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A realist review on the police use of stop and search powers

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Abstract

Proponents of police use of stop and search powers argue that they are essential to prevent crime and improve public safety. However, there is increasing evidence that stop and search generates a range of adverse effects, including poor mental health outcomes. Missing from these debates is an understanding of the mechanisms that drive the practice and why and in what circumstances it can lead to negative outcomes. To fill this gap, a realist review was conducted on police use of stop and search of people in public places. Searches of academic and grey literature from January 2000 to December 2022 identified 206 relevant studies from 21 countries. The review identified a range of contextual factors, mechanisms and moderators that affect stop and search outcomes in developing a programme theory of stop and search. The review shows that police stop and search practice can be shaped by contextual factors, such as political climate, organisational priorities and the characteristics of where stop and search is deployed and who is stopped. The review further distinguishes four different mechanisms for stop and search, including three commonly stated justifications for stop and search (detection, deterrence and disruption) and one mechanism increasingly associated with negative outcomes (surveillance). A range of outcomes are also discussed, including crime reduction, attitudes about the police and mental health outcomes. The review brings to the fore contexts and mechanisms that are more (and less) likely to cause negative outcomes from stop and search: a vital contribution to more evidence-informed and just policy and practice.

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Introduction

The police power to stop, question and potentially search members of the public is a core police activity that causes ongoing international debate (Bowling and Weber, 2011). All European countries provide the police with powers to stop citizens, and the issue has become highly politicised in several of them (Aston et al., 2024a, 2024b; de Maillard et al., 2024). Proponents of the use of such powers argue that they are essential to deter people from committing crime, detect offenders and improve public safety. Yet, there is increasing public, academic and governmental concern about the adverse effects that can arise from the unfair use of the practice to target certain groups, particularly Black and minority ethnic groups and young people. Research on communities that regularly experience stop and search and individuals that are repeatedly stopped has shown that stop and search can be stressful, humiliating and traumatic and contribute to less trust in the police and poorer relationships (Akintoye, 2023; Grewcock and Sentas, 2021). Missing from these debates is a fundamental understanding of *how* stop and search 'works' and of *why and in what circumstances* it can lead to negative outcomes.

The majority of studies of stop and search come from the USA, in relation to the practice of 'stop and frisk' or traffic stops (MacDonald et al., 2016; Pierson et al., 2020). In England and Wales, stop and search research gained prominence in the 1980s following a rise in concern over poor relationships between the police and Black communities. Disparities in stop and search were involved in a number of significant historical events, including the 1981 Brixton Riots, which led to the inquiry by Lord Scarman (Hall, 1999). Research and police reforms since this time have attempted to address these disparities, albeit showing that stop and search by police in England and Wales remains highly disproportionate (Akintoye et al., 2022; Delsol and Shiner, 2015; Equality and Human Rights Commission, 2010; Shiner et al., 2018; StopWatch, 2017).

In mainland Europe, less research has historically been conducted. One reason for this is that data on stops are often not systematically recorded and/or available to the public, limiting the ability of researchers to understand the scope and nature of police stop activity (PolStops, 2019). However, there is growing evidence emerging from mainland Europe suggesting that this area warrants further investigation. For example, a recent study published by the European Union Agency for Fundamental Rights (FRA, 2021) examined differences in experiences of police stops between the general population and those with an ethnic minority or immigrant background through a survey conducted in all EU member states. This found that 14% of people surveyed had been stopped by the police in the previous 12 months (27% in the previous 5 years), and that these stops were most commonly experienced by men, young people, ethnic minorities, Muslims or people who do not identify as heterosexual. In some countries, over 80% of ethnic minorities perceived their most recent police stop to be a result of ethnic profiling (FRA, 2021).

A recent systematic review and meta-analysis examined the relationship between police stops and several outcomes: area-level crime and disorder, individual and

community-level attitudes towards the police, individual mental and physical health outcomes, self-reported crime and/or delinquency and violence in police–citizen encounters and officer misbehaviour (Petersen et al., 2023). The results of this study confirm the association between stops by the police and both intended and unintended outcomes. The evidence suggests that at the geographic level, an average 13% reduction in recorded crime was observed in areas with intensified levels of stop and search. However, at the individual level, being the subject of a stop was associated with an increase in the odds of a mental health issue[1] of 46% and of a physical health issue[2] of 36%. Those stopped by police also expressed more negative attitudes towards police (18.6% more negative than those not stopped). However, this systematic review focused on outcomes, not on how and under what conditions these outcomes are generated.

This article presents a realist review of the police use of stop and search that aims to provide a realist synthesis of the international literature published between 2000 and 2022 and to produce a programme theory for the police use of stop and search. The aim and approach of a realist review differ from those of a systematic review that aims to comprehensively appraise all available evidence on a topic to provide an aggregate measure or effect size of the intervention's effectiveness across the existing evidence. Realist reviews, in contrast, seek to examine and analyse not only outcomes, but also the contexts and mechanisms under which particular outcomes are found. In so doing, they seek to show what combinations of contexts and mechanisms produce particular outcomes (see, e.g. Masterton et al., 2022; Mukumbang et al., 2018; Stevens et al., 2022, 2023). It is our contention that a better understanding of the mechanisms and contexts of stop and search can aid in understanding and improving policy and practice.

Methods

Realist reviews employ systematic methods for searching and synthesising literature, albeit with a more iterative and adaptive approach than systematic reviews. A realist enquiry is guided by a generative model of causality, which posits that inferring a causal outcome (O) requires an understanding of the underlying mechanisms (M) and the circumstances or 'context' (C) within which they occur (Wong et al., 2013). This review was conducted through the following stages: development of an initial programme theory, literature search and selection, data extraction and realist synthesis. The realist review protocol was published in PROSPERO in July 2020.[3] It is reported here in accordance with the RAMESES standards for realist reviews (Wong et al., 2013).

Initial programme theory

Developing initial programme theories can sensitise the analysis to a broad range of contextual factors and mechanisms. It is the role of the researchers to identify those factors which are 'common and significant enough to contribute to the pattern of outcomes of the intervention' (Wong et al., 2013: 6). Empirical evidence is then reviewed to populate the theoretical framework, 'supporting, contradicting or modifying the programme theory as it goes' (Pawson et al., 2005: 21).

Search strategy

Searches were conducted in August 2020 and April 2023 across eight academic databases (Criminal Justice Abstracts, Web of Science, PsycINFO, Scopus, ProQuest Criminal Justice Database, Sociological Abstracts, ProQuest Theses and Dissertations and CINCH) and a specialist police grey literature database (National Police Library). The following search terms were used:

1. (police OR policing OR "law enforcement" OR cop* OR officer OR constab* OR sheriff OR detective)
     AND
2. (("stop and search" OR "stop and frisk" OR "terry stop" OR "street stop") OR (stop AND search) OR (stop AND frisk) OR (search AND seizure))

From the database and grey literature searches, 6899 records were identified. These were imported into EndNote and de-duplicated. A master dataset was then transferred into Endnote for screening.

Inclusion/exclusion criteria for selecting documents to review

To be included in the review, documents had to meet the following inclusion criteria;

1. Contained empirical data on the context, mechanisms and/or outcomes of police stop and search activity
2. Data collected refer to pedestrian or person stops[4] only (not traffic stops[5]) by police officers
3. Published between January 2000 and December 2022[6]
4. Utilised a quantitative, qualitative or mixed methodology

At each stage of screening (title and abstract and full text), studies were appraised according to the inclusion criteria and the ability of the data to contribute to the programme theory. This meant that studies were required to demonstrate a clear link to stop and search activity or outcomes by either identifying a contextual factor or mechanism that had a measurable impact on stop and search or by directly measuring stop and search outcomes. For example, studies that examined policing in general or specific aspects of policing (e.g. police discretion) but only mentioned stop and search in passing were excluded. Legal cases or law reviews that provided a legal opinion or discussion of stop and search laws without including empirical data were also excluded. To ensure consistency of reviewing, all three reviewers appraised a sample of documents and amended the inclusion criteria for application to the broader sample.

Figure 1 shows the screening process and number of records identified at each stage. Two stages of screening were conducted, first of title and abstracts, and then of the full-text documents, resulting in 433 full-text studies to be reviewed. Of these, 206 were included in the review.
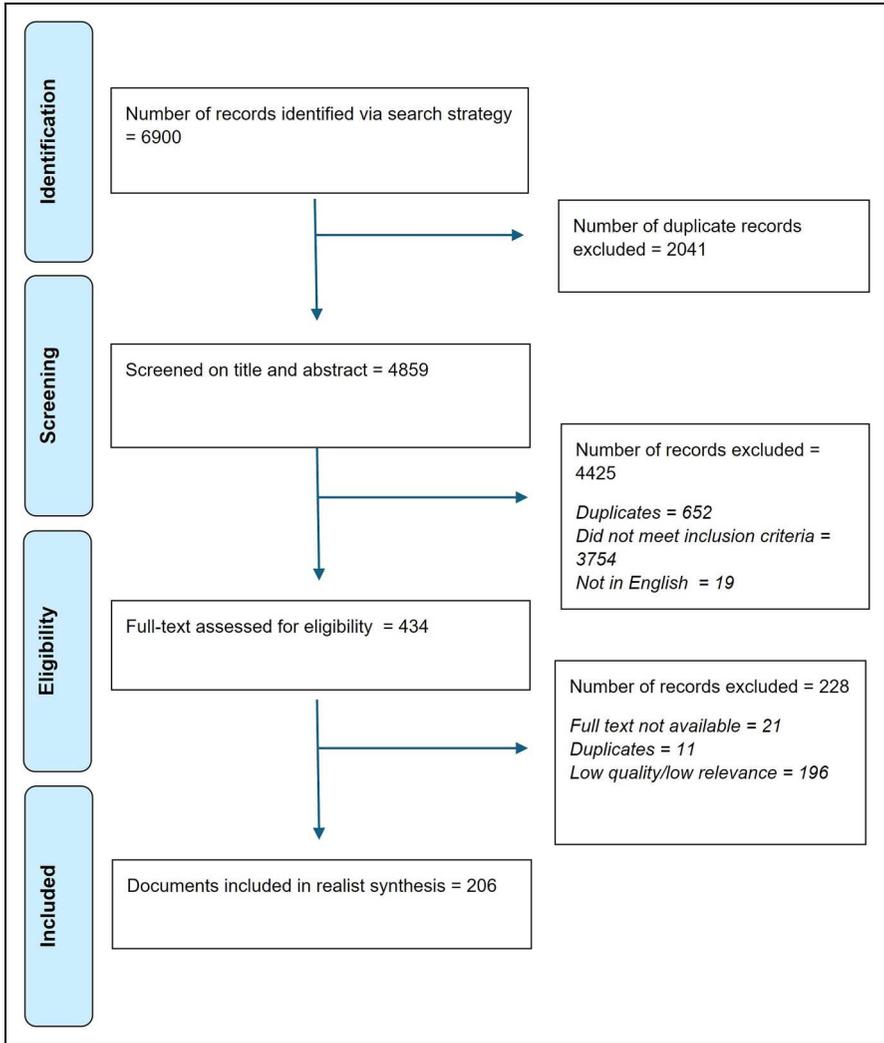
Figure 1. PRISMA diagram.

Methodologies and quality of studies

A wide range of studies and study methodologies are relevant to realist synthesis. Decisions on inclusion/exclusion were based on an assessment of *relevance*, *richness* and *rigour*, as opposed to standardised quality appraisal tools (Bunn et al., 2018; Dada et al., 2023; Wong et al., 2013). All studies were subject to quality appraisal by the reviewers. Each study was appraised in relation to its ability to contribute to the programme theory and to employ a sufficiently robust and trustworthy methodology to support the research claims. For example, some studies were excluded due to poor

quality, as indicated by small samples, inadequate reporting of limitations or claims that
were not supported by data.

Data extraction

Data were extracted from the included studies in NVivo. Using the initial programme
theory, a coding framework was designed to capture data relating to the realist areas of
inquiry: context, mechanisms, moderators, outputs and outcomes (see Figure 2 for defi-
nitions). The coding process was adaptive, with codes added to the coding framework as
new concepts were found in the studies (Layder, 1998). The final coding framework can
be found in the Supplementary Materials. To develop the programme theory, coded data
were analysed and discussed between the authors in order to identify factors significant
enough to contribute to the theory.

Study characteristics

In the 206 included documents, studies were identified from 21 countries. The majority
were from the USA (62%), followed by England and Wales (18%) and 9.3% from other
European countries (19 studies). While most studies examined one country (96.1%),
eight studies examined more than one country. The majority of included studies were
quantitative (70%); however, qualitative (14.1%) and mixed-method (12.7%) studies
were also identified. Full details of the study characteristics can be found in the
Supplementary Materials.

Realist synthesis

Figure 2 shows the programme theory developed from the realist synthesis of included
studies, highlighting the main contextual factors, mechanisms, moderators and outcomes
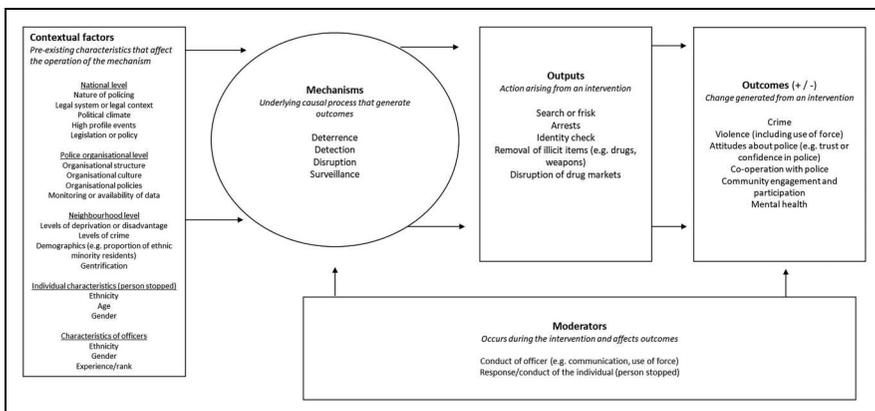

Figure 2. Programme theory of police stop and search.

identified. Wong et al. define a programme theory as the 'theory about what a programme or intervention is expected to do and, in some cases, the theory about how it is expected to work' (2013: 10). The evidence base and ways these come together are discussed below. It is important to acknowledge that any diagrammatic representation of a complex programme theory, such as police stop and search, and categorising factors as, for example, a mechanism and not a moderator, are bound to oversimplify the complexity of the contingent configurations of causation. While there is likely to be some flexibility in the interpretation of such factors, we propose that Figure 2 presents a logical configuration of the contexts, mechanisms, moderators and outcomes as identified in the literature. While outputs are an important component of stop and search processes, as the actions that directly arise from police stops (see Figure 2), they are not discussed separately here as the focus of the review is on the broader outcomes or changes that arise from stop and search.

The term 'stop and search' is used in this review to describe the practice by police to use police powers to stop and temporarily detain an individual/s in public places for the purpose of questioning, searching or frisking. While there are variations in how these practices are operationalised or in the specifics of the legal powers, studies that have compared the powers in different countries (see e.g. Delsol, 2006; de Maillard et al., 2018; Lennon and Murray, 2018; Miller and Gounev, 2007) suggest that despite differences, the practice of stop and search is sufficiently similar to warrant comparison, thus allowing the examination of how different mechanisms employed in different contexts might lead to different outcomes.

Contextual factors

Contextual factors refer to the pre-existing characteristics or conditions that affect the operation of the mechanisms that generate outcomes. These can be situational factors relating to different features of environments at the national, organisational or neighbourhood level or individual characteristics (e.g. of those who are stopped).

National level. At a national level, the nature of policing, different legal systems, legislation or national policy and the political climate can all impact stop and search (de Maillard et al., 2018; de Maillard and Zagrodzki, 2021; Oberwittler and Roché, 2022). The nature of policing differs between countries, which ultimately impacts various practices, including stop and search. For example, community-focused policing styles compared to more confrontational policing styles can shape the frequency of police stops and the nature of the interactions (de Maillard et al., 2018; de Maillard and Zagrodzki, 2021; Oberwittler and Roché, 2022). Governments (either at the state or federal level) set budgets and dictate police powers, oversight mechanisms and set police priorities or objectives around stop and search (Oberwittler and Roché, 2022).

Legislation and the legal backdrop of jurisdictions are other important contextual factors affecting stop and search practices either at a national level or at a micro or force level. Legislation sets the powers that can be used by police in relation to stop

and search and any requirements on when and how they can be used, for example, the requirement for 'reasonable grounds' before a search is conducted. Legislative or legal measures can further mandate specific reforms or policies that can have an impact on police stop practices and outcomes. For example, consent decrees[7] were imposed on police departments in Newark to address disparities in stop, question and frisk (SGF) and improve accountability (Chillar, 2022). Another example of this is the recording of police stops in England and Wales, which is a national legal requirement (Shiner, 2010). Nevertheless, the studies in this review note that the unsupervised nature of stop and search and the high levels of discretion that officers possess in many contexts mean that it is never fully controlled (Delsol, 2006; Derfoufi, 2016; Pearson and Rowe, 2020; Quinton, 2011).

Police activity is also subject to external shocks, such as high-profile or highly publicised events, which can impact stop and search. Following a homicide (not committed by police), the stop and search activity can increase in response to the investigation or for public reassurance (Braakmann, 2022; Lacoe and Sharkey, 2016). Conversely, studies have shown that following a killing committed by police (e.g. the death of Michael Brown in 2014 or George Floyd in 2020), stops made by police, particularly of Black individuals, may decrease in response to public outcry or civil unrest (Onookome-Okome et al., 2022; Powell, 2023). Furthermore, incidents of violence against police officers (e.g. fatal shootings by Black suspects) can lead to periods of increased stops, increased racial disparities and increased use of force against certain groups (Legewie, 2016).

Police organisational level. Elements of police organisations, such as organisational structure, culture and certain policies, can affect the operation of stop and search (Aston et al., 2021; Lennon and Murray, 2018; Oberwittler and Roché, 2022). An example of organisational-level changes to stop and search comes from Scotland. Prior to organisational changes, stop and search in Scotland was seen as a target-driven proactive policy based on volume rather than efficacy. Through a period of heightened media and political scrutiny on stop and search, several reforms were made to stop and search practice (Aston et al., 2021; Deuchar et al., 2019; Lennon and Murray, 2018; Murray, 2014). This led to a decrease in recorded searches in Scotland and an increase in efficiency through a higher positive search rate (McVie, 2019).

The introduction of technology or tools through organisational policies can also impact stop and search practices. One example is the use of body-worn cameras (BWC). Studies have shown that officers who wear BWC may conduct fewer stops than officers not wearing BWC and may divert their activities to other tasks (Groff et al., 2020; Lawrence and Peterson, 2020; Ready and Young, 2015).

The recording of stop activity is another important factor. In England and Wales, recording of stops for the purpose of data collection has become an important accountability and monitoring mechanism (Quinton and Olagundoye, 2004). There is also evidence to suggest that increased recording of police stops can reduce levels of disproportionality and increase effectiveness. During a study examining accountability in police stops in Bulgaria, Hungary and Spain, requiring officers to gather data and record their grounds for stops, reduced the number of stops conducted and increased

the proportion of stops that produced an arrest or other intended criminal justice outcomes (Open Society Justice Initiative, 2009). The recording of stop activity for the purpose of data collection differs from performance monitoring systems through the use of targets or quotas. Research has shown that performance targets around conducting stops can incentivise officers to make unnecessary and potentially unlawful stops (Cauley, 2019).

Neighbourhood factors. Several studies show that geographic or neighbourhood factors impact stop outcomes, in particular, in neighbourhoods that have a high proportion of ethnic minority or Black residents and lower socio-economic neighbourhoods. Studies from the USA, UK and some parts of Europe (e.g. Denmark) found areas with higher proportions of Black and/or ethnic minority residents were more heavily policed and, as such, subject to higher levels of police stops (Carter, 2014; Fagan, 2022; Fagan et al., 2009; Geller and Fagan, 2010; Hanink, 2013; Kammersgaard et al., 2022; Lacoe and Sharkey, 2016; Vomfell and Stewart, 2021). Stops carried out in these areas were more likely to result in a frisk or a search or to involve use of force (Morrow et al., 2018; Omori et al., 2022; Zhao et al., 2019), but were less productive in that they were less likely to result in arrest or in finding illegal items (Fagan et al., 2009; Hannon, 2020; Martin and Kaminski, 2021; Neil, 2021).

Similar findings were found in lower socio-economic areas, where the rate of stops was higher than in areas of higher socio-economic advantage (Carter, 2014; Fagan et al., 2009, 2012; Pearson and Rowe, 2020; Suss and Oliveira, 2023). Stops conducted in more disadvantaged areas have also been found to be less likely to lead to a formal police action (i.e. an arrest), suggesting that police may have a lower threshold for suspicion in these areas (Fagan et al., 2012; Farrell, 2022a).

Characteristics of those stopped. While contextual factors can relate to features of an environment, they can also refer to the characteristics or populations of those who are affected by the practice (Wong et al., 2013). The two key factors discussed in the literature were ethnicity and age of those stopped. Here, the literature shows it is not just about the overall neighbourhood characteristics, as after controlling for neighbourhood characteristics certain people remain more likely to be stopped.

Research has shown that individuals from certain ethnic minorities are stopped at a higher rate than White individuals.[8] Studies consistently found that Black and other ethnic minority individuals (e.g. Latino) were more likely to be stopped than White people, even after controlling for other factors, such as age, social class, local crime rates or offending history (Avdija, 2014; Borooah, 2001; Evans, 2019; Ferrandino, 2015; White, 2015; Wortley and Owusu-Bempah, 2022). Being Black also increased the risk of a stop turning into a frisk or a search (Coviello and Persico, 2015; Mrozla, 2014; Ridgeway, 2007) and, in some studies, increased the risk that force would be used (Kramer and Remster, 2018). Examining the circumstances of stops more specifically, Cooley et al. (2020) found that being in a group (rather than alone), increased the risk that Black individuals would be frisked, searched, arrested and have force used by police.

In order to explain why Black people are more likely to be stopped, police may argue that they are more likely to be involved in criminal activity. However, several studies found that Black people were less likely to be arrested following a stop or to be found with illegal items – suggesting that stops of Black individuals may be less 'productive' (Cooley et al., 2020; Coviello and Persico, 2015; Fagan, 2022; Friendman, 2015; Levchak, 2016; Rosenfeld and Fornango, 2014). It has also been argued that Black people are more likely to be stopped and searched in England because they are more likely to be in public places and so they are 'available' to the police (Waddington et al., 2004). However, more recent and methodologically sophisticated research shows that the existence of 'officer bias' in English policing cannot be ruled out (Vomfell and Stewart, 2021). Vomfell and Stewart (2021) found that Black people are over-represented in stops when comparing the rate of being stopped to the proportion they make up of crime suspects as well as to the ethnic composition of the local area.

Some studies suggest that Black individuals are more likely to be stopped in predominately White areas (compared to their White counter-parts), a phenomenon referred to as the 'race out of place' effect (Meng, 2017). Others have found that racial and neighbourhood class context together is more significant in determining police stop activity, rather than race alone (Neil, 2021) or that in large urban cities, stops can be particularly high in areas where there is greater economic inequality, that is, in areas where both affluent and disadvantaged residents co-exist (Suss and Oliveira, 2023).

Young people tend to be disproportionately affected by stop and search. For example, studies found that they were more likely to be frisked or searched after a stop than older people (Avdija, 2014; Dunham et al., 2005; Murray, 2014; Topping and Schubotz, 2018). A study utilising population-based data from the USA examined police contact among young people and found that exposure to the police through stops is widespread, with one-fifth of the sample reporting personal experience of being stopped and almost 70% reporting they had seen or heard about someone they knew being stopped. Over a third of those who reported being personally stopped were first stopped by police at a very young age, namely between the ages of 8 and 12 years old (Geller, 2021). This is an important finding given that young people are more susceptible to distressing or traumatic experiences, and that police stop can negatively affect mental health and attitudes toward police (discussed below). The effects of ethnicity and age are found to be compounded, in that young people from ethnic minority backgrounds are more likely to be stopped and searched (Geller, 2021; Hayle et al., 2016; Svensson and Saharso, 2015). Other studies found that young people from lower socio-economic backgrounds were particularly targeted by stop and search (Lennon and Murray, 2018; Pearson and Rowe, 2020).

Mechanisms

From the review, we have identified four mechanisms that generate stop and search outcomes. Three are the commonly stated justifications for police use of powers: detection, disruption or deterrence. Importantly, the mechanism of surveillance is not a commonly

stated justification, but has been identified in the literature as likely to contribute to negative outcomes.

Detection. One of the rationales of stop and search is that it reduces crime through the detection of offences, such as people carrying illegal items (e.g. stolen goods, weapons, illicit drugs) or detects individuals who are planning to commit an offence (e.g. going equipped[9]). Research tends to find that stop and search plays a relatively minor role in targeting crime through direct detection. The vast majority of stop searches lead to no further action taken by police (Ariel and Tankebe, 2018; Hofer et al., 2020; Miller et al., 2000). Moreover, available stop and search studies show limited detection of more serious offences, such as identifying weapons or drug trafficking, and the large majority of offences detected by stop and search activity relate to low-level drug possession and consumption offences (Ariel and Tankebe, 2018; Geller and Fagan, 2010; Lennon and Murray, 2018).

Disruption. Another way stop and search is intended to impact on crime is through disrupting the behaviour or activities of offenders. This is challenging to measure, as available data on stop and search arrests rarely shows us the nature/volume of offending or subsequent criminal justice system outcomes (Miller et al., 2000). One area in which this can be examined, however, is in relation to drug offending. If stop and search is to maximise the long-term impact on illicit drug markets, police ought to be removing key individuals within drug trafficking networks or carrying out repeated seizures of drugs to 'disrupt' drug supply networks. However, research shows that the scale of illicit drug markets is so large that even repeated seizure of drugs from users and dealers has limited, if any, impact on the price, purity or availability of drugs – indicating a limited (if any) disruptive effect (O'Reilly et al., 2020).

Deterrence. One of the key intended mechanisms of stop and search is that it deters or prevents crime. This can be through specific deterrence (a specific individual is deterred following a stop) or general deterrence (the general public is deterred by awareness of the risk of being stopped) (Tiratelli et al., 2018). This can be achieved through increasing police presence and/or media releases about stop and search targeted operations or stop and search of individual citizens. Deterrence is a core assumption underlying much of policing (in particular proactive policing), aimed at increasing the certainty of the apprehension of punishment, and reducing propensity to engage in offending behaviour (Durlauf and Nagin, 2011; Kleiman and Kilmer, 2009). Measuring the relationship between stop and search and crime deterred is complex, requiring specific causal modelling using accurate data (Ferrandino, 2012). The evidence to show that stop and search effectively deters crime is limited (Braakmann, 2022; Petersen et al., 2023; Tiratelli et al., 2018), as discussed in further detail below. That said, Petersen et al. (2023) found stop and search lead to an overall 13% reduction in crime across the nine studies that analysed crime reduction impacts.

Surveillance. The literature suggests that stop and search practices are not solely employed to detect or disrupt crime but also act to reinforce and reproduce social order through the

surveillance of certain communities. Surveillance, in this context, refers to the practice of institutions, such as the police, protecting the interests of dominant social groups (those who possess economic, political and/or social capital) by monitoring and disciplining those who are deemed to threaten or disrupt normative social order (Choongh, 1998). This dynamic is evident in how stop and search practices are disproportionately applied to residents of poor, disadvantaged neighbourhoods, who face more intense forms of surveillance and regulation in many aspects of everyday life (Sewell et al., 2016; Stuart and Benezra, 2018; Vieyra, 2017). Surveillance is closely linked to order maintenance style policing strategies, which posit that police attention to low-level crime and social disorder, through the control of public spaces, can reduce overall crime (Gau and Brunson, 2010; Golash-Boza et al., 2023; Laniyonu, 2018a). By enforcement against disorder, order maintenance initiatives 'intend to create an environment of perceived constant surveillance' (Gau and Brunson, 2010: 256).

Certain groups, for example, young men, ethnic minorities or people who use drugs, are considered more likely to disrupt the normative social order and are therefore more likely to be subject to police attention through stop and search. Police officer identification of 'suspicious individuals' during stop and search tends to be based on broad generalisations and stereotypes that placed people in defined social categories, suggesting that bias can indeed inform officer decision-making (Minhas and Walsh, 2021; Quinton, 2011; Saudelli et al., 2022). For example, officers can have pre-determined ideas of how a 'criminal' or a person who uses drugs looks, which can be biased towards certain ethnic or socio-economic groups (Aden et al., 2022; Anunciação et al., 2020; Egnell, 2022; Kammersgaard et al., 2022). These decisions by officers might be driven by bias at an individual level, such as implicit or unconscious bias (Morrow and Shjarback, 2019), or by a belief that certain groups commit more crime than others (i.e. statistical discrimination; Goel et al., 2016). In some cases, this can be driven by direct or categorical discrimination[10] (Reiner, 2010). Decisions around who, and which areas, are subject to greater police surveillance and scrutiny can also be driven by institutional racism[11] (Casey, 2023; Delsol, 2006).

This approach creates an environment of perceived constant surveillance, reflecting a belief that strict enforcement of order can reduce overall crime (Gau & Brunson, 2010; Golash-Boza et al., 2023; Laniyonu, 2018a). While this might not be the deliberate or intended objective of police officers or organisations, the net result is that such mechanisms reinforce social inqualities by disproportionately impacting certain groups which may experience a process of labelling and stigmatisation as a result.

Surveillance acts as a mechanism for reinforcing social inequalities and producing negative stop and search outcomes through two pathways. Firstly, it subjects those groups who are subject to surveillance to further scrutiny, regardless of whether or not they have committed an offence. Once someone is stopped by police, they are more likely to become 'known to police' and subsequently recognised, stopped and potentially searched on other occasions. Many stops also require or enable the collection of personal data, which can then be entered into police or national databases, subjecting that person to further scrutiny. This can lead to repeated police contact and harassment and contribute to the accumulation of further police records or, in some cases, further offending (Bradford, 2017; Kaufman, 2016; Sewell et al., 2016).

Secondly, surveillance can affect the identity and sense of belonging of those stopped by classifying and labelling them as suspicious, threatening or criminal. Labelling not only affects how these individuals are perceived by others (e.g. their community, police or other criminal justice institutions) but also influences their self-identity and behaviour, which can potentially lead to further patterns of criminality (Wiley et al., 2013). If people perceive that the police are using stop and search in an unjust way, and that they are stopped because of their race, socio-economic status, religion, age or gender, rather than their behaviour, then this can communicate a lack of belonging to the group identity that police represent and are deemed to protect (Bradford, 2017). Studies show that those who experience frequent police stops can internalise these labels, feeling stigmatised and marginalised, which in turn can increase mental health distress, trauma or other adverse effects (Barrett, 2020; Deuchar, Miller & Densley, 2019; Gau & Brunson, 2010). Such exclusionary practices limit individuals' ability to engage positively with their social environments, which can reinforce cycles of marginalisation and deviance (McAra & McVie, 2012; Del Toro et al., 2019).

Evidence of stop and search surveillance can be seen in the included studies in a number of ways. In certain contexts, stop and search was perceived as police discouraging the use of public space and limiting citizens' mobility (Billies, 2013; Haldipur, 2018; Kaufman, 2016). This was particularly the case for residents of poor, disadvantaged neighbourhoods as they faced more intense forms of surveillance and regulation in many aspects of everyday life through stop and search use (Sewell et al., 2016; Stuart and Benezra, 2018; Vieyra, 2017). Young people in certain contexts, particularly males and those from poorer backgrounds, also report feeling scrutinised and targeted by police through the use of stop and search (Anunciação et al., 2020; Barrett, 2020; de Maillard and Zagrodzki, 2021; Deuchar et al., 2019; Gau and Brunson, 2010). Studies with those who frequently experienced police stops reported that their age, socio-economic status and/or race made them suspicious persons to police, and that they were 'perpetually under officers' gaze' (Gau and Brunson, 2010: 272).

Moderators

Certain factors or actions that occur during a stop and search interaction can moderate the outcome. Two key moderators we identified in the literature were the conduct of the officer and conduct of the person stopped.

The communication and actions of the officer who conducts a stop shape the nature of the interaction. Reviewed studies show that officers adapt their demeanour to different situations (Quinton, 2020; Rios et al., 2020). Research conducted with people who frequently experience stops, particularly young people and those from minority backgrounds, emphasises the importance of stop encounters being conducted with fairness and respect – in line with an adherence to principles of procedural justice (Deuchar et al., 2019).

The demeanour of the person stopped also matters (Stroshine et al., 2008), as suggested by the concept of 'interactional discrimination' (Reiner, 2010). Studies from the USA have found that challenging police or questioning the validity of the stop during an encounter often leads to escalation of the stop, such as the threat of or use of force or arrest. This was particularly the case if a stop was perceived to be illegitimate

(Hirschtick, 2018) or if the person stopped was a Black male (Cobbina et al., 2019). In response to this, evidence suggests that some individuals who frequently experience police stops adapt their behaviour and demeanour towards police to avoid confrontation or escalation, for example, by over-emphasising compliance (Stuart, 2016; Stuart and Benezra, 2018). That said, evidence also shows how others do the opposite and how they in turn often experience more frequent stop and search and/or more intensive police stop and search encounters. Stops where suspects were perceived to be non-compliant or aggressive by police officers often lead to a range of negative outcomes, including an increased risk of the use of force by the officer (Farrell, 2022b).

Outcomes

Studies on stop and search activity report a range of outcomes. These include reductions in crime, a decrease in trust in police and stress for the person being stopped. Some outcomes are intended (e.g. crime reduction), and some are unintended (e.g. stress). Stop and search can also affect community engagement with police and mental health outcomes.

Crime. A recent meta-analysis found that police stop interventions were associated with a statistically significant 13% decrease in recorded crime (Petersen et al., 2023). Studies in this review found mixed evidence around how and to what extent stop and search affects crime. Some evidence suggests stop and search may reduce certain crime types. Tiratelli et al. (2018) found that increasing levels of stop and search were likely to have, at best, a very marginal effect on emerging crime problems. They found no evidence of an effect on robbery and theft, vehicle crime or total crime. However, this study did find tentative evidence that stop and search might have more desired impacts on some crime types and in some regions (Tiratelli et al., 2018), suggesting that the impact of stop and search on crime may differ according to where and how the activity is deployed.

Braakmann (2022) examined the effect of increased stop and search activity on crime (following a highly publicised murder in Northen England), finding that property, weapon, violence and drug crime were not significantly affected by the increase in stop and search operations, but that there was a decline in anti-social behaviour, criminal damage, and public order offences. Importantly, the increase in searches was driven by an increase in additional searches where no further action was taken, that is, no offence was detected. This suggests that any effects observed relate to a 'general deterrent' effect likely associated with an increase in police presence, rather than the direct detection of offenders or offences.

Few studies examined the deterrent effect of stop and search through directly asking members of the public. One study interviewed a sample of young people who had been stopped and searched in Scotland, who explained that stop and search did not act as a deterrent for them, but instead displaced their activities to areas less likely to attract officer patrols (Deuchar et al., 2019).

There was some evidence to suggest that conducting stops may have a modest crime reduction effect in high crime areas or hot spots, but that this impact is likely to be temporary. MacDonald, Fagan and Geller (2016), in their evaluation of Operation Impact in New York City, found that concentrated police deployment and stops in high crime areas had a statistically significant, but relatively small, association with reduction in total

crimes, with the largest effect on robbery and burglary offences. The authors, however, concluded that the results remain unclear and of 'little practical importance' due to the small size of the reductions and the fact that reductions could not be directly attributed to the stop and search activity. Other studies have found that while stops in hot spots may reduce crime in the short term, these effects are not sustained (Jang et al., 2012; Weisburd et al., 2016). Jang et al. (2012) found that officer deployment to hot spots (including conducting pedestrian stops) led to an immediate decrease in violent crime; however, this effect disappeared the following week.

Overall, the evidence shows that stop and search may reduce some crime types, albeit these effects being short-lived and possibly affecting some crimes and contexts, but not others.

Police use of force. Stop and search practices also play a role in generating police violence, particularly for vulnerable groups. The ways in which police use of force is deployed can differ: ranging from the use of hands, handcuffing or detaining a person against a wall or vehicle, to drawing or using a police weapon (Remster et al., 2022). The evidence suggests that use of force or police violence is more likely to disproportionately affect vulnerable groups. For example, several studies have found that Black individuals are more likely to experience police use of force during a stop encounter, regardless of other factors, such as conduct during the encounter, local crime rates, neighbourhood context or whether the individual is carrying an illegal item (Kramer and Remster, 2018; Levchak, 2016; Martin and Kaminski, 2021; Milner et al., 2016; Morrow et al., 2018; Mrozla, 2014). The risk of force being used was also higher for Black individuals of lower socio-economic standing (Motley and Joe, 2018). Young people and men were also more likely to experience the use of force during stops (Kramer and Remster, 2018).

Attitudes towards and confidence in police. Beyond crime-related outcomes, research into stop and search has examined the role of this police practice on attitudes towards police. Overall, stop activity has been shown to have a negative impact on trust in the police and perceptions of police legitimacy. This is because even a small number of unsatisfactory experiences with a police stop can have a large negative effect while, conversely, a numerous number of satisfactory stops have, at best, a neutral effect (little or no positive effect) (Bradford, 2017). Young men, in particular, report feeling unfairly treated and targeted by police through stop and search, leading to feelings of anger, resentment and mistrust, which in turn had a negative effect on police legitimacy (Deuchar et al., 2019; Gau and Brunson, 2010; Hofer et al., 2020; Murray et al., 2020; Newburn et al., 2018). Comparing young people's experience of policing in two English cities and two Scottish cities, Murray et al. found that higher prevalence and more intensive use of stop and search in Scotland had a negative impact on young people's attitude towards police and lower levels of trust in police and police legitimacy (Murray et al., 2020).

However, studies also revealed that stop and search practices that incorporated elements of procedural justice may lead to improved perceptions and trust in police (Deuchar et al., 2019; Henry and Franklin, 2019; Hunold et al., 2016). Examining the

lived experience of stop and search among young people in different parts of Scotland, Deuchar et al. (2019) found that where a more procedurally just approach was used, young people felt more fairly treated and thus less mistrustful of the police.

Community engagement (cooperating with police, reporting crime, community participation). Several studies looked at impacts of stop and search on broader community engagement with police and found that police stops may have a negative impact on willingness to cooperate with police or report crime (Laniyonu, 2018b, 2019; Lerman and Weaver, 2014; Slocum, 2018). Slocum (2018) found that police-initiated and unjust police contact for poor and African Americans was associated with less reporting of crime to police, even when they are victims themselves. Invasive police contact (which includes being searched or frisked) had the greatest negative effect on the reporting of personal crimes for victims living below the poverty line. Similarly, Lerman and Weaver (2014) found that non-emergency calls for service to the New York Police Department (NYPD) (between 2010 and 2011) declined in neighbourhoods that experienced a high degree of stops involving a search or the use of force, but no arrest.

Mental health. A recent meta-analysis of police stops found that those stopped by the police were 46% more likely to report a mental health issue – with a larger effect of poor mental health outcomes for young people compared to adults[12] (Petersen et al., 2023).

Several US studies showed that stops have a negative effect on mental health or wellbeing outcomes (Baćak and Nowotny, 2020; Hirschtick, 2018; Sewell et al., 2016; Sundaresh et al., 2020). For example, being stopped by the police was associated with an increase in the reporting of depressive symptoms (Baćak and Nowotny, 2020; Turney, 2021) and higher psychological distress among men who experience police encounters (Sewell et al., 2016). Hirschtick (2018) found that chronic police exposure, measured by having a high number of police stops, was significantly associated with current post-traumatic stress disorder (PTSD) symptoms among men in Chicago. Interestingly, while chronic stops were related to PTSD symptoms, distressing police exposure (e.g. incidents involving perceived threat or use of force from police) was not, suggesting that repeated police exposure (i.e. particularly via surveillance and/or bias) may be more distressing than infrequent distressing incidents.

The detrimental impact frequent stops can have on communities and individuals was particularly highlighted by Vieyra (2017) in their 3-year ethnographic study (between 2013 and 2016) in one of New York City's most disadvantaged Black neighbourhoods. They found that beyond being a 'minor inconvenience', as the NYPD claimed, the practice of stop, question, frisk had a disturbing and psychologically taxing impact on everyday life and compromised quality of life and well-being for residents, *even if they did not personally experience being stopped*. Residents reported the practice as a 'recurrent mental concern', disrupting mundane tasks like trips to work and school and causing residents to take on alternative actions and routines to avoid police contact.

This review identified surveillance, operating at either an officer, organisational or institutional level, as a mechanism that may drive negative stop and search outcomes,

such as poor mental health outcomes. Individuals who have been stopped by police may experience feelings of stigmatisation if they feel that they are being targeted due to their ethnicity, age, socio-economic status or other characteristic. This could result in heightened psychological distress through a sense of unfair treatment, humiliation and a diminished sense of personal dignity. This perceived stigmatisation, compounded by the power dynamic inherent in police–citizen interactions, may contribute to increased stress, anxiety and emotional strain for those who experience or witness police stops (Hannon, 2020; Jackson et al., 2020; Neil, 2021; Rios et al., 2020).

Discussion

The police use of stop and search is a complex and often controversial practice. Through the realist synthesis of 206 studies from 21 different countries, we reveal a range of contexts, mechanisms, moderators and outcomes that shape police stop and search practice. Our realist review provides a programme theory for understanding how stop and search works.

Strengths and limitations of the realist review

There are a number of limitations to note. First, this review only included studies published in English, with the majority coming from the USA and UK. While it is promising that this review included studies from 21 different countries and 19 studies from continental Europe, it is clear that more research is needed on stop and search outside the USA and UK, particularly from the Global South.

Another limitation is the absence of strong causal evidence on the outcomes of stop and search. Randomised controlled trials (RCTs) may be unfeasible – and perhaps undesirable – on such complex interventions as this (Deaton and Cartwright, 2018; Pawson and Tilley, 2004). The systematic review by Petersen et al. (2023) found only one randomised trial, and this was of increased foot patrols, not stop and search specifically. Furthermore, this study was not able to isolate the effect of increased stop and search from the other activities of increased policing on their observed reduction in violent crime (Ratcliffe et al., 2011). Petersen et al. (2023) described the methods of the research they reviewed as 'weak overall'.

We agree that existing evidence does not provide strong evidence of a causal effect on reducing crime. However, despite the lack of RCTs in this field, it is still possible to infer causality through abductive and retroductive analyses in realist research (Danermark et al., 2019). The current realist review extends knowledge by bringing to the fore contexts and inferring mechanisms that are more (and less) likely to elicit positive and negative outcomes from stop and search.

There have also been an increasing number of studies published on the effects of stop and search in recent years. The current review included studies published until the end of 2022. There is already more recent research on stop and search, including a review by Chan et al. (2023), finding the 'identity relevance' of police contact, which has been published since the end of our period for the literature search. It is likely that there are other factors that influence the use and outcomes of stop and search. These may include the impact of calls for service,

performance management, the attitudes and behaviours of police managers, intelligence gathering processes and the various uses of public space on police decision-making. However, these did not emerge as prominent themes in the included literature. Such areas would make pertinent topics for future research.

This review has provided a number of contributions. First, it reinforces that stop and search practices and their outcomes are shaped by a complex web of factors, ranging from political climate, high-profile events, organisational priorities, the characteristics of where stop and search is deployed and who is stopped and the actions of individual officers and suspects. Second, it shows that while police often state that stop and search operates through three key mechanisms or goals – detection, deterrence or disruption – the practice can also be driven by other mechanisms, such as surveillance. Third, and most importantly, this review starts to bring to light the circumstances under which positive and negative outcomes of stop and search are more likely.

It shows that negative outcomes are more likely within a police culture that is focused on order maintenance style policing, environments where police are afforded high levels of (unchecked) discretion and where there is a focus on stop quantity rather than the quality. We further see added risks when stop and search is deployed in particular environments, for example, more disadvantaged neighbourhoods or areas with high proportions of ethnic minorities. Conversely, positive outcomes are more likely when there is an emphasis on community policing, procedural justice and transparency and accountability mechanisms, such as the use of body worn cameras. The requirement to record stop and search activity (including ethnicity data and the reasons for stops), availability of public stop and search data and public enquiries and reviews of stop and search practices were also identified as important. These findings are significant as they suggest steps that can be taken by police organisations to shape the future use of stop and search practice. They further raise implications for countries in continental Europe, given the historical lack of availability of transparent stop and search data.

The identification of stop and search mechanisms is also significant – as we see that when stop and search is used as a tool for surveillance or driven by bias towards certain groups, the risk of adverse outcomes increases significantly. Stop and search used for these purposes is more likely to lead to adverse outcomes like non-productive stop and search (i.e. stops where nothing is found or there is no arrest), increased risk of use of force, community mistrust and mental health distress for individuals and their broader communities. Furthermore, when used for surveillance purposes, stop and search can create self-reinforcing cycles, as the generation of crime data through stop and search can further justify the repeated stop and search of particular sub-groups (such as young people or ethnic minorities), even if they are not engaged in criminal activity.

The programme theory developed (Figure 2) provides a framework that can be used by academics, policy-makers or police to construct and test different configurations of context, mechanisms and outcomes of different stop and search pathways. One way to outline this is through the development of if-then-because statements (Mukumbang et al., 2018). Here, we provide an example of a context-mechanism-outcomes (CMO) pathway to minimise the negative outcomes of police stop and search.

CMO pathway example

If police officers use stop and search in a targeted and intelligence-led way and utilise the principles of procedural justice during these encounters (e.g. communicating the reason for the stop, speaking to the person respectfully, treating them with dignity and minimising the use of force) (context);

Then this could lead to more procedurally just and/or less-invasive stop and search encounters, less adverse consequences arising from the stop (e.g. physical harm, distress, trauma) and a lower risk of a loss of trust and confidence in the police (outcome);

Because those who are impacted by the stop (i.e. the person stopped, their friends and family, bystanders) may be more likely to perceive the stop as fair and legitimate (mechanism).

Implications

There are a number of implications that arise from our findings, which are of particular importance for policing in Europe. While there is emerging evidence on stop and search use in Europe, further research is needed in this context. Where systems of recording stop and search activity are lacking (e.g. in many continental European countries), the capacity for researchers and policy-makers to understand how stop and search is being used is severely limited. Hence, there needs to be a continued drive internationally to ensure that there is transparency in stop and search recording practices to allow for greater accountability and further research. In Europe, this has important consequences for two vital aspects of policing: racial equality and respect for European and human rights law. The available evidence on the racialised aspects of stop and search comes largely from the USA and UK. The fact that the ethnicity of those who are stopped is not recorded in many countries of the European mainland limits our knowledge of the scale of ethnic disproportionality (Aston et al., 2024c). The contexts and mechanisms of the unequal application of stop and search also exist in continental Europe, although they are triggered through different configurations of migration patterns, policing institutions and legal frameworks. These also affect the interplay between policing practices and citizens' rights. In Europe, the European Convention on Human Rights and the Charter of Fundamental Rights of the European Union provide legal protection to the liberty and privacy of citizens, both of which are threatened by practices of stop and search (Jasinski et al., 2024). The relative absence of data, combined with a relatively stronger regime of legal protection, creates a lacuna that needs to be addressed; a gap between the codified legal protection of citizens' rights and our knowledge of the extent to which these rights are protected in the actual practice of policing. Our realist review should sensitise researchers and policy-makers to the need to fill this gap with better knowledge of the contexts, mechanisms and outcomes of stop and search in all European countries.

Taking a realist approach for this review highlights the importance of understanding the context within which interventions operate and the underlying generative mechanisms that drive different outcomes. Despite the growing interest and evidence based on stop and search, the mechanisms that drive unintended consequences are still under-researched and poorly understood. There is a need for further research in this area using various quantitative, qualitative and mixed methods. More qualitative research is

needed, in particular ethnographic research, which has the capacity to develop deeper and more nuanced understandings of contexts, mechanisms and outcomes. Without this realist understanding, stop and search is likely to continue to generate negative outcomes for the communities in which it takes place, as policy and practice will continue to target the symptoms of the practice (i.e. the outcomes), rather than the causes (i.e. mechanisms).

The programme theory outlined in this review can be used to develop more specific expectations about particular causal configurations that can inform policy, practice and research, such as the if–then–because statement provided above.

Conclusion

There is a growing body of evidence on the topic of police stop and search as the police, policy-makers and researchers seek to understand the complexity of stop and search debates and consequences. Through the realist synthesis of 206 studies from 21 different countries, we developed a programme theory that brought together the international, interdisciplinary and methodologically diverse body of evidence to interrogate how, under what conditions and for whom stop and search leads to different outcomes.

The review identified a range of contextual factors, mechanisms and moderators that affect stop and search outcomes and identified key factors that can either increase (or decrease) the likelihood of adverse stop and search outcomes. Contexts that were likely to increase negative outcomes included a focus on order maintenance style policing strategies, valuing stop quantity over quality and high levels of police discretion around stop and search. Importantly, the mechanism of surveillance was found to generate negative outcomes. Contexts and mechanisms that lead to better outcomes included a focus on community policing and procedural justice, transparent systems for recording and monitoring stop and search and public inquiries and reviews of stop and search practices.

This programme theory underscores the importance of considering the nuanced interactions between context, mechanisms and outcomes in understanding the complex relationship between police stops and intended and unintended outcomes in informing and developing more effective policy and practice on stop and search.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. PTSD, anxiety, depressive symptoms, emotional ill-being, life evaluation, suicidal ideation and attempted suicide.
2. Poor health, trouble sleeping, life evaluation and self-rated health.
3. Available at: https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID= 193915
4. Police stop activity is broad and can relate to a range of powers and actions carried out by officers. This review focused on pedestrian stops and included the general powers police possess to stop and/or search people in public places. Studies that examined specialist powers (such as terrorism powers) or stop and search using drug detection dogs were excluded, as were traffic stops.
5. Searches were originally conducted to include traffic stops. However, the traffic stop literature retrieved a large number of results. The decision to exclude literature on traffic stops was made to review a more manageable number of studies. Furthermore, initial scanning of the search results suggests that there are differences between pedestrian and traffic stops that would lead to different mechanisms and contextual factors. We recommend that future scholars repeat this realist review for traffic stops specifically.
6. Searches were originally conducted from 1970 onwards. However, this retrieved a very large number of results. A pragmatic decision was made to limit the review to documents published between 2000 and 2022, on the assumption that earlier findings will have informed research carried out since. This realist review also still ended up including 206 studies: a large body of work on this topic.
7. A consent decree is a legally binding agreement between a police department and a government authority (e.g. the US Department of Justice) that mandates specific reform to address and rectify patterns of unconstitutional conduct (Chillar, 2022).
8. Note that the studies we reviewed came predominantly from countries where the majority of the population is classified as White.
9. 'Going equipped' refers to the offence of carrying items in preparation for another offence, for example, items to use in a theft.
10. For example, where police apply a lower threshold of suspicion when stopping Black people than White people.
11. The Macpherson Report following the Stephen Lawrence Inquiry defined institutional racism as: 'The collective failure of an organisation to provide an appropriate and professional service to people because of their colour, culture, or ethnic origin. It can be seen or detected in processes, attitudes and behaviour which amount to discrimination through unwitting prejudice, ignorance, thoughtlessness and racist stereotyping which disadvantage minority ethnic people' (Macpherson, 1999: 49).
12. Police stops of youth were associated with a 74% increase in the odds of a mental health issue, while studies measuring similar impacts on adults were associated with a 32% increase (Petersen et al., 2023).

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