent for body searches and drug
tests respectively. The differences may be due to previous studies having
primarily focused on stop-and-search practices and traffic stops, whereas this
study has focused on minor drug offences detected via a range of different
strategies. The hit rates noted in previous studies also vary between different
types of offences (drugs, weapons, stolen goods etc.).

An alternative explanation is that Sweden has more restrictive guidelines for body
searches than other jurisdictions. In some jurisdictions, residing in a high crime
area may be enough to warrant a stop and search (Fagan 2022), which is not
applicable (at least not as the sole ground for such a search) in Sweden. The
relatively high hit rates found in this thesis may also be an indication of the
effectiveness of discretionary practices and of a more targeted use of coercive

Hit rates for drug tests only are also high in comparison to reported numbers based
on the use of the British drug-testing order, where 42 percent of tests proved
positive for illicit substances (Connor et al. 2020), compared to approximately 80
percent in the first study in this thesis. These figures are not directly comparable,
since the British order relates to conducting drug tests in connection with other
offences, not merely on suspicion of a drug offence. Further, drug tests are only
performed in relation to a suspicion of the consumption of “hard” drugs. It is also
important to bear in mind that the population examined in this thesis comprises
youths aged 15-20, whereas other studies have focused on the total population.

**Grounds for suspicion**

The at times subjective nature of drug-related suspicion formation has been
described in previous research (Fagan 2022; Grace et al. 2022; Gaston 2019b;
Houborg et al. 2016), and should be seen in the light of the inherent subjectivity
associated with enforcement in relation to minor drug offences, where officers
often have to rely on situational and extra-legal cues in the context of suspicion
formation. This opens up for a fair amount of discretion with regard to who should
be stopped in which context.
Research also shows that officers can find it difficult to translate suspicions into concrete reasons (Houborg et al. 2016; Quinton 2011), and that the thresholds for performing a search vary between officers (Quinton 2011). In an ethnographic study, Quinton (2011) found that suspicion formation is an interactive and non-static process, in which initial cues could be replaced by others during the encounter. Likewise, cues could be subject to reframing if new cues did not fit the initial interpretation of an encounter (ibid.). This is also evident in the current thesis. Vehicle stops could be initiated on “routine” grounds or because of a suspected traffic violation. As the stop unfolded, additional cues could then emerge, such as the smell of cannabis or signs of intoxication. A recent report showed similar findings in relation to vehicle-stops (Brå 2023a).

What is perhaps most interesting in such cases is why a “routine stop” was initiated in the first place, but these reasons are not necessarily recorded in the police data. In a qualitative observational study, Holmberg (2000) found that 49 percent of proactive stop incidents were based not on concrete suspicions of an offence but on the officers’ general impressions about the individuals in question. The stop was often formally based on regulations specified in the Road Traffic Act, even though the suspicion was not related to a traffic violation (ibid.). Similar findings on the significance of traffic stops have been reported in other qualitative studies (Quinton 2011; Sollund 2006).

Although there was a scarcity of detail in the police descriptions of what precedes a drug intervention, the most common ground for using coercive measures was physical signs of intoxication, such as red eyes, blurred speech and so on. Other indicators involved being nervous, avoidance behaviour, drugs being visible in close proximity to the suspect or the smell of cannabis. The results are in line with a recent report that mapped cues for suspicion formation in relation to drug offences in the Swedish context (Brå 2023a). Studies indicate that the application of suspicion thresholds (justifications for stops) differs across different ethnic groups, which disfavours Black people compared to Whites (Fagan 2022; Gaston 2019b). Future research should explore how cues that influence officer suspicion are distributed between different sociodemographic groups, in order to further explore differential levels of thresholds for stops and the use of coercive measures. This should include behavioural signs such as the ones described. Insights from qualitative research show that a suspect’s demeanour in a police-citizen encounter, such as signs of disrespect or avoidance behaviour, may influence how the intervention unfolds (Holmberg 2000; Sollund 2006). Quantitative evidence on whether and how citizen demeanour influences officer
decision-making is mixed (Bolger & Lytle 2018; Kochel et al. 2011; Skogan & Frydl 2004).

**Ethnic disparities**

The second study found evidence of ethnic disparities not only in relation to exposure to drug testing, but also in relation to the hit rates of body searches and drug tests. The overrepresentation of people of non-European background in relation to drug controls, searches and arrests confirms findings from previous research (Brownsberger 2000; Brå 2023a; Eastwood et al. 2013; Estrada et al. 2022; Kakade et al. 2012; Koch et al. 2016; Mitchell & Caudy 2015; Moeller 2010, 2020; Nguyen & Reuter 2012; Pettersson 2005; Shiner et al. 2018).

Importantly, if the definition of ethnic background used changes, the tendencies also change. A recent Swedish report (Brå 2023a) found that ethnic disparities in success rates for drug enforcement were greatest for people with a background in Africa and South-West Asia, compared to individuals with a Nordic background. This shows the importance of the way ethnic background is defined and measured, and the use of more detailed categorizations may reveal particular region-based vulnerabilities to bias.

The results presented in the thesis are in line with previous research on hit rates (Brå 2023a; Eastwood et al. 2013; Engel et al. 2009; Engel et al. 2023; Estrada et al. 2022; Fagan 2022; Feigenberg & Miller 2022; Gelman et al. 2007; Gross & Barnes 2002; Knowles et al. 2001; Kovera 2019; Persico & Castleman 2005; Ridgeway 2007; Pettersson 2005; Pierson et al. 2020; Shiner et al. 2018), which shows mixed and small ethnic differences. Research shows that ethnic disparities are larger in hit rates for drug offences than for other offences (Shiner et al. 2018), which may explain why this study found disparities where some others have not.

While the deployment model may explain some variation in levels of exposure to drug tests, it is more difficult to apply this model, at least directly, to the explanation of disparities in hit rates. Instead, Study 2 explored the importance of being suspected in an area characterized by a high level of drug enforcement intensity, with the assumption being that the context of suspicion formation may have spill-over effects with regard to how individuals and their behaviour are perceived by officers and the measures that are taken (Fagan et al. 2016; Fagan 2022; Gaston & Brunson 2020; Lum 2010; Quinton 2011; Skogan & Frydl 2004). Gaston & Brunson (2020) call this process *ecological contamination*, because
place shape officer interpretation more than particularized cues that normally should influence decisions about who to detain or not (ibid.).

The study’s results did not confirm this hypothesis. A recent report on drug enforcement in Sweden found that the success rates of enforcement of drug possession offences differed between neighbourhoods (Brå 2023a). The success rates were lower in areas that were classified as vulnerable, with low socioeconomic status and high levels of crime (ibid.). The differential success rates in relation to neighbourhoods indicate that there are contextual effects that influence levels of coercive measures and the hit-rates of those measures. Given indications from previous research, that context is important for understanding officer suspicion formation and behaviour, further exploration is needed, perhaps using better measures of neighbourhood characteristics and smaller geographical units.

The ethnic disparities found in exposure to drug testing may be an indication of officer bias towards youth born outside Europe. However, there are a number of omitted variables that have been found to be more or less important in previous research that have not been controlled for, such as deployment effects (Engel et al. 2012), previous offending (Estrada et al. 2022; Pettersson 2005), the nature of drug transactions and drug use (Beckett et al. 2005, 2006; Ngueyn & Reuter 2012; Ramchand et al. 2007), and concurrent offending (Grace et al. 2022).

What strengthens the case for officer bias is that ethnic disparities were also found in hit rates. Differences in hit rates may indicate the use of differential search thresholds for different ethnic groups. Still, there are important limitations with the hit-rate test, as discussed in the background. To make more reliable conclusions from the test, there is a need to assess the distributions of “criminal cues” that attract officer attention and influence officer action. Further, criminal cues should be rated based on the probability for a hit. This is a complex task since a combination of several cues and factors may influence a stop. In addition, a police stop includes a chain of events where officer interpretation may change during the course of events (Quinton 2011). What triggers a stop is not necessarily that what triggers the use of coercive measures.

**Contribution and future directions**

This is one of few Swedish studies that has explored the circumstances of detection, the grounds for suspicion and use of coercive measures as well as ethnic disparities in drug enforcement. It contributes to the research field by
describing patterns of proactivity and reactivity in drug enforcement and the importance of concurrent offences. Grounds for the use of coercive measures were found to be quite generic. The unique situation in Sweden, with a very expansive level of enforced drug testing on suspicion of drug consumption provides opportunities for conducting reliable research on hit rates and for exploring ethnic disparities.

Taken together, the results of this thesis may indicate officer bias. Even if we cannot know the exact mechanisms that produce ethnic disparities, the available evidence from the current study and international studies shows that certain minorities and communities carry “a disparate burden” (Ridgeway & MacDonald 2010) in relation to drug enforcement practices. These consequences, even in the absence of individual officer bias, must be weighed against the benefits of focusing strict drug enforcement practices on minor drug offences. As Ritter (2022) has argued, drug policy is permeated by goal conflicts, and policies may also have unintended effects.

These effect of drug control policy should be discussed at the policy level. Sampson and Lauritzen (1997) argue that changes in ethnic disparities in the criminal justice system must be viewed in a context. The nature of the highly restrictive drug law enforcement policy employed in “the war on drugs” in the US, which targeted minor drug crimes and certain substances, was designed to have a disproportionate effect on minority communities (ibid.). While Sampson and Lauritzen’s (1997) analysis is focused on a specific historical period and context in the US, similar drug enforcement processes, with similar consequences in terms of producing ethnic and socioeconomic disparities, are also evident in other contexts, Sweden included (Moeller 2010, 2020; Estrada et al. 2022; Shiner et al. 2018).

There are alternatives to the expansion of enforcement in relation to drug consumption offences in particular that has been seen in the Swedish context. The more targeted UK drug testing order constitutes one example. Another option would be to decriminalize drug consumption offences, making them administrative offences instead. This would have the benefit that youth can avoid a criminal record, which can harm their future life-chances. This would benefit all youth, not only minority groups.

The findings from this thesis suggest that future research should investigate a number of pre- and post-stop conditions and outcomes. Research on pre-stop conditions should further explore: 1) the distribution of "criminal" signs between
different sociodemographic groups and their probability for a hit, 2) the importance of concurrent offending for the detection of drug offenses, and 3) the nature of drug use, transactions, and dealing in association with the risk for suspicion. Research on post-stop conditions and outcomes should explore: 1) ethnic disparities in hit-rates of body searches and drug tests with more detailed data on ethnic background (specific region-based vulnerabilities), and 2) neighborhood effects on searches and drug tests, including hit-rates, both on an individual level and a neighborhood level.

Research on various forms of police bias in drug enforcement should integrate both neighborhood- and individual-level processes in relation to pre-stop and post-stop conditions to understand the mechanisms behind ethnic disparities. Finally, future research should focus on the "gender gap" found in this study and previous studies on drug enforcement.

Limitations

As was described in the section on measuring ethnic bias, the approach employed in the second study involved both a benchmarking test and an outcome test. This approach has strengths, but as previous researchers have noted, drawing conclusions about bias on the basis of disparities is subject to limitations (Goff & Kahn 2012; Neil & Winship 2019). The models need to control for a large number of factors, and to make the correct assumptions about officer knowledge and interpretations (Neil & Winship 2019). The combination of the benchmarking test and outcome tests can provide information about disparities and indications of officer bias, but to arrive at more certain conclusions, a more complex model is needed. Such a model should take account of situational factors in the interaction between police officers and suspects, as well as the grounds for interventions and neighbourhood context.

Both studies are limited by the fact that nothing is known about the suspects’ prior offending, and both are also limited by variations in the information included in the police reports’ free-texts, and possibly also by the lack of additional police memoranda that might provide additional information on the enforcement situations and grounds for intervention. Brå (2023a) also found shortcomings in relation to the documentation of body searches, of which about one-third lacked protocols. There are also indications of this in the current thesis. The scarcity of detail documented in relation to body searches and the grounds for intervention noted in Study 1 is consistent with previous research (Bowling
2007). This does not necessarily translate into reasons having been absent in the actual situation. Further reasons may have been noted in documents not accessed by this project. It may also be that documentation praxis needs to be improved. The material also contains a number of mandatory searches and searches related to concurrent offences, which may further explain the lack of detail in the documents provided by the police.

Another important limitation is that the study excludes all police activity that does not result in the registration of a suspected offense, which means that it provides an incomplete picture of the drug enforcement activities directed at adolescents and young adults. Holmberg (2000) described the study of discretion as the study of “invisible” decisions. Reasons for (unrecorded) stops that warrant no further action are typically unknown to anyone other than the police officer who decides to take a closer look at something (ibid.). The enforcement of laws leaves more visible traces, but the more frequent, low-level offenses tend to be sparsely documented.
I ljuset av Sveriges strikta narkotikapolicy med stort fokus på ringa narkotikabrott såsom konsumtionsbrott uppkommer frågor om polisens upptäckt av ringa narkotikabrott, deras användning av tvångsmedel, i vilka situationer de används, mot vem och på vilka grunder. Polisens förhållandevis vida möjligheter till diskretion i relation till övriga aktörer i rättskedjan, och specifikt i relation till narkotikabrott väcker också frågan om risken för bias i polisens arbete mot narkotikabrott. Tidigare forskning visar att en strikt narkotikapolicy som fokuserar på ringa narkotikabrott på gatunivå riskerar att leda till ökade skillnader mellan etniska grupper inom rättssväsendet.


Framtida forskning om olika former av bias inom polisens arbete mot narkotikabrott bör integrera processer både på områdes- och individnivå i relation till omständigheter före och efter ett polistopp. Detta för att bättre förstå mekanismerna bakom etniska skillnader inom rättsväsendet. Slutligen bör framtida forskning fokusera på bristen av (unga) kvinnor som hittades i denna och tidigare studier om polisens arbete mot narkotikabrott.
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ORIGINAL PAPERS I-II
Exploring the situational characteristics of drug policing directed at youth – circumstances of detection and grounds for intervention

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ABSTRACT
The aim of this article is to explore the circumstances associated with police interventions and the use of enforced drug tests and body searches against youths suspected of minor drug crime in Malmö, Sweden. There is a need for research on police enforcement practices directed at young people as a result of an increased use of coercive measures against youth and young adults suspected of minor drug offences in Sweden. The research questions are addressed on the basis of police documentation covering a period of one year. Approximately 67% of police interventions involved car-stops or police responses to calls for service. The documented grounds for the use of enforced drug tests are of a subjective nature, and detail signs of intoxication. Body searches were less often documented, and provided little insight into suspicion formation. 82% of the drug tests produced positive results for illicit substances. The results highlight the need to evaluate the utility and practice of body searches and enforced drug testing focused on youth.

Introduction
The police have a considerable degree of discretionary freedom in their law enforcement work. One aspect of police discretion relates to the immediate situation in which encounters with the public take place, when individual officers make on-the-spot decisions about whom they will intervene against and which methods they will use to do so. Discretion and decision making are part of the everyday work of police officers and have attracted a great deal of attention from the research community, as have related issues such as whether coercive police practices such as stop and search disproportionately affect communities of color, minorities and people with mental health issues (Bowling & Marks, 2017; Bowling & Weber, 2011; Gaston & Brunson, 2020; Wood et al., 2017). Drug law enforcement has also attracted scrutiny over recent decades, since increases in street-level drug enforcement focused on minor drug crime have resulted in increased rates of arrest and incarceration among drug users (Lynch, 2012; Werb, 2018) and have changed the composition of the suspects, with individuals of non-native and poorer background being at higher risk of being targeted by the police (Estrada et al., 2022; Moeller, 2010). In order to better understand why, how and in what situations the police use coercive drug enforcement methods, it is important to study decision making and suspicion formation in the context of specific enforcement practices, as these are formulated by officers themselves. The current study provides a snapshot of drug enforcement practices based on the circumstances of detection and the grounds for enforcement, using police-
documented interventions against young people suspected of minor drug offenses. Given that coercive measures such as body searches and enforced drug tests are intrusive methods that should be used restrictively and proportionately, while also functioning as means of early detection and early intervention in relation to youth drug use, it is important to increase the knowledge on how and under what circumstances drug use is detected in order to situate the role of police practice within the field of drug law enforcement against young people.

**Contextualizing Sweden**

In a Western context, Sweden is of particular interest with regard to the policing of drug crime, since the country’s legislation and drug policing policies are unique. Drug use is criminalized, and this legislation is strictly enforced, with prosecutions for drug use relying on urine- or blood sampling. A person can be required to submit to a drug test if the criteria for reasonable suspicion are met, which is a rather unique enforcement practice in relation to other countries in the Nordic region, Europe, and the US. While many countries in the Western world are taking steps towards the depenalization and/or decriminalization of possession for personal use (Stevens et al., 2019), crime statistics and other available evidence on drug enforcement suggest that Sweden is moving in a different direction (Brå, 2000; Brå 2016).

Since the early 1990s, levels of reported minor drug crime and of the use of enforced drug tests have increased substantially in Sweden (Brå 2016; Estrada et al., 2022). There has also been a focus on more consistent street-level enforcement directed at personal use rather than the sale of drugs as a result of strategy changes within the police, which followed an overall societal and political shift in how the ‘drug problem’ was defined and in ideas about how to deal with this problem (Estrada et al., 2022; Kassman, 1998).

Enforced drug tests were seen as a key component in the detection and enforcement of the criminalization of drug consumption that was introduced in 1989. The usefulness of this measure as a means of detecting adolescents who were ‘new’ to drug use as early as possible was emphasized, as was its usefulness as a means of general prevention and deterrence (Government Bill 1992/93:142; Brå, 2000).

In order to perform an enforced drug test or body search, the police must have a reasonable suspicion that a concrete crime has been committed by a specific person, and the offense’s penalty scale must include a prison term (Andersson, 2017). Reasonable suspicion related to drug offenses must be grounded in circumstances that are concrete enough to suspect that a crime has been committed, and it is not enough, for example, to associate with known users (Andersson, 2017).

To date we know relatively little about the situational circumstances leading up to the use of body searches and drug testing among adolescents. This includes both the contexts in which the police make interventions against youth and the legal grounds for police interventions against youth drug use and minor possession offenses. Although discretionary police practices and officer decision making have been the focus of many international studies, relatively little research has to date focused on officer practice in Sweden.

**Aims and research questions**

The aim of this article is to explore the circumstances of police interventions against youths suspected of minor drug crime. The study is based on police reports of suspected minor drug offenses among youth and young adults. In the light of previous research, the research questions are: 1) What characterizes the circumstances in which suspected minor drug offenses are detected in terms of place and the mode of policing practice? 2) Under what circumstances and on what grounds are young people identified as suspects and submitted to coercive measures? 3) What are the hit rates for enforced drug testing?
Using police documentation of drug enforcement activities directed at young people, the study contributes to previous research on the formation of police suspicion and knowledge about what informs police decision making in a specific situation.

**Background**

The police have a major influence on who is suspected of drug use and subjected to body searches and drug tests. The individuals who pass through the justice system comprise a select group, who are filtered via police priorities and strategies. Drug enforcement targeting street-level dealers and users uses considerable resources and affects both communities and young people in urban areas (Flacks, 2018; Lum, 2010; Marco et al., 2017). Yet, stop-and-search practices are often perceived by the police and policy makers as a vital tool in fighting crime and drug offending (Flacks, 2018). At the time that drug use was criminalized in Sweden in 1989, and similarly when the possibility of using enforced drug tests was introduced a couple of years later, the arguments for these measures centered on the importance of taking a clear stance against drugs, as a society, and on targeting the demand side (Government bill 1987/88:71; Government Bill 1992/93:142). Legislators argued for the potential preventive and/or deterrent effects among youth in particular (Government bill 1987/88:71). Drug law enforcement is described in the research literature as involving over-enforcement, and as being overly punitive and disproportionate in relation both to the (non-)seriousness of the offense and the persons who are affected by enforcement activities – members of already marginalized communities and citizens who are already vulnerable in terms of problematic substance use and mental health issues (Csete et al., 2016; Lynch, 2012; Schulenberg, 2016). In addition, as Lynch (2012) has argued, drug law enforcement often entails sanction-like practices and punitive measures such as invasions of privacy in the form of enforced drug tests, confiscations and body searches. Thus, the process of enforcement may be perceived as more punitive than the potential sanction itself, and previous research has noted the importance of the perceived fairness and proportionality of the enforcement process for both youth trust in the justice system and continued delinquency (Bowling, 2007; Slocum et al., 2016; Solhjell et al., 2019). This is of particular relevance in the Swedish context, where there has been an increase in the use of the enforced drug testing of young people (Brå, 2016).

Since drug use and possession for personal use are ‘victimless crimes’, they would mostly go unnoticed in the absence of proactive and investigative police work. This opens up for a substantial amount of discretionary practice and for situation-based decision making, whereby the police to a large extent influence which people will be detected and sanctioned (or not sanctioned), and in what situations. Given the assumed proactive nature of drug enforcement, there is a good case for the investigation of discretionary practices, of the settings in which detection occurs, and of the logic behind detection (Houborg et al., 2016). As researchers have noted, the concepts of drug enforcement strategies and proactivity are not entirely unproblematic (Mazerolle et al., 2007; Wu & Lum, 2017). Few studies have dedicated themselves to understanding when, where, to what extent, and how the police actually engage in proactive policing strategies (Wu & Lum, 2017). While it is often assumed that much drug enforcement relies on proactivity, a fieldwork study focused on two English police forces (Bacon, 2016) found that while the proactivity concept was applied to a range of policing activities, drug law enforcement still to some extent relied on more traditional order maintenance practices. Previous research also shows that the police rely on pedestrian- and traffic stops as a mean of seizing weapons and illicit substances (Gaston & Brunson, 2020; Tillyer et al., 2012).

**Detection and police encounters with the public**

There is a fairly extensive body of work on stop-and-search practices and police encounters with the public (see for example Tyler, 2017; Weber & Bowling, 2015). The question of what ‘stimulates’
police decisions to engage in enforcement activities in the context of a specific encounter between a police officer and a citizen remains very much open to scientific debate. Factors such as being under the influence of alcohol and drugs, officer characteristics, place, non-compliance, mental illness, socioeconomic background, previous incarceration and race are all factors that have been investigated, with ambiguous results (Bolger & Lytle, 2018; Briggs & Keimig, 2017; Estrada et al., 2022; Gaston & Brunson, 2020; Lum, 2010; Moeller, 2010; Pettersson, 2005; Schulenberg, 2016; Ti et al., 2013; Tillyer et al., 2012). Knowledge of situational ‘triggers’ and factors that contribute to enforcement decisions are important cues in relation to understanding how suspicion is formed and how police officers use their discretion.

Schulenberg (2016) defines discretion as the capacity that officers have to choose between a range of alternatives in an encounter in which they legally have the possibility of formally reporting a crime. They may issue an informal warning, disperse a crowd, subject one individual to a body search or drug test but not another; that is, they may use informal social control rather than reporting an offense. A Danish study (Houborg et al., 2016) based on an examination of criminal records and interviews with police officers showed that certain offender characteristics, such as individual appearance and particular types of behavior, contributed to an increased risk of being suspected of crime (Houborg et al., 2016). Among other things, experience and working culture provide the police with typologies regarding whom to act upon and in what manner (Bowling, 2007; Moeller, 2010; Tillyer et al., 2012) The experiential knowledge of police officers does not evolve in a vacuum, but is rather shaped by their legal, social and organizational context, which shapes their interpretation of specific situations and the available alternatives for action (Quinton, 2011). Others have noted that the police’s capacity to exercise discretion contributes to the more precise and fair exercise of search powers, with officers’ experience and knowledge of the community and of people providing a foundation for more accurate decisions about whom to search (Tillyer & Klahm, 2011).

Previous research has focused on stop-and-search practices, predictors of exposure to police encounters and suspicion formation from the perspective of officers themselves and has documented the grounds on which they make interventions. In a Swedish research context, however, very few studies have looked at the circumstances surrounding the detection of drug crimes and the grounds on which interventions are based, particularly those involving youths, which constitutes a considerable gap in the literature given the large-scale use of coercive measures in relation to suspicions regarding drug use and possession for personal use. It is therefore important to increase the available knowledge on how crimes become known to the police, what attracts the attention of police officers, and the situational circumstances that characterize interventions and the use of coercive measures.

Method

Research design

The study is based on a document analysis of all reported minor drug offenses registered during the year 2018 in Malmö, Sweden. Since the focus is directed at police interventions involving youths, the data set is restricted to offenses linked to persons aged 15–20. The research questions are examined via an integrated approach, using both quantitative and qualitative content analysis for descriptive and exploratory purposes. The study was approved by the Swedish Ethical Review Authority, DNR 2021–05720-02.

Quantitative content analysis was employed in order to systematize the data into themes that relate to the aims of the study (Bowen, 2009). The central themes were then further explored in a qualitative phase. The use of the quantitative content analysis has been intended to provide an overview of the frequency of manifest content (White & Marsh, 2006) in relation to the study objectives, whereas the qualitative content analysis supplements the quantified results with more in-depth knowledge regarding specific contexts and the situational decision making of police officers,
as this is presented in the documents. In contrast to quantitative content analysis, which systematizes, thematizes and counts large amounts of data for descriptive purposes, qualitative content analysis attributes meanings to the data that are not necessarily explicit, but which instead require re-reading and interpreting material (Schreier, 2012). This method of processing and analyzing the material was chosen because the combined police documents contain a substantial amount of information that describes the circumstance of the intervention and the officers’ interpretations of the situation and the people involved. However, it is important to emphasize that the level of detail in the descriptions can differ greatly between cases.

**Data and sampling**

The analyzed documents consist in part of crime reports, which include information about the suspect, crime codes, the date and address of the incident, and passages describing the incident and the grounds for suspicion, as well as information on possible witnesses and the final decision made on the basis of the suspicion (whether or not the individual was charged). The study documents also include protocols documenting the use of coercive methods (in this case body searches and drug tests) and lab reports describing the results of urine or blood tests, and tests of suspected illicit substances that have been seized. Minor drug offenses, in the form of drug use or minor possession for personal use, accounted for approximately 90% of the total number of reported drug offenses in 2018 (Brå, n.d.), and given the study’s interest in the police use of body search and drug testing, a focus on these offenses constituted a natural selection criterion for the study.

A total of 646 unique case reports relating to minor drug offenses were received from the police. It is important to note that the unit of analysis for this study is not individuals, but rather situations involving a police intervention, sometimes with several suspects involved. During the coding process, a total of 535 unique situations emerged from the initial 646 unique case reports. For the purpose of this particular study, 16 case reports were excluded, mostly due to a lack of information, or to the case having involved someone of the wrong age, or the incident having occurred in a different city. The material contains 463 unique individuals. Date-of-birth information was missing for three individuals, and these are not included among the 463 individuals, but their cases are included in the situational analysis. 99 individuals (21%) are repeat suspects, appearing as suspects more than once in 2018. Of the 463 unique individuals, approximately 8% are girls and 92% are boys.

For the qualitative analysis, a stratified random selection was made on the basis of the results of the quantitative content analysis. From the central themes, a random selection of 10% of the situations was drawn from the three major themes in proportion to size, to produce a total of 50 separate situations for the qualitative analysis. For ethical purposes, names of places and/or streets has been changed or deleted, and details in the qualitative descriptions have in some cases been altered in order to avoid identification of the individuals involved. In addition, individuals are referred to as minors or adults (over 18), and since there are very few girls in the data set, no detailed descriptions are presented for these.

**Analytical unit**

As was noted above, the study’s primary unit of analysis is situations involving a police intervention (n = 535). This focus in this study is directed at how a suspected minor drug offense was detected, and what triggered the intervention in a given situation. A significant number of police interventions contain several individuals who have been detected in the same manner, which provides an argument for utilizing situations rather than individual cases as the unit of analysis.

A single situation may have produced a number of different case files, and there may be several individuals linked to the same situation in the same file or in different files, as well as several types of drug crime, and so on. Situations were identified and counted by means of an extensive reading and re-reading of the case files, and by examining possible cross references between case files, dates and
times, the addresses of the recorded incidents, and text passages regarding these incidents. In this way, the cases have been merged into unique situations. Hit rates are not calculated on the basis of situations or individuals but of tests performed.

**Analytical procedures**

The quantitative content analysis identified themes related to the study’s first research question in a data-driven manner (Schreier, 2012), without the use of predefined concepts. Content analysis procedures are flexible, and there is considerable variation in the way content analysis has been conducted in previous research, and with what aims and techniques (White & Marsh, 2006). The coding of the data required numerous re-readings of the material. This re-reading process also served to shape and re-shape the more specific research questions in a back- and forth process between the data and the research questions, in an explorative manner.

This study makes inferences from the police documents on the basis of a thematical text-driven analysis in order to search for manifest patterns and frequencies within the data (Bowen, 2009). As such, the quantitative phase of the study may be described as a fusion of content and thematic analysis using an abductive approach. The central themes are presented descriptively in the results section. Some of the content in the material was coded and systematized in accordance with the documents’ predefined structure, and treated as variables rather than as text. The predefined codes refer to variables such as suspect ID, crime codes, age, the offense’s geographical location, and the date of the reported offense. Other relevant codes were gathered from additional material, such as results from drug tests and confiscation protocols. In order to establish whether and which coercive measures had been used, cues were looked for in the text descriptions contained in the police reports, and in texts relating to confiscations and the results from drug tests.

The quantitative content analysis generated five main themes in relation to the circumstances of detection, which in turn contribute to providing an answer the first research question. The themes were constructed by identifying patterns/commonalities in wordings and terms in the police documents, reflecting how the police describe and understand the circumstances leading up to the enforcement activities. This is a way of reducing a large amount of data and creating categories/themes that represent trends across all of the cases.

Additional quantitative results relate to the type of context in which the suspected offenses were detected, links to other crime types, and the outcome of enforcement activities in terms of evidence of drug use and confiscations. The qualitative phase of the study explores three major themes in more depth. More importantly, the qualitative phase helps to answer the second research question, which relates to the grounds for interventions and the officers’ decision-making process in the specific situation.

**Results**

As described above, the quantitative content analysis generated five general themes, which have been labelled Modes of Detection (MoDs). These themes relate to the detection circumstances, and more specifically to the way in which the suspected offense was detected, and the underlying enforcement logic, in so far as these factors can be interpreted from the documents. Due to variations in how ‘richly’ the police documents describe the situations, the possibility of describing what characterizes the detection circumstances in detail is limited to some extent.

The findings are presented in the first section below. These descriptive quantitative findings are followed by the results from the qualitative sample, which was based on the main themes related to the MoDs. The final part of the results section presents findings relating to the hit rates for drug tests and drug confiscations in the material as a whole.
Circumstances of detection

The five main themes related to modes of detection (MoD) are vehicle-related, house searches, checks and patrol, officer response and other, as presented in Table 1. Similar themes have been presented in previous research on police suspicion formation and discretion (Gaston & Brunson, 2020; Houborg et al., 2016).

Table 1. Modes of detection.

<table>
<thead>
<tr>
<th>Modes of detection</th>
<th>Number/proportion of situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle-related</td>
<td>177/33%</td>
</tr>
<tr>
<td>House searches (unique, not connected to a previous drug related situation)</td>
<td>18/3.4%</td>
</tr>
<tr>
<td>Checks and patrol</td>
<td>131/24%</td>
</tr>
<tr>
<td>Officer response</td>
<td>183/34%</td>
</tr>
<tr>
<td>Other</td>
<td>26/4.8%</td>
</tr>
<tr>
<td>Total</td>
<td>535</td>
</tr>
</tbody>
</table>

These themes emerged from cues in the police files, and are indications of the underlying enforcement logic employed by the police. Some of the MoDs are more proactive, while some are of a more reactive nature, such as officer response, where the majority of the cases involved responses to calls for service, for example from the public or the central alarm center.

The categories are mutually exclusive, but this is not to say that a case cannot potentially fall into two categories. For example, a ‘check’, categorized as proactive, may have been preceded by a call for service that was not documented. An important issue when interpreting and coding documents is that what is not explicitly mentioned cannot be analyzed. Early in the coding process, it became clear that detections associated with vehicle-related situations were common in the data. Terms such as ‘control’ or ‘routine stop’, which are normally associated with the category ‘check and patrol’, were often found in the texts relating to car-related situations. Because of the frequency of car stops and the fact that the legislation regarding car stops differs from that related to stopping pedestrians, these were singled out as a specific category. The vehicle-related category contains both incidents that can be labelled as proactive car stops (the majority) but also more reactive interventions, where the police have reacted to rule-breaking behavior such as speeding. These are all categorized as vehicle-related situations. The ‘other’ category contains among other things situations in which individuals have been in a police facility, or were being transported to a police facility, or where they had been subject to customs controls.

In many of the cases included in the material, there is an overlap with other types of crime. Approximately 31% (n = 167) of the situations include other crime types, predominantly traffic violations, violent incidents and disturbances, the possession of weapons such as knives, guns or pepper spray, the handling of stolen goods or suspicions of drug distribution. This number only includes the additional offenses that were reported in the same case file as the drug offense, and thus the figure represents a minimum estimate of the overlap with other crime types. If crimes and disturbances that can be deduced from the written description of the incident in the police report, but that were not officially reported in the same case file, are included, the proportion of situations in which there was an overlap with other suspected offenses and public order disturbances increases to approximately 40% (n = 212).

Although it might seem relatively straightforward to define proactive or reactive policing, there is no clear distinction between different modes of intervention in the police files. This is partly due to certain information being missing, but also to differences in the way terminology is used in the documents. Words such as patrolling, routine work, crime preventive work, checks or intelligence gathering might mean different things to different police officers, or an intervention may consist of a combination of several modes of detection.
Place of detection

Due to the scarcity of detail in many files and the format in which the police document the place of intervention, only cautious estimates are presented for place of detection. Most of the interventions had taken place in and around vehicles, in public spaces or in semi-public spaces such as malls or stores. Apartment settings are also frequent, often due to house searches or in rarer cases incidents of domestic violence or disturbances. Bar or club settings are rare as place of detection in the material examined.

Interpreted grounds for the police interventions

This section explores the grounds for intervention related to different modes of detection via the presentation of a sample of situations. The two smaller categories (‘other’ and ‘house searches’) were excluded from the qualitative analysis due to their involving so few cases. The qualitative coding provides a more detailed view of the terminology and manifest content found in the police documentation concerning both the modes of detection, grounds for use of coercive measures and the places in which the interventions occurred, thus shedding more light on the descriptive quantitative results. Words such as ‘other matter’, ‘called out’, ‘checked’, ‘observed’, ‘routine patrol’, ‘stop-and-search’, ‘problem-oriented policing’, and ‘anti-drug work’ all provide a picture of how the police officers themselves describe their work and its underlying rationale.

Vehicle-related situations

Even though a considerable proportion of the vehicle-related situations involve other offenses, such as traffic violations, the more typical vehicle-related situations involved a car stop that was not due to a traffic violation but was instead more similar to a stop and search procedure, where the reason for the stop is not obvious. Twelve of the eighteen sampled cases include wordings such as stop-and-check, routine patrolling, and car stops.

In the majority of the cases included in the qualitative sample, the reasonable suspicion for a minor drug offense had arisen after the car had been stopped. Thus, the reason for the stop itself is not clear. The suspicion is often combined with a suspicion of DUI (driving under the influence), and at times with a suspicion of other traffic violations such as driving without a license.

One specific situation (SIT-ID 200) reveals a number of suspicions formed by different patrol officers involved in the same car stop. Here, a car containing at least two individuals was stopped based on grounds that are described in somewhat conflicting terms in two separate case files focused on the same situation. The first file documents that the car was stopped because the individuals had previously been observed in drug-related circumstances. The second file, lodged by a second patrol car, documents the patrol making a ‘routine check’ because of unpaid vehicle taxes. During the stop, suspicions formed around the use of illicit substances, and two enforced drug test samples were taken, of which only one is documented as having been due to the individual showing signs of being under the influence: ‘large pupils, bloodshot eyes, and slow speech’. Most often, a suspicion of drug use is combined with physical and mental signs of being under the influence, which are normally required in order to form the reasonable suspicious necessary to require an enforced drug test.

In a second situation (SIT-ID 232), which involved one individual, an unmarked patrol car had followed a car. As a result of reckless driving, the patrol car performed a ‘stop and check’. The driver had stopped and run from the car but was later stopped by another colleague. The driver was suspected of drug use and possession, but the police documents include no record of a confiscation (which is very unusual) and no signs of the individual being under the influence were documented. In most MoDs, avoidance behavior and nervousness are commonly interpreted as suspicious.
The situations described above contain a relatively large amount of information on the mode of detection, whereas other situations are described using shorter texts, and contain limited information about the rationale behind the stop:

Patrol was on routine patrol in [street address] when we noticed car [register number]. A check was conducted and suspicion of crime emerged. (SIT-ID 395).

In some cases, the police files refer to interrogations and further memorandums to which this study does not have access, and this may have limited our access to information concerning the mode of detection and the underlying reasons for the police activities. Some of the vehicle-related situations, and also some of the officer response situations, include references to the Police Act (1984:387, Article 19/20a) as the grounds for intervention, rather than describing suspicions of concrete offenses. In three situations, SIT-ID 267, 349 and 501, drug crimes suspicions had been formed in connection with car stops that were described only as having been based on Article 19/20a. This is a preventive coercive measure that requires a lower level of suspicion and where the article’s intention is to provide a basis for detecting weapons or other dangerous objects (not illicit drugs).

Checks and patrol

Fourteen situations were sampled relating to checks and patrol. Patrolling is tied to keywords such as patrolling, routine patrolling, or ‘being in’ a particular street, at times also in connection with problem-oriented or preventive anti-drug crime work. Initially identified as two separate themes, they were later merged due to overlaps in relation similarities in the description of how a suspected crime was detected, and via which mode. What differentiates checks and patrol is that the use of terms linked to patrolling indicates more proactive, focused and problem-oriented activities, whereas checks is a more open theme tied to ‘being present’ for reasons that are not necessarily known, and ‘observing’ or ‘checking’.

In some cases, the proactive nature of the policing activities is stated explicitly in the documents, with the patrolling and search activities being conducted in certain places with the aim of detecting drug crime. A situation might be presented as follows:

Patrol was in the area around [park] to conduct anti-drug work. […] X was found in [park]. X had small pupils and glossy eyes and made nervous movements with his hands. He was making clicking sounds with his mouth due to dryness. When confronted by the officers, he said that he had smoked hashish. (SIT-ID 365)

This provided the basis for a suspicion of drug use and an enforced drug test was performed. Two other situations in the sample show similar modes of detection, with the officers working with proactive anti-drug activities in certain areas of the city and apprehending individuals. In one case the individual was known from previous drug-related encounters (SIT-ID 258). A number of cues are present in the documents that provide insights into what the police were looking for. Not surprisingly, groups of young people in public spaces constitute a target for police suspicions, as in SIT-ID 28, where the police approached and made contact with a group of young people in a public space. One of the adolescents in the group was suspected of both use and possession, but specific grounds for this suspicion are not provided, with the exception of physical signs of intoxication, such as ‘blank, large pupils’. About eight grams of hashish had been found on the young adult, and according to the documents no other person was suspected in connection with the same incident. A similar situation is described in SIT-ID 171, where a check was performed on a group of young people with reference to Article 19 of the Police Act. The police confiscated about two grams of marihuana and performed a drug test (negative) on the grounds that the suspect had ‘bloodshot eyes, was slow and stuttering in his speech, and there was a strong smell of cannabis’ (SIT-ID 171).
In a very rare incident (SIT-ID 243), the police had performed a body search based on nervous behavior and signs of intoxication, and confiscated small amounts of cannabis. They then emphasized that they had abstained from enforced drug tests, stating that personal use would be consumed by the more serious offense of possession. It is rare for the police to present arguments for not having taken certain actions, and even rarer for them to argue in this manner (even though it is legally correct).

In the situations where check was the MoD, the keywords ‘check’ or ‘checked’ appear in the documents, in most cases with little information about the reason for the check or about any specific form of police activity that was being conducted at the time (which contrasts with the documents relating to patrol as the MoD, which may include references to a specific police activity). During these checks, suspicions of drug crime developed as a result of physical signs of intoxication:

Radio car made a check of X in the parking lot of [food chain] and a suspicion emerged of being under the influence of drugs. [...] SIGNS: Large pupils, glossy and bloodshot eyes. Acted nervously and answered questions incoherently. (SIT-ID 254)

In this case, the enforced drug test came back negative. A similar mode of detection was described in a second situation (SIT-ID 103), where a control had been made in a stairwell and where signs an individual of being under the influence of drugs are also described. Two other situations (SIT-ID 168 and 362) also include descriptions of checks of individuals on the street, but in these cases, the individuals were subjected to body searches on suspicion of drug possession because they smelled of cannabis.

Similar to patrolling, the use of check as a MoD is linked to discretionary practices, with the officers looking for signs of drug use during the check. In rare cases (SIT-ID 453), the contact was initiated as a result of obvious signs of intoxication and physical non-responsiveness that had been noted prior to the check.

**Officer response**

This theme is related to responses to calls for service, often as a result of other types of crime such as public order disturbances, possession of weapons, or brawls or assaults. Eighteen situations relating to this theme have been included in the qualitative analysis. In these reports, typical keywords include ‘ordered by alarm center’, ‘ordered to’ or ‘another matter’. The categorization of cases that included the wording ‘another matter’ was not without problems, since the lack of further information about what the other matter consisted in at times made interpretation and coding difficult. The decision to place them in this category was based on an overall assessment, which showed that most of the time, these cases seemed to be a by-product of police interventions associated with other crimes, i.e., they were not based on self-initiated work.

The identification of a drug offense is thus most often a by-product of a response to other types of crime or public order disturbances. Although it is not often made explicit in the material as a whole, it is sometimes apparent that the public have informed the police about suspected drug activities, for example, when a bag of suspected drugs had been found in a communal area in a residential building (SIT-ID 503). In this case, the bag was then linked to an individual in the police report, but the case was later closed due to lack of additional information. In another case (SIT-ID 4), a patrol had been stopped by a member of the public who claimed that drugs were being distributed on a street in Malmö. Following a body search, a small amount of hashish, 0.78 g, was confiscated.

A more typical situation involves the police arriving at a scene in relation to ‘another matter’ (SIT-ID 374, 323, 85, 275), with suspicions about drug crime then emerging in the context of this intervention. Sometimes the ‘other matter’ is specified in the report:

Patrol is ordered to [address] due to a person who is threatening and acting out against his family. [...] X is behaving as if he were under the influence by way of stuttering speech and heavy mood swings. He goes from giggling to being angry and verbally threatening towards the patrol and his family (SIT-ID 221)
An enforced drug test was conducted, which confirmed the officers’ suspicions of drug use, with the individual being found to have consumed illicit substances. Usually the ‘other matters’ described involve non-drug related situations, such as weapons (SIT-ID 216), theft (SIT-ID 97), fights in public spaces (SIT-ID 241, 492), or public order disturbances (SIT-ID 302). In all of these cases, with one exception (241), the individuals were subjected to drug tests. Situation 302 involved a call out of police officers to disturbances and disputes on a train. In this case, two minors and one young adult were drug tested with reference to having ‘bloodshot eyes and a dry mouth’.

The situation described in another case (SIT-ID 495) is both atypical and typical with regard to the mode and place of detection. In general, the material includes few mentions of clubs and bars as places for detection, but security guards or other forms of security staff are present in about nine percent of the detection situations. In this particular case, security staff had apprehended an individual who had used a false passport when trying to enter a nightclub:

Patrol arrived at the place to file a report, and in connection with this additional suspicions of illicit drug use emerged, when the patrol officer observed that he had bloodshot eyes, large pupils and glossy eyes. (SIT-ID 495)

Given that much drug use takes place in the night-time economy in bars, clubs and other party-settings, the proportion of reported drug offenses found in these arenas must be interpreted as being low.

**Hit rates associated with coercive measures**

About 82% of the 472 drug tests included in the total sample confirmed illicit drug use, either in the form of single-use or poly-use.

| Table 2. Proportion of positive drug tests by age group and gender². |
| --- | --- | --- |
| Female | Male | Total |
| Proportion | n | Proportion | n | Proportion | n |
| 15–17 | 62.5 | 10 (16) | 77.2 | 95 (123) | 75.5 | 105 |
| 18–20 | 66.7 | 12 (18) | 86 | 271 (315) | 85.0 | 283 |
| Total | 64.7 | 22 (34) | 83.6 | 366 (438) | 82.2 | 388 |

A comparison with recent national statistics calculating hit rates between year 1998–2015 (Brå 2016) shows considerable differences. Based on the numbers presented thereport by the The Swedish National Council for Crime Prevention (Brå, 2016), the hit rate for the age span 15–20 (all genders, all years) was approximately 66%, which is 16 percentage points lower than the hit rate in the current sample. Overall, the proportion of positive tests is thus considerably higher in this study than is the case for the figures for the country as a whole, with the exception of girls in the age group 18–20, where the hit rate is lower. A study by Estrada et al. (2022) covering 15–20 years in the three biggest cities in Sweden between 1998 and 2015 found considerable differences in hit rates over time, spanning between approximately 65 and 77%.

**Discussion**

**Modes of detection**

The content analysis of the circumstances associated with the detection of suspected drug use and possession among adolescents and young adults resulted in the identification of five modes of
detection: *vehicle-related situations, checks and patrol, officer response, house searches and other*. With the exception of *officer response*, all themes can generally be categorized as involving proactive and self-initiated policing strategies. Nonetheless, around 34% of the situations were related to officer responses to calls to the alarm center or calls from security officers or members of the public. This represents a minimum estimate since ‘hidden calls’ might exist in other themes, without having been explicitly mentioned in the documents.

These proportions are nonetheless somewhat comparable to those reported in a study by Gaston and Brunson (2020), in which 71% of drug arrests were based on proactive policing (pedestrian and traffic stops), while officer response (reactive policing) accounted for 19% of arrests, a smaller proportion than in this study. Vehicle-related detections account for about one-third of the detection situations included in the current material, which mirrors previous research on street-level drug enforcement (Gaston & Brunson, 2020).

As was shown in the results section, the categorization of different strategies as either proactive or reactive is not clear-cut. Given the many ways of engaging in proactive policing, the conceptual terminology is sometimes ambiguous in both practice and research, especially in the field of drug enforcement (Bacon, 2016; Mazerolle et al., 2007). This is also the case for this study. Documented phrases such as ‘working proactively against drug crimes’ are cues to a strategy, but they contain little information about the actual activity engaged in.

Further, the explicit mention of proactivity as an enforcement strategy in relation to youth drug use is rather rare in the documents examined in the study, but cues in terms of the wording employed (*problem-oriented policing, drug preventive work or routine stops*) indicate that self-initiated checks directed at youths in public spaces are frequent. Evident in this study as well as in others (Quinton, 2011) is that the police often make contact to ‘control’ individuals, in order to look for further cues that can confirm suspicion. Why the police initiate contact in the first place was hidden behind descriptions such as ‘routine stop checks’ in Quinton’s ethnographic study (Quinton, 2011), a term frequently found in the material for this study.

The results from the current study suggest that more than one-third of the detection situations were initiated wholly or partly in relation to crimes other than suspected minor drug offenses, which is shown by the proportion of situations that also involve suspicions related to non-drug offenses, and the proportion involving officer-response situations. These results mirror those of a study by Houborg et al. (2016), which found that around one-fourth of all drug cases were by-products of activities related to other forms of suspected crime or order disturbance.

The categorization of officer response as reactive might be questioned as the officers still have considerable room for action once arriving the scene. Following the logic of Gaston and Brunson (2020), officer response has in this study been categorized as reactive due to the way the response framework limits (but does not erase) officer discretion. In addition, responding to calls for service ‘forces’ the police towards certain settings that are visible to the public, thus limiting the effects of strategic drug-enforcement decision making and contributing to a skew in the locations in which drug offenses are detected, such as public or semi-public spaces.

Indeed, the data reveal that drug enforcement focused on personal use for the most part takes place in public and semi-public spaces (streets, parks, malls, train stations etc.), and is focused on pedestrians, park visitors, youths who are ‘hanging around’, and cars. Group of (male) youth in public space as ‘targets’ for police suspicion mirror the findings in previous research (Quinton, 2011; Solhjell et al., 2019). The frequent use of public spaces by adolescents and young adults makes them more vulnerable to police stop-and-search practices and their possible consequences (Flacks, 2018).

Very little enforcement activity is focused on bars or clubs, or other similar premises/party settings where youth tend to gather. This is surprising given that these settings are associated with both licit and illicit substance use among adolescents and young adults (Nordfjærn et al., 2016). However, the police are often left with the discretion to outsource policing activities to groups such as security officers, staff and bar owners in semi-public spaces, and rely on the cooperation of these premises.
Grounds for intervention

It is evident from the study that the formulation of drug-use suspicions is standardized, given the frequent use of similar phrases referring to eyes being bloodshot, pupil size and other aspects of physical appearance and behavior. As such, the documents include descriptions of the legal grounds for suspicion formation, although these are very subjective given the many different kinds of substances used, and their different effects on appearance and behavior. Signs of intoxication are normally required to meet the requirement for reasonable suspicion for drug use (Andersson 2017). The findings also mirror results from similar studies (Houborg et al., 2016; Quinton, 2011).

While the grounds for the formulation of suspicions of drug use are most often documented, the grounds for conducting searches and for suspicion formation in relation to possession offenses are less often documented. From time to time the documents do include reasons for these activities, such as the apparent smell of cannabis, avoidance behavior, nervousness or drugs being visible. Often, however, grounds for suspicion are not documented, or signs of intoxication are mentioned as the sole ground. Andersson (2017) notes that signs of intoxication are in general not sufficient to meet the criteria for reasonable suspicion for possession, and that additional circumstantial cues are needed.

What is evident from both this study and others (Gaston & Brunson, 2020; Houborg et al., 2016; Quinton, 2011) is the subjective nature of the grounds for police interventions in relation to suspected minor drug offenses, with these decisions being based on officers’ interpretations and evaluations of a person and a situation. As was seen in the qualitative results section, there are situations that involve two or more individuals where coercive measures are used against one individual but not the other. Why certain coercive measures were taken against only one individual is a matter of speculation.

As earlier mentioned, the data do not allow any conclusions about actions that were not taken, only those that were (and that were described).

Since this material relies upon documentation that was written subsequent to the incidents described, it does not necessarily reflect the actual interpretations made by police officers in the moment. Houborg et al. (2016) found disparities between how encounters were described in the police files, and how the officers in interviews verbalized the reasons for their interventions. The authors suggest that some grounds may be viewed as being more appropriate than others when it comes to formally recording the legal reasons for a search. Since suspicion formation partly relies on experiential knowledge, which shapes ‘typologies’ regarding whom should be acted upon and in which situations (Bowling, 2007; Tillyer et al., 2012), these in-the-moment interpretations are not easily accounted for and transformed into concrete grounds for interventions (Quinton, 2011).

Hit rates

The results from the study show a high hit rate compared to other Swedish reports and studies on enforced drug tests among youth (Brâ 2016; Estrada et al., 2022). The high hit rate suggests that the use of discretion contributes to effectiveness and well-targeted interventions (Tillyer & Klahm, 2011). Estrada et al. (2022) found in their longitudinal study that the hit rate was higher for groups that were more frequently tested, and discussed whether this was a consequence of the police focusing on known users, and/or whether enforced drug tests were performed in direct connection with non-drug-related offenses.

The high hit rates in this study, the level of repeat minor drug offenders in the material, and the overlap with other crime types suggest that the police to some extent target individuals who are already known for involvement in crime in general, but also that the police do indeed perform drug tests in connection with other crimes.
Policy implications

This study may be of use to practitioners and policy makers in two ways. The first of these relates to legal issues and the second to the use( fulness) of enforced drug tests as an enforcement practice. First and foremost, the results section shows that the grounds for body searches are at times poorly documented, and it is not always evident in the police reports that a body search has been performed, unless additional information such as confiscation records is also included. Given the research design of this study, there is no way of knowing why this is the case, but as Andersson (2017) has noted, neither Swedish law nor the legal texts describing how the law should be implemented provide the police with concrete guidelines as to when body searches should be performed. The lack of information regarding the grounds for reasonable suspicion for body searches suggests the need for a review (and perhaps a reformulation) of this practice both at the street-level and from a legal point of view.

Secondly, in the context examined in this particular study, it is important to emphasize that the use of enforced drug tests is viewed as a tool for general prevention and the early detection of specifically young drug users. However, the police should also work proactively and in a targeted way against drug crime and publicly visible drug scenes in general. There is an underlying tension between proactive police work, which has been proven to be effective against open drug scenes and crime hot-spots (Mazerolle et al., 2007; Wu & Lum, 2017), and general prevention, which requires detecting adolescents and young adults who are ‘new’ to drug use in order to provide opportunities for early intervention. This in turn requires both increased knowledge on high-risk settings for drug use that are gender-sensitive (only eight percent are girls in this data set), and an extension of the focus of detection work beyond the street-level activities that primarily lead to the detection of users (and dealers) who frequent public spaces.

Finally, weak international and national evidence in support of various drug enforcement strategies and their effects in general (Flacks, 2018; Mazerolle et al., 2007), and enforced drug tests more specifically suggests a need for caution in relation to the extensive use of intrusive measures and over-enforcement in relation to adolescents and young adults. This is due to concerns about both stigmatization and the effects of intrusive measures on public trust towards the police and the justice system, and thus the legitimacy of these institutions (Flacks, 2018; Slocum et al., 2016; Solhjell et al., 2019).

Limitations

Finally, a number of limitations associated with the study’s research design should be addressed. The study does not contain any background information on the individuals subjected to police interventions, such as whether they have previously been suspected of drug-related offending. Further, the use of documents as the main data source is associated with both strengths and weaknesses (Bowen, 2009). While such data allow for the processing of large quantities of information, they may lack important information relating to the aim of the study, such as ‘thick descriptions’ of the event, strategies and decision making (Bowen, 2009). Variations in the richness of the free texts describing situations and the reasons for police activity have consequences for reliability when comparing cases and identifying themes. Another weakness is that the study excludes all police activity that does not result in the registration of a suspected offense, which means that it provides an incomplete picture of the drug enforcement activities directed at adolescents and young adults. Finally, the nature of the data do not provide an opportunity for making inferences about the quality and frequency of different policing strategies. As others have suggested, the exact nature and extent of different forms of proactive strategies directed at minor drug offending need to be researched on the basis of more sophisticated designs and material (Wu & Lum, 2017).
Notes

1. Some suspicions were dropped because test results came back negative for illicit substances, or because searches yielded no findings of illicit substances.
2. Two drug tests were excluded for this analysis due to a lack of test results.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

Susanne Egnell is a PhD student at the Department of Criminology, Malmö University, Sweden. Her research focuses on drug policy, drug enforcement and the use of coercive measures, including under what circumstances and against whom they are used.

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References

Title: Examining ethnic disparities in enforced drug tests and body searches: An analysis of youth suspected of minor drug offenses

Abstract

Ethnic disparities in drug law enforcement have been noted in several previous studies investigating arrest rates, search rates, and hit-rates. Evidence also suggests that ethnic disparities tend to increase with restrictive drug law enforcement that focuses on minor drug offenses. The Swedish drug policy has a strong focus on drug use and possession offenses, where the enforcement of those offenses has increased over time. The targeted population is decreasing in age. Using police data on the success rates of enforced drug tests and body searches associated with suspicion of drug offenses among youth, this study explores both ethnic differences in exposure to enforced drug tests and ethnic disparities in the hit rates of drug tests and body searches among youth aged 15-20. The results suggest that youth exposed to enforced drug tests are more likely to be born outside Europe, be male, and have unemployed fathers. Results from the hit-rate test show that youth born outside Europe are more likely than youth born in Sweden to be body searched and drug tested with a negative result when controls are included for socioeconomic status, gender, repeat drug offending, and neighborhood drug crime characteristics. The results are discussed in the light of previous research and theoretical approaches to ethnic disparities in drug enforcement.

Introduction

Over the years, numerous studies have focused attention on the question of who is suspected and sanctioned for crime, and of possible ethnic bias at different stages of the criminal justice process (Blumstein 1982; Bolger & Lytle 2018; Engen 2002; Kochel et al. 2011; Piquero 2008; Sampson & Lauritzen 1997; Zane & Pupo 2021). The so-called “War on Drugs”, involving tougher drug enforcement practices and increased arrest rates among low-level drug offenders in the US in particular, but also in other Western countries, has focused attention on drug law enforcement. Research suggests that repressive drug enforcement practices risk producing increasing ethnic disparities in the criminal justice system (Blumstein 1993; Fellner 2009; Lynch 2012; Tonry & Melewski 2008).

The research on selective drug enforcement is still very US dominated, but some recent evidence suggests that ethnic disparities in drug enforcement can also be found in the Scandinavian context (Brå 2023; Estrada et al. 2022; Moeller 2010, 2020). However, more research is needed, especially given that Sweden has seen an increased focus on minor drug offenses in recent decades, with the criminalization of drug use and an increase in the use of coercive measures (Brå 2016; Estrada et al. 2022). These developments guide the focus of the present study, which explores the question of ethnic disparities in drug enforcement in a Swedish context.
Using police data on reported minor drug offences, and on body searches and enforced drug tests and their outcomes, the study explores the risk of being subjected to enforced drug tests in relation to ethnic background, gender and socioeconomic status. In addition, the study examines disparate outcomes (in hit rates) based on ethnic background in relation to the coercive measures used against a sample of young people aged 15 to 20. Given the sensitive and intrusive nature of this unique aspect of the enforcement of Swedish drug policy in relation to minor drug offences, it is relevant to improve our knowledge about the accuracy of coercive measures, and about whom these are used against and possible ethnic disparities in the enforcement process. Two research questions are examined:

1) How do the sample registered for drug use offences by the police differ in terms of ethnic background, available measures of socioeconomic background and gender when compared to a school sample of youths who have used drugs?

2) Does ethnic background matter in relation to disparities in hit rates for drug tests and body searches when controls are included for socioeconomic background, gender, repeat drug offending and neighborhood (crime) context?

Factors that influence officer behaviours
Overrepresentations of certain groups can be found throughout the justice system, and researchers have emphasized the importance of the cumulative effects of ethnic disparities at multiple stages of the criminal justice process and over the life course (Engen 2002; Piquero 2008; Sampson & Lauritzen 1997; Spencer et al. 2016). The police constitute a natural starting point for examining this issue, not only because they are the first point in the justice system that comes into contact with the potential suspects but also because they enjoy wider discretionary powers than many other actors (Eastwood et al. 2013; Piquero 2008; Spencer et al. 2016).

The concept of police discretion has long been associated with worries about bias and discrimination towards certain groups in society (Reiner 2010). As early as the 1980s, Blumstein (1982) noted that ethnic disparities in a prison population convicted of drug offences were more difficult to explain than ethnic disparities for other offences. Scholars have argued that this is due to less serious offences (with few witnesses and victims) being more vulnerable to the effects of discretionary police practices (Beckett et al. 2005; Blumstein
Legal factors have been shown to heavily influence police decisions to arrest an individual, with these including the seriousness of an offence and the presence of witnesses, victims or other legal evidence (Skogan & Frydl 2004). In addition, extra-legal factors may influence an officer to make a stop or arrest or to use coercive measures, such as race, socioeconomic status, sex, the age of the suspect, neighbourhood context and officer characteristics (Bolger & Lytle 2018; Estrada et al. 2022; Gase et al. 2016; Holmberg 2000; Koch et al. 2016; Kochel et al. 2011; Lum 2010; Tillyer et al. 2012). Other situational factors may influence the outcome of a stop, such as disrespect and an unwillingness to cooperate (Holmberg 2000; Skogan & Frydl 2004; Sollund 2006). Scholars have noted that police officers work in a high-tempo environment, where they have to make fair decisions quickly, with limited information to hand (Bowling 2007; Glaser 2014; Holmberg 2000; Sollund 2006). This will result in mistakes and unjust decisions, and relying on typological and stereotypical information may be an inevitable consequence of these limitations in the available time and information (Glaser 2014; Holmberg 2000).

A great deal of research has confirmed the overrepresentation of certain groups (minorities, males, youths) in relation to policing in general (Bolger & Lytle 2018; Briggs & Keimig 2017; Engen et al. 2002; Fagan 2022; Kochel et al. 2011) and drug law enforcement in particular (Beckett et al. 2005, 2006; Eastwood et al. 2013; Nyuen & Reuter 2012; Owusu-Bempah & Luscombe 2021; Shiner et al. 2018; Tillyer et al. 2012). Ethnic disparities in the criminal justice system and in drug enforcement have also been noted in a Scandinavian context (Brå 2023; Estrada et al. 2022; Holmberg & Kyvsgaard 2003; Kardell 2006; Moeller 2010, 2020). Despite much previous research that confirms ethnic disparities, the explanations of why ethnic disparities exist is not necessarily apparent.

Understanding ethnic disparities in (drug) enforcement

Previous research exploring ethnic disparities and (drug) enforcement has focused on, among other aspects 1) implicit bias and stereotyping in suspicion formation (Bowling 2007; Beckett et al. 2006; Glaser 2014; Holmberg 2000; Quinton 2011; Spencer et al. 2016), 2) police deployment patterns and neighborhood effects (Briggs & Keimig 2017; Brownsberger 2000; Engel et al. 2012; Gase et al. 2016; Gaston 2019; Meng 2014; Mitchell & Caudy 2015; Shiner et al. 2018), 3) the nature and frequency of offending in different ethnic groups (Beckett et al. 1982; Brownsberger 2000; Kochel et al. 2011; Moeller 2020; Nyuen & Reuter 2012; Piquero 2008; Shiner et al. 2018).
Several studies integrate two or more of these factors in order to isolate the mechanisms underlying disparities. The aspects explored are embedded in theoretical frameworks that emphasize different levels of analysis, chains of causation and actors as being important in relation to disparate outcomes. Many of the above studies (not all are related to drug enforcement, but to policing in general) find partial support for the hypothesis that ethnicity matters and for indications of ethnic bias, leaving room for interpretation. As such, the findings are conflicting and remain US dominated, making it difficult to transfer them to a Scandinavian context. Evidence suggests that implicit stereotypes and previous knowledge about places and people predict differential treatment, and that this is most likely in specific situations involving time pressure (Bowling 2007; Glaser 2014; Holmberg 2000; Quinton 2011). This may have the consequence that ethnic minorities are treated with greater suspicion and that the thresholds for stopping and searching minorities are lower.

Similarly, partial support has been found for the deployment hypothesis in previous research, but place matters in different ways. Place is important as a result of the differential geographical deployment of officers (Brownsberger 2000; Engel et al. 2012; Mitchell & Caudy 2015). In addition, the characteristics of places themselves may influence perceptions of a behaviour (Fagan et al., 2016; Fagan 2022; Gaston & Brunson 2020; Lum 2010). The complicated nature of “place” has been highlighted in studies which suggest that officers tend to form suspicions about people who are deemed to be out-of-place, such as Black people residing in neighbourhoods dominated by Whites or vice versa (Gaston 2019; Gaston et al. 2020; Meng 2014). Finally, there is limited evidence for an effect of disparities in the nature and frequency of offending, at least with regard to patterns of drug use across different ethnic groups. However, the picture may be different with regard to more serious drug use that is not captured by many surveys (and which is more likely to lead to arrest) (Mitchell & Caudy 2015). As Kochel et al. (2011) concluded in a meta-analysis focused on police arrest decisions; race matters, but more theoretically informed and stronger empirically research is needed.

This study explores the importance of ethnicity, while controlling for other sociodemographic and neighborhood variables that have been found to be important in the existing literature. The study uses two of the most common approaches to test for racial bias – the benchmarking test and the hit-rate test.
The benchmarking approach
There is an ongoing scientific debate about how to best measure ethnic disparities in policing, and what evidence of ethnic disparities actually tells us. Previous research has been hampered by methodological differences and weaknesses (Bolger & Lytle 2018; Goff & Kahn 2012; Kochel et al. 2011).

In earlier studies of what some researchers refer to as *disproportional minority contact* with the criminal justice system, a common approach was to compare the demographic composition of those who come into contact with the criminal justice system with the demographic composition of the general population (Piquero 2008), so-called benchmarking. Benchmarking is a very common approach in the research on ethnic disparities in policing in general, but is not without its limitations, as authors have noted (Glaser 2014; Goff & Kahn 2012; Neil & Winship 2019; Piquero 2008). Benchmarking requires additional controls for a number of situational, legal and extra-legal factors that may influence officer decision-making (Neil & Winship 2019). Researchers need to consider that the behaviours that influence police decisions to search or drug test individuals are unequally distributed within the population (Ridgeway & MacDonald 2010). One way of dealing with this problem is by attempting to narrow down the population employed as the denominator so that it more accurately reflects the population that is of interest to the police, and this population’s exposure to the police. Still, incorrect assumptions about what affects police perceptions may lead to fundamental errors (Fagan 2022).

Accuracy in police (drug) enforcement
A second way of measuring bias is to study the success rates of police interventions in relation to various outcomes, the so-called hit rates of searches or stops. In this case, what is investigated is the accuracy of police decisions, and possible patterns associated with hit rates. Knowles et al. (2001) have argued that hit rates provide a better measure of racial disparities since their validity is not dependent on disentangling the police’s motivations for stops, which may be very difficult for researchers to observe. While hit-rate tests have been subject to valid criticisms (Ayres 2002; Neil & Winship 2019), they are widely used as a test of ethnic bias in policing. While unfounded suspicions are a natural and necessary part of daily police work, systematic disparities in hit rates may indicate that the police act upon less well-founded suspicions in relation to certain groups in society (Fagan et al. 2016).

Several studies have investigated hit rates as a means of examining the accuracy of body searches for drugs and contraband, or the arrest rates resulting from stops. Swedish studies
have found that ethnic background plays a mixed role in officer decision-making in relation to coercive measures, and also in relation to the hit rates associated with such measures (Brå 2023; Estrada et al. 2022; Pettersson 2005). These studies confirm that individuals of non-European or non-Western background are at increased risk of being subject to drug tests or body searches that produce a negative result compared to individuals of Swedish or European/Western background, although the discrepancies are rather small (Estrada et al. 2022; Pettersson 2005), and varying in their magnitude depending on region of origin (Brå 2023). One of the single most important factors for being subjected to a negative test is living in a poor metropolitan area (Estrada et al. 2022), which suggest that other, overlapping, factors are important for explaining ethnic disparities in drug enforcement.

International studies of hit rates have also produced mixed results with regard to ethnic background. Most studies confirm that minorities are more likely than whites to be stopped and searched by the police, but the differences in hit rates for arrests, drugs or other contraband are quite small (Eastwood et al. 2013; Engel et al. 2009; Engel et al. 2023; Fagan 2022; Feigenberg & Miller 2022; Gross & Barnes 2002; Knowles et al. 2001; Kovera 2019; Persico & Castleman 2005; Pierson et al. 2020; Ridgeway 2007; Shiner et al. 2018). Fagan (2022) found that when stopped, both Black and Latino Americans were less likely to be sanctioned and to be carrying contraband. The study also found that certain suspicion-related cues were more often applied to Latino and Black suspects, a finding that together with the lower hit rates strengthened the evidence for ethnic bias. Shiner et al. (2018) reported that drug searches had lower hit rates than other searches, and that (small) ethnic disparities in hit rates were found only for drug searches. Similarly, results from a second report showed that arrests for suspicions related to drugs were associated with lower success rates than arrests for other offences (Eastwood et al. 2013). This again is an indicator of a wider use of discretion for drug offences than for other offences, and suggests that extra-legal circumstances may play a greater role in relation to suspicion formation for drug offences.

The present study contributes to the existing literature on hit rates by focusing on both body searches and drug tests, and by including not only individual background characteristics but also the neighborhood drug crime context.

The Swedish context
As many countries are witnessing a liberalization of drug policy (European countries, Canada and some states in the US) with the legalization of cannabis and the decriminalization or depenalization of the personal use of illicit substances (Colson & Bergeron 2020; Greer et al.
2022), Sweden’s restrictive policy approach towards personal drug use remains intact. While some form of prohibition of the consumption of illicit substances is in place in about half of the countries of the European Union (specified as a specific offence), very few countries actually enforce the criminal code in this respect (EMCDDA 2018). Increased penalization and the availability and use of coercive measures in relation to drug crime has been a characteristic of drug policy trends in the Nordic countries over recent decades (Larsson 2014; Träskman 2005). In 1993, prison was included in the sentencing scale for drug consumption in Sweden, which made it possible for the police to forcibly test for drug use in order to investigate drug consumption offences (Träskman 2005). The police have furthermore been assigned an important role in drug policy in combating both drug use and the supply of drugs.

In order to enforce a drug test, the police must demonstrate a reasonable suspicion of drug use. Sweden has seen an intensification in the use of enforced drug tests (Brå 2016). In addition, the mean age of the population drug tested on suspicion of illicit drug use has decreased over time (Brå 2016), and youths, men, individuals of non-majority background and those with low socioeconomic status have a higher risk of being subjected to enforced drug tests than other groups (Brå 2023; Estrada et al. 2022).

The current study
This study is based on a cross-sectional design, using police data covering one year of reported minor drug crimes in a single city, with suspects in the age span 15-20 years. The study is based on three main data sources: i) reported minor drug offences (police documentation), ii) background variables from Statistics Sweden (SCB) relating to the suspects and iii) a health-related school survey conducted by Region Scania. The study was approved by the Swedish Ethical Review Authority Dnr 2021-05720-02.

Data and method
i. Reported drug offences
The documentation from the police consists of written reports that include the police officer’s interpretation of the situation, geographical coordinates for the crime incident, the suspect’s date of birth, coercive measures (body searches and drug tests) and the results of these coercive measures (lab reports on confiscated substances and drug tests). The data cover registered minor drug crime reports (drug use and possession offences) for the period of one year (2018) in Malmö that involved suspected individuals aged 15-20. A majority, but not all, of the reported individuals live in Malmö. The police files were not accessible in their entirety, which means that interrogations and memoranda that may more thoroughly describe
the incidents have not been included in the data. It is difficult to assess much of the information that is missing, since memoranda may contain more information about the incident that is relevant to the study, such as on coercive measures taken by the police, but they may also contain information that is not relevant, such as phone calls to parents, correcting mistakes in the filing etc. In addition, memoranda are not filed in relation to all incidents.

A total of 646 unique case reports relating to minor drug offences were received from the police. For the purpose of this particular study, 16 case reports were excluded, mostly due to a lack of information or to the case having involved someone of the wrong age, or the incident having occurred in a different city. The final sample comprises 432 individuals, of whom 384 have been included in this study since they had been drug tested and/or body searched. In addition to the case files described above, data including geographical coordinates were collected for reported use and possession offences for persons of all ages (N=5851) for the years 2017 and 2018. These data were used to measure the intensity of enforcement activities across small geographical areas (DeSO).

ii. Background variables from Statistics Sweden (SCB)
SCB provided information on socioeconomic conditions, region of birth and parental level of education for the reported individuals. Following the exclusion of cases with incomplete or non-Swedish personal identification numbers, identification information for 438 unique individuals was sent to SCB. 432 unique individuals came back as valid (6 having been excluded due to errors in their personal identification numbers). 96 individuals (about 22 %) are repeat suspects, i.e. they had been reported more than once for minor drug offences in the course of 2018.

iii. School survey data
In order to draw conclusions about the over- or underrepresentation of certain demographic groups, a school survey conducted by Region Scania has been used. Two waves of data from a repeated cross-sectional school survey conducted in Region Scania (2016, 2021) on children and young adults’ living conditions and health outcomes in region Scania were used to explore use of drugs among a sample of 9th graders and students in upper secondary school (N=6947). The surveyed adolescents were attending either their final year of lower secondary school, or their second year of upper secondary school in the municipality of Malmö. and the majority also lived in the municipality (84.5 %). This approach is similar to the one used by
Brå (2018), in a study that compared youths suspected of minor drug crimes in Stockholm, Sweden to responses on the use of illicit substances in a surveyed school population.

The response rates in the Region Scania survey were 78.2% in 2016 and 72% in 2021. These response rates relate to survey as a whole, which was sent to schools throughout Region Scania. The response rate for the sample used in the current study is unknown. The technical report from the 2016 survey presents response rates for the different municipalities, with Malmö municipality having a response rate of 72% (upper secondary school) and 73% (9th graders). This is somewhat lower than the response rate overall, but nonetheless represents a good response rate.

Variables employed in the population comparison
The sample reported for drug use consists of youths tested for illicit substances upon suspicion of drug use (N=363), for whom demographic variables have been collected relating to gender, ethnic background and parental employment. The denominator to which the sample of reported youth are compared consists of those students who frequently use illicit substances, and is based on comparable demographic variables. The survey measures are standardized and broad, and measure ever having used illicit substances, use during the last year and use in the last 30 days. 12% (n=817) reported that they had ever used illicit substances and 3.8% (n=229) that they had used illicit substances in the last 30 days. Although not perfect, the measure of use in the last 30 days may indicate a more frequent use of illicit substances and this population was viewed as comprising the most suitable comparison group for the sample of reported youth.

Variables in the analysis of hit rates
Outcome variable
This analysis is based on a single main binary outcome variable, which combines the hit rates for drug tests and body searches. Hit rates for drug tests and body searches were combined in order to increase the number of observations in the outcome variable, thus providing a basis for more stable analyses, since the sample is relatively small.

The combined outcome variable has two categories – high accuracy (n=288) and low accuracy (n=96). This categorization is based on a continuous variable that takes into account different outcomes for several body searches and/or drug tests performed on the same individual. The continuous variable ranges from 0 to 1, with 0 representing zero “hits” on any drug test and/or body search performed on that individual, while 1 represents a “hit” on all drug tests and/or body searches performed. Hit rates ranging from 0-0.5 are categorized as
low, whereas those above this threshold are categorized as high. Since the continuous outcome variable is skewed and the sample relatively small, it makes sense to group the variable into two categories in this way.

The material includes several types of body searches, both discretionary and mandatory\(^1\). Only discretionary searches that were explicitly based on a suspicion of drug possession\(^2\) were included in the outcome variable, since the hit-rate test is based on an assumption of discretionary searches (Engel et al. 2023; Pierson et al. 2020). A hit is defined as illicit substances being found in relation to the search. Substances found on the ground or in cars or apartments searched in connection with the same incident are counted as hits.

**Independent variables**
The independent variables mainly comprise demographic variables collected from SCB. All background variables were collected for the year 2018.

*Ethnic background* is a categorical variable with three categories; *born in Sweden* (n=264), *born in Europe* (n=30) and *born outside Europe* (n=89).

*Gender* is a dichotomy: male (n=353) and female (n=31).

In order to control for socioeconomic background, a *SES-index* (scale 0-1, from low to high SES, n=333 was created using four variables; parental educational level, disposable family income, employment status and main source of income (on welfare yes/no) (α = .758). The use of an index provides a certain level of validity that we are actually measuring socioeconomic status, which constitutes the primary interest of the current study.

Socioeconomic background has been included because studies show that SES may be associated/overlap with ethnicity (Engen et al. 2002; Koch et al. 2016).

The study includes information about the reported sample’s area of residence, DeSO (demographical statistical areas). The DeSO is a geographical unit created and managed by SCB that is stable over time, and Malmö comprises 192 DeSO-areas. A neighborhood

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\(^1\) Examples of mandatory searches are in case of arrest or youth being taken into care.

\(^2\) Some searches are based on a search protocol that explicitly states a suspicion of drug possession (crime code). Other discretionary searches in the material indicate that they were conducted based on a suspicion of drug possession, but with no protocol. These latter have been excluded from the outcome variable. A report from Brå (2023) has confirmed the presence of an inadequate documentation of body searches. With some uncertainty, 177 individuals had been body searched (note that these individuals may have been body searched several times over the course of 2018). The material includes a body search protocol relating to drug suspicion for 99 of these.
variable, *economic standard of residential area* (as defined by SCB), was used in order to explore associations between SES and hit rates. Open data from Statistics Sweden on the *median economic standard* of Malmö municipality and the surrounding areas for 2018 was collected at the DeSO-level (N=418). DeSO-areas were divided into three categories of economic standard using Malmö municipality and the surrounding areas as a reference point. Low economic standard includes youth living in DESO in the bottom 20% of the distribution (n=41), high economic standard includes DESO in the top 20% (n=41), and the rest is categorized as mid-range economic standard (n=168). The variable was not included in the final logistic regression model, but was used in a bivariate analysis.

In addition to the demographic variables, a *repeat suspect* (yes/no) variable was added to the analysis. This is a dichotomized variable based on whether or not an individual had been reported for a minor drug offences more than once in 2018 (no, n=293/yes, n=91).

Finally, a variable on geographical variations in *enforcement intensity* (n=383) was included in the analysis, based on the assumption that being detected and reported in an area with a high level of drug enforcement intensity increases the likelihood of being suspected on looser grounds (which would be expected to result in a lower hit rate). The geographical coordinates linked to the individual crime reports (based on the first offence report for repeat offenders) were aggregated to the micro-areas (DeSO). Coordinate data on all reported minor drug offences (N=5851) in Malmö in the years 2017 and 2018 were also aggregated to the DeSO-level (N=192). This made it possible to see the minor drug crime rates for the specific area in which a given individual had been reported.

**Analytical approach**

The following analyses were performed to answer the two research questions. The population comparison (benchmark test) between the sample tested for drug use and the sample who self-reported illicit drug use is presented in a descriptive tabulation (i). Chi-square tests were conducted in order to explore group differences.

For the hit-rate analysis using the combined outcome variable, initial bivariate analyses are presented together with chi-square test and t-tests (ii). Finally, a logistic regression (iii) was

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3 Economic standard is calculated by SCB based on a household’s disposable income summed across all the members of a household. The sum is then adjusted according to the size and composition of the household, and then divided equally among the household members (SCB 2016). The median for every DeSO in Malmö region was collected from open data published by Statistics Sweden.
estimated with the combined hit-rate variable as the outcome variable in order to present the odds ratios compared to a reference group (Field 2013).

Results
This section describes the results in relation to the two research questions. The first part (i) presents the results from the benchmarking test (population comparison) and the second (ii) and third part (iii) present bivariate and logistic regression results from the hit-rate test.

i. Benchmark test
Focusing on the population characteristics of the surveyed youths who reported illicit drug use during last 30 days, these differ from the population of youths drug tested by the police on selected demographic variables. The analysis includes those who had been drug tested by the police in 2018, irrespective of the result of these drug tests.

Table 1, benchmark test. Comparing youth who report drug use during last 30 days to youth drug tested by the police upon suspicion of drug use.

<table>
<thead>
<tr>
<th></th>
<th>Used last 30 days, percent (n)</th>
<th>Drug tested by police, percent (n)</th>
<th>Chi-square tests of independence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Native/non-native background</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Born in Sweden</td>
<td>78.9 (179)</td>
<td>68.2 (247)</td>
<td>(X^2(2)=14.93) p&lt;.001 n=589</td>
</tr>
<tr>
<td>Born in Europe</td>
<td>9.7 (22)</td>
<td>7.5 (27)</td>
<td></td>
</tr>
<tr>
<td>Born outside Europe</td>
<td>11.5 (26)</td>
<td>24.3 (88)</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>34.5 (79)</td>
<td>8 (29)</td>
<td>(X^2(1)=66.16) p&lt;.001 n=592</td>
</tr>
<tr>
<td>Male</td>
<td>65.5 (150)</td>
<td>92 (334)</td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mother</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>72.6 (159)</td>
<td>64.8 (199)</td>
<td>(X^2(1)=3.56) p&lt;.059 n=526</td>
</tr>
<tr>
<td>Not employed</td>
<td>27.4 (60)</td>
<td>35.2 (108)</td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>father</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>74.7 (165)</td>
<td>48.5 (130)</td>
<td>(X^2(1)=34.62) p&lt;.001 n=489</td>
</tr>
<tr>
<td>Not employed</td>
<td>25.3 (56)</td>
<td>51.5 (138)</td>
<td></td>
</tr>
</tbody>
</table>

Chi-square tests of independence were performed in order to explore differences between the two samples on comparable variables. The sample sizes differ across the different variables as a result of non-response or a lack of information on background variables.
As can be seen from Table 1, chi-square tests show that there are significant differences between the two samples in the distributions of ethnic background, gender and father’s occupation. Youths subject to enforced a drug tests are male, born outside Europe and have unemployed fathers to a significantly greater extent than their counterparts in the survey population that reported using illicit substances in the last 30 days.

ii. Hit-rate test
The first section of the hit-rate analysis (ii) presents results from initial chi-square tests and t-tests focused on the independent variables of interest and the combined outcome variable for drug tests and body searches. The subsequent section (iii) presents results from the logistic regression analysis.

Bivariate analysis
In total, 384 individuals were tested for drug use and/or body searched. As previously mentioned, only body searches that include search protocols specifying possession have been included. 99 of these individuals had been body searched and 361 drug tested at least once during 2018.

The main focus of interest is directed at understanding the (in)significance of ethnic background for hit rates in relation to drug tests and body searches, while controlling for indicators of SES, enforcement intensity, gender and repeat minor drug offending. Initial bivariate analyses show that group differences in ethnic background are not significant at a $p$-level of .05, but there is a tendency for youth born outside Europe to have lower hit rates, $X^2 (2, N = 383) = 3.43, p < .18$.

The group with the low hit rate ($n=83, M=.66, SD=.29$) had significantly higher scores on the SES-index than the high hit-rate group ($n=250, M=.58, SD=.31$), $t(331) = -2.1, p = .036$. This suggests that the accuracy for drug tests and body searches is lower for those with higher SES. Separate analyses for the different indicators included in the SES-index confirmed the direction of the association. In addition, a bivariate analysis was performed to examine the relationship between the SES of the individuals' residential area and the outcome variable, in order to verify the direction of the association between hit rates and the SES-index. Here, chi-square tests confirmed the direction; individuals living in areas with a higher median

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4 A total of 363 individuals had actually been drug tested, but for two individuals, no laboratory test results were available, and they were therefore excluded from the analytical sample.
economic standard tended to have lower hit rates ($X^2 (2, N = 371) = 4.82, p < .09$) (not included in the regression model).

With regard to enforcement intensity, the differences between groups with low and high hit rates are not significant. A t-test showed that the low hit-rate group (n=96, $M=84.90$, $SD=102.9$) had higher enforcement intensity scores than the high hit-rate group (n=287, $M=76.52$, $SD=94.3$), indicating that tests on youths registered by the police in areas with higher enforcement levels had lower hit rates ($t(381) = -.74, p = .46$).

There were significant gender differences, with the accuracy being lower for girls than for boys, $X^2 (1, N = 384) = 7.31, p < .007$. The proportion of girls in the sample is very small, however, so this result should be interpreted with caution. Differences between individuals who were registered only once for a minor drug offence in 2018 and those who were registered two or more times were significant, $X^2 (1, N = 384) = 7.30, p < .007$, with higher hit rates being noted for repeat drug offenders.

Additional bivariate analysis for native/non-native background
As noted in the previous section, no significant between-group differences in the outcome variable were found in relation to the main independent variable of interest, ethnic background. Cross tabulations indicate that youths born outside Europe have lower hit rates (31.5 % in the low hit-rate group) than youth born in Sweden (23.5 %) and youth born in Europe (16.7 %). If the definition of ethnic background is changed, however, the tendencies in the data also change. When native is defined as those born in Sweden to Swedish-born parents, and non-native is defined as those born in or outside Sweden with one or more parents born outside Sweden, the direction of the results changes. Using this definition, the native group has a lower hit rate (27.6 % in the low hit-rate group) than the non-native group (23.7 %), $X^2 (1, N = 383) = .62, p < .43$. The tendencies are similar when the hit-rate variables for drug tests and body searches are examined separately.

iii. Hit-rate test logistic regression
Variables were included in the regression model not on the basis of their significance or the model fit but rather based on the research question and previous research (Field 2013). In contrast to the bivariate analysis, only those with registered caregivers are included in the logistic regression, since the SES index is calculated on the basis of information about the registered individuals’ parents.
### Table 2, Logistic regression. Analysis of accuracy for body searches and drug tests, 2018

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Sig.</th>
<th>odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single offender</td>
<td>.673</td>
<td>.356</td>
<td>3.562</td>
<td>.059</td>
<td>1.960</td>
</tr>
<tr>
<td>Born in Sweden (reference group)</td>
<td>ref</td>
<td>ref</td>
<td>ref</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Born inside Europe</td>
<td>- .643</td>
<td>.646</td>
<td>.990</td>
<td>.320</td>
<td>.526</td>
</tr>
<tr>
<td>Born outside Europe</td>
<td>1.139</td>
<td>.384</td>
<td>8.798</td>
<td>.003</td>
<td>3.125</td>
</tr>
<tr>
<td>Female</td>
<td>.903</td>
<td>.429</td>
<td>4.425</td>
<td>.035</td>
<td>2.466</td>
</tr>
<tr>
<td>SES index</td>
<td>1.209</td>
<td>.487</td>
<td>6.163</td>
<td>.013</td>
<td>3.350</td>
</tr>
<tr>
<td>Drug enforcement intensity (neighbourhoods)</td>
<td>.001</td>
<td>.001</td>
<td>.712</td>
<td>.399</td>
<td>1.001</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.695</td>
<td>.452</td>
<td>35.569</td>
<td>&lt; .001</td>
<td>.068</td>
</tr>
</tbody>
</table>

Model $\chi^2$ 26.960  P. < .001
Pseudo R2 .078
Model % (pred) 76.2
n= 332

Note: The dependent variable in the analysis is coded so that 0 = high accuracy and 1 = low accuracy

The results from the regression model (significant categories in bold) show that youth born outside Europe are more likely than youth born in Sweden to be body searched and drug tested with less accuracy/negative results ($p = .003$), when controlling for the other variables. In addition, the model shows that females are more likely than males to be body searched and drug tested with less accuracy ($p = .035$). As note previously, however, since the proportion of women is very small, this finding should be interpreted with caution. Interestingly, the higher an individual’s socioeconomic status, the more likely it is that the individual person falls into the “low accuracy” category ($p = .013$). Being a non-repeat minor drug offender does not mean that an individual is more likely to be searched or tested with less accuracy than a repeat drug offender ($p = .059$), although the low significance level and an odds-level of almost two may suggest otherwise. The hypothesis that being detected and reported in an area with a high drug enforcement intensity is likely to produce lower hit rates is not confirmed in the regression model. The overall model is significant at the .01 level and predicts 76.2 % of the cases correctly. A linear probability model was performed (not shown) with similar results.

Discussion and conclusion
This section discusses results from the benchmarking test and the hit-rate test in relation to the study’s two research questions.

Benchmarking test
The benchmarking test showed that youth born outside Europe are at increased risk of being subjected to an enforced drug test as compared to self-reported drug use in the same age group. This is in line with much previous research on ethnic disparities in drug enforcement

In contrast to a study conducted in Stockholm (Brå 2018), youth born outside Europe were less likely to report drug use but more likely to be registered by the police for drug use. In the Stockholm study, youth born in Sweden were both more likely to report drug use and to be suspected of drug use (Brå 2018). This difference may be due to differences in the definition of ethnic background employed, or it may reflect actual differences in enforcement practices between the two cities. The results focused on exposure to enforced drug tests are also in line with a longitudinal study on the use of enforced drug tests (Estrada et al. 2022), which found that youth of non-majority background had twice the risk of being subjected to a drug test compared to those of native background.

The result from this study may indicate differential treatment on the part of the police, but there are several omitted variables that should be considered. The benchmarking test does not include measures of geographical exposure to the police, which means that it is possible that the differences between Malmö and Stockholm may be due to differences in the geographical deployment of the police. Research has shown that residing in high-crime neighbourhoods or neighbourhoods with low SES is associated with an increased risk for drug arrest/drug testing (Bra 2023; Gaston 2019, 2020; Estrada 2023; Mitchell & Caudy 2015), although evidence for the deployment hypothesis in the explanation of ethnic disparities in drug arrests is mixed (Brownsberger 2000; Beckett et al. 2005, 2006; Engel et al. 2012; ; Gaston 2019, 2020; Mitchell & Caudy 2015).

Similarly, underlying differences in non-drug offending (both concurrent and prior offending) may explain some of the differences. Differences in patterns of drug use and drug offending between different ethnic groups have been found to be unable to explain differences in drug arrests (Kakade et al. 2012; Mitchell & Caudy 2015; Nguyen & Reuter 2012; Shiner et al. 2018), but it may be the case that the nature of drug use (indoor/outdoor) and how drug transactions are conducted (outdoors/indoors, between strangers/acquaintances) varies across different ethnic groups (Nguyen & Reuter 2012). This aspect of the risk for police exposure has been the subject of relatively little research.

The overrepresentation of boys found among those subjected to drug tests by comparison with the sample of youth who self-reported illicit drug use is in line with previous research on drug
enforcement (Brå 2018; Estrada 2022; Koch et al. 2016; Moeller 2020; Nguyen & Reuter 2012). The differences in criminal involvement are also in line with studies of youths who visit out-patient care settings for substance use problems (Anderberg et al. 2022; Anderberg & Dahlberg 2018). Neither the current study or these other studies have been able to explain gender differences in drug enforcement, but several possible explanations have been suggested, such as lenience in enforcement practices in relation to women (bias) or gendered differences in patterns and the nature of drug use and drug transactions that make boys more vulnerable to arrest.

Hit-rate test
The ethnicity-related results from the bivariate and logistic regression analyses of hit rates are in line with previous research, which has shown inconclusive (and small) differences in hit rates between different ethnic groups (Bra 2023; Eastwood et al. 2013; Engel et al. 2009; Engel et al. 2023; Estrada et al. 2022; Fagan 2022; Feigenberg & Miller 2021; Gelman et al. 2007; Gross & Barnes 2002; Knowles et al. 2001; Kovera 2019; Persico & Castleman 2005; Pettersson 2005; Pierson et al. 2020; Ridgeway 2007; Shiner et al. 2018). Race matters, but the significance of race is also equivocal and not always open to a straightforward interpretation. Bivariate analyses showed that the direction of groups differences in hit rates varied depending on the way ethnic background was defined. The importance of the way ethnic background is defined and categorized for results regarding ethnic disparities has been noted in previous studies on both the punishment of youth (Engen et al. 2002) and hit rates (Brå et al. 2023; Shiner et al. 2018). A recent report (Brå 2023) showed that there are ethnic disparities in the success rates in relation to possession (but not drug use), with the analysis showing that the disparities are greatest for individuals with a background in Africa or South-West Asia, compared to individuals with a Nordic background. These results hold when controls are included for gender, age, previous convictions and neighborhood context (ibid.). The nature of disparities varies depending on the ethnic group to which individuals belong, which underlines the importance of having detailed information on ethnic background.

Compared to youth born in Sweden, those born outside Europe have higher odds for being subject to an enforced drug test or body search that results in a negative outcome. Lower hit rates may suggest that the police use standards that are more lax in their decisions to stop minorities. There may also be more subtle mechanisms at play. Qualitative evidence suggests that the police are better at distinguishing “the usual suspects” among the majority population,
while resorting to group-based thinking in encounters with minority populations (Granér 2004; Holmberg 2000).

An alternative explanation proposed by some authors is that specific behaviours and the contexts in which minorities spend their time are more easily interpreted as cues indicating criminal behaviours and as triggers for the attention of police officers (Fagan 2022; Gelman et al. 2007). This is a more implicit form of bias that takes account of the social and geographical environment and its characteristics. The variable drug enforcement intensity was created in order to take aspects of this into consideration, but proved insignificant in the analysis. This result may indicate that neighborhood cues matter little, or it may indicate the presence of measurement errors. Future research should include both non-drug related offences and preferably also other neighbourhood characteristics.

Finally, due to methodological limitations associated with the hit-rate test (Neil & Winship 2019; Ridgeway & MacDonald 2010), we cannot exclude the possibility that the hit rates reflect, in part, underlying differences in distribution of “criminal signs”, which may obscure the test result.

The positive relationship found between high SES and lower accuracy in drug tests and/or body searches stands in contrast to the results of previous studies. Although initially included as a control variable, this finding requires further discussion. A previous study (Petterson 2005) found that individuals who were not on welfare were more often body searched based on drug suspicions than individuals who were on welfare, which is somewhat in line with the results of the current study. Other studies point in a different direction, with low socioeconomic status increasing the likelihood of being suspected or arrested for a drug offence, or being subject to an enforced drug test (Brå 2018; Estrada et al. 2022; Koch et al. 2016). The results from the current study are in line with previous research in so far as youths subject to an enforced drug test had unemployed fathers to a significantly greater extent when compared to the sample that self-reported frequent drug use. On the other hand, the results from the hit-rate analysis are in the opposite direction, with the police being less accurate in the case of suspicions directed at youths with higher SES. By comparison with the study by Estrada et al. (2022) which is the most similar to the current study, the methodological differences are not sufficiently large to warrant results that point in contrasting directions.

Previous studies have pointed to a deployment or neighbourhood effects, with drug enforcement being targeted on certain high crime, poorer neighbourhoods that have a higher
The proportion of minority residents (Bra 2023; Engel et al. 2012; Estrada et al. 2022; Fagan 2022; Marco et al. 2017; Mitchell & Caudy 2015). The sample in the current study were more concentrated to poorer residential areas than the general population in Malmö. One speculation would be that youth with a higher SES who live in disadvantaged neighbourhoods are exposed to police and coercive measures to a similar extent, but that in these cases police judgements are less accurate. The underlying mechanisms would then be that in specific neighbourhoods, officer judgements about cues are distorted, being influenced by an overall perception of a given area as being poor and having a high level of crime (Fagan 2022). Rather than seeing individual cues for crime, officers may instead generalize crime risk to include all individuals residing in the area, resulting in more errors in that specific context (Fagan 2022; Gaston & Brunson 2020). Gaston and Brunson (2020) discuss this in terms of ecological contamination.

A final discussion on the issue of visibility is warranted in the light of the results regarding hit rates in relation to both ethnic and socioeconomic disparities. The hypothesis of biased law enforcement is partly based on the idea that officers can visually distinguish between youth based on visible characteristics that influence officer suspicion formation. This assumption poses challenges in the interpretation of the ethnic disparities found in hit rates, and also for the interpretation of disparities in relation to socioeconomic differences. Socioeconomic differences are not necessarily visible characteristics. The assumption also raises the question of why being born outside Europe is important, whereas having parents who were born outside Europe is not. This further underscores the importance of conducting more careful analyses in relation to ethnicity, where region of origin may prove more important than the rough divisions of ethnicity employed in this study.

Comparisons with previous studies are difficult due to a number of factors: 1) the definition of the outcome variable varies (arrests for drugs, weapons, stolen goods), and 2) studies focus on different types of policing practices, such as stop and search, traffic stops or more general policing. Disparities in hit rates have been shown to vary depending on the type of offence, with drug offences being found to be associated with both lower success rates and wider disparities (Eastwood et al. 2013; Shiner et al. 2018). In addition, law enforcement strategies and guidelines for conducting searches/arrests vary across different countries, which is evident in the way success rate may vary from 5 % for arrests, and 18 % to 45 % for stops for suspicions relating to drugs, weapons and stolen goods in international studies. In the current
study, hit rates vary between 60 and 80%, indicating a more restrictive use of coercive measures, with less room for discretion.

Conclusion
The significant ethnic disparities in hit rates may indicate the differential treatment of ethnic minority youth born outside Europe. At the same time, the differences in hit rates between different ethnic groups are quite small, both in the current study and the existing literature, and are inconclusive, since they are dependent on the definition of ethnic background employed. Limitations associated with the hit-rate test suggest caution when drawing conclusions on the basis of their results. As previous research has shown, the level of detail is important when investigating ethnic disparities, since certain minority groups may experience biased enforcement while others do not. One could also question why youth born outside Europe are disproportionately being stopped if they do not carry or use drugs to a greater extent than the majority population, as has been argued by Gross & Barnes (2002). There is much evidence, both from the current study and previous studies, to suggest disproportionately high numbers of drug arrests among people of minority/foreign background.

It is thus important to study both exposure to searches and/or drug tests, and variations in hit rates in order to more accurately assess indications of bias. Lower hit rates for those born outside Europe, coupled with a higher level of exposure to enforced drug tests, may indicate ethnic bias. At the same time, there are other theoretically informed hypotheses that need to be explored further, such as the deployment of the police, concurrent offending, contextual influences in the areas in which officers work, situational factors associated with the police’s encounters with youth, and the nature drug offending across different ethnic groups. While we cannot exclude that there may be other mechanisms than ethnic bias at play in drug enforcement, we can conclude that drug enforcement produces a disparate impact, both in terms of who is forced to take a drug test, and the success rates associated with coercive measures. As previous research has shown, an expansion of drug enforcement focused on minor offences risks increasing ethnic disparities (Fellner 2009; Moeller 2020). Since drug enforcement is targeted on certain communities and neighbourhoods, this imposes an increased risk on youth in these neighbourhoods of being targeted by coercive measures. The issue of both increasing ethnic disparities and selective enforcement against certain neighbourhoods may pose challenges for proportionality and police legitimacy, especially given the relatively minor nature of the offence in question.
Limitations
This study has several limitations, of which some have already been addressed, such as limitations associated with the hit-rate and benchmarking tests. In addition, there may have been underreporting in relation to both drug tests and body searches based on suspicion of possession conducted by the police, which is more likely to have been linked to body searches conducted in the absence of a protocol (see also Brå 2023). As long as this underreporting is not systematically focused on a specific group, it poses no threat to the study’s conclusions. An obvious limitation is the lack of a variable focused on prior non-drug related offending. Studies have shown that previous registered offending can in part explain ethnic disparities in the criminal justice system (Engen et al. 2002; Estrada et al. 2022; Kochel et al. 2011). A further limitation concerns a possible systematic underreporting of drug use in the school survey. A recent study (Andersson et al. 2023) using an indirect survey method found that the underreporting of drug use was particularly high for individuals born outside Europe when using traditional survey methods. This may have implications for the benchmarking test. An issue associated with the use of socioeconomic background variables based on parental information is that those with no registered parents/caregivers are missing from the SES-index (n=42). A reasonable assumption is that these individuals are unaccompanied child migrants, and excluding them from the analysis has consequences for the ethnic background variable, since almost half (44.9 %) of the individuals born outside Europe lacked registered caregivers. At the same time, a bivariate analysis showed that individuals with no caregivers did not differ significantly on the outcome variable from those with caregivers. Finally, the sample is small, and both regional differences in drug enforcement and differences between rural/urban contexts pose challenges to the generalizability of the study’s results.

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