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Interventions to reduce bureaucratic discrimination: a systematic review of empirical behavioural research

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ABSTRACT

The reality of street-level discretion can entail discrimination against people based on their identifiable characteristics. However, there has been surprisingly little systematic assessment of empirical evidence about what can be done to tackle the problem. This paper systematically reviews empirical behavioural research studies ($N = 53$) on the effects of interventions to reduce bureaucratic discrimination. Evidence shows that three types of interventions are reliably effective: outreach to and engagement with clients, anti-bias training, and passive representation. Inclusive practices can also reduce discrimination. These effects are however context-dependent, and causal mechanisms linking interventions with effects remain a 'black box'.

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KEYWORDS Bureaucratic discrimination; interventions; stereotypes; street-level bureaucrats; behavioural public administration; systematic review

Introduction

This paper reviews existing evidence from empirical behavioural research about the effects of interventions that seek to reduce bureaucratic discrimination at the street level. Fairness and equal opportunities (equity) and the impartial treatment of clients[1] seeking public services (equality) are fundamental principles of good bureaucratic practice (Frederickson 2015). What happens at the street level is particularly important. For most people, their most frequent, direct experience with 'the state' is through everyday interactions with street-level bureaucrats, such as police officers, teachers, and social workers, who enjoy a substantial degree of freedom when implementing public policies and thus serve a crucial role in guaranteeing an appropriate treatment of clients (Lipsky 1980; Maynard-Moody and Musheno 2012). For example, administrators can affect the costs or administrative burdens that clients experience in accessing public services (Keiser and Soss 1998; Moynihan and Herd 2010; Moynihan, Herd, and Harvey 2015). We generally expect street-level bureaucrats to treat clients

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appropriately and without unjustified differences related to ethnicity, race, gender, age, disability, socio-economic status, nationality, sexual preferences, et cetera. Both traditional legal and political perspectives and, more recently, the public value perspective on the public administration emphasize the importance of impartiality, equity, and a discrimination-free public service delivery for the broader political system within which the bureaucracy operates (Frederickson 2015).

However, a persistent issue in street-level bureaucracies is the prevalence of unjustified inequities in frontline interactions between public servants and clients. We define bureaucratic *discrimination* as individual street-level bureaucrats' systematically biased behaviour, including actions that inappropriately harm/disadvantage or unfairly advantage a group of clients based on identifiable characteristics (Dovidio et al. 2010, 9; Gartner and Dovidio 2005; Pager and Shepherd 2008, 182). As modern, globalized societies become more diverse, a growing body of evidence has revealed discriminatory practices among street-level bureaucrats, for instance in the form of stereotyping along ethnic and racial lines (e.g. Epp, Maynard-Moody, and Haider-Markel 2017; Jilke, Van Dooren, and Rys 2018; Keiser 2010;

Lewis and Karthick Ramakrishnan 2007; Meier 1984). Bureaucratic discrimination is problematic because it systematically facilitates access to public services for some groups and creates barriers for others (Grohs, Adam, and Knill 2016; Schram et al. 2009; Thomann and Rapp 2018; White, Nathan, and Faller 2015). This can have far-reaching consequences for society and democracy at large. The experience of being discriminated against deepens existing social inequalities, creates psychological wounds, and can feed back into attitudes and behaviours that define the relationship between citizens and the state, such as trust in government, deservingness, or the exercise of political rights and participation (Bruch and Soss 2018; Epp, Maynard-Moody, and Haider-Markel 2017, Moynihan and Herd 2010; Moynihan, Herd, and Harvey 2015; Moynihan and Soss 2014; Schneider and Ingram 1993; Soss, Fording, and Schram 2008).

Only recently have studies in public administration begun to investigate how to address bureaucrats' biases (Banuri, Dercon, and Gauri 2017; Cantarelli, Belle, and Belardinelli 2018; Gooden 2015). These studies discuss the role of attitudes and perceptions in explaining street-level bureaucrats' behaviour. However, while attitudes relate to prejudices, they may or may not inform discriminatory behaviours (Quillian 2006. Research on attitude-behaviour consistency contests that interventions on attitudes may automatically have a positive effect on behavioural change (Smith and Louis 2009; Smith and Terry 2003; Swanson, Swanson, and Greenwald 2001). Yet, the public policy and public administration literature has seldom evaluated interventions designed to change street-level bureaucrats' biased *behaviour*.

To address this gap, we ask: what do we know about the effects of interventions to reduce bureaucratic discrimination? We conduct an interdisciplinary review of empirical studies about the effects of interventions – addressing biased behaviours or attitudes – across behavioural research including psychology, management, economics, social policy and sociology, and public administration. Behavioural research focuses on the motives, perceptions, attitudes and actions of individuals who are situated in broader contexts of interaction with other individuals and within institutions, including organizational structures and societal norms. The research also recognizes that human beings often have cognitive limitations and use heuristics in decision making, departing from rational, self-interested, utility-maximizing agents with strong

mental powers of calculation that characterize the model of homo economicus. Such behavioural research has been increasingly used to address topics in public administration in recent years (Grimmelikhuijsen et al. 2017; James et al. 2020). As behavioural research is concerned with how and why people behave as they do in specific contexts, it provides particularly valuable evidence on the effectiveness of interventions on street-level bureaucrats' attitudinal, cognitive, motivational processes, and their outcomes. Comprehensive reviews of empirical studies have become increasingly valuable in public administration (Liberati et al. 2009; Tummers et al. 2015) because they systematize knowledge, identify the current state of research, its potential gaps, and applicability elsewhere. This approach helps us gain important evidence for the theory and the practice of public administration about the effects of interventions addressing bureaucratic discrimination.

The first section of this paper discusses core concepts surrounding bureaucratic discrimination and interventions. We then introduce the methods we used for the literature review and the data. The results section categorizes studies and reports the state of evidence on interventions that address discrimination. We then suggest how the findings can inform practice and research.

Bureaucratic discrimination and its sources

Bureaucratic discrimination is not simply an error, but a systematic difference in treatment that affects specific client groups when they interact with street-level bureaucrats or attempt to access public services, and that often has an underlying structural basis. Equal treatment of clients means that the law and government treat everyone the same, irrespective of their status or identity. Conversely, the notion of equity refers to fairness and equal opportunities for all, which can require that we treat people from different backgrounds differently (Morand and Merriman 2012). Equity 'is rooted in a sense of proportion [. . .] equity exists when individuals perceive the ratio of their inputs as equivalent and fair in comparison with the ratios of others. [. . .] In contrast to equity, under equality-based distribution rules, all outcomes would be equal' (Keppeler and Papenfuß 2022, 1850). Equity itself is a complex notion where people can be 'equally unequal'. Frederickson (2015, 56) distinguishes individual equality (e.g. one person, one vote), segmented equality which allows for inequality between but not within segments (e.g. equal pay for equal work), and block equality between groups (e.g. separate classes for students with different skill levels, but where education is equally provided). While equality is often a value defined in formal constitutions, political decisions determine how a policy defines social equity and accordingly distributes goods, services, and benefits (Schneider and Ingram 1993). By using divergent equality and/or equity criteria than those formally/politically defined, bureaucratic discrimination undermines the rule of law and social equity in public administration (Epp, Maynard-Moody, and Haider-Markel 2017; Frederickson 2015; Gooden 2015).

The topic of bureaucratic discrimination has some shared areas of interest to the important topic of discrimination in interaction between employees within organizations and in hiring of staff (). However, the current review focuses on the specific intersection of street-level bureaucrats and the people who are often citizens of a territorial nation state (clients) because the interaction involves provision of a service or policy through the exercise of public authority and affects clients.

Discrimination can be institutional or manifest in individual interactions (Fletcher 2011; Sandfort 2000). Indeed, structural factors may systematically disadvantage members of minority groups 'not only by the wilful acts of particular individuals, but because the prevailing system of opportunities and constraints favours the success of one group over another' (Pager and Shepherd 2008, 197). We acknowledge the importance of colonial heritage and practices, institutions, policies, rules, and procedures as sources of discrimination (Eiró and Lotta 2023; Epp, Maynard-Moody, and Haider-Markel 2017; Nisar and Masood 2021). Our practical ambition for this review is to help inform the theory and practice of public administration interaction with those affected by policies or programmes. We review empirical behavioural research which scrutinize the individual interactions and situate those within the organizational context of these interactions. In this way, the work we examine focuses on the micro level of individuals and the macro level of individuals' situation in contexts including organizations that affect the social norms and incentives that the face. This type of research does tackle some issues of the systemic kind, but does not extend to theory focused more explicitly on the macro-structural level such as broad sociological theories or historical institutionalist theories, or post- or decolonial approaches which are very important, but beyond the scope of our current review.

At individual or organizational levels, bureaucratic discrimination occurs in four stages (Sager, Ritz, and Bussmann 2010): *access* refers to conditioning the availability of services or benefits. For instance, are clients provided with information about their options for claiming welfare benefits? *Process* refers to what happens as outputs are being produced: for instance, the quality of interaction, and the number and intensity of checks that are performed before making a decision. *Outputs* are the decisions and activities produced by administrative actors as they implement policy. Bias in output could be for instance inequalities in tax assessment based on socio-economic status (Cohen and Gershgoren 2016). Finally, *outcomes* are the result and impact of street-level bureaucrats' work on the community (Gregory 1995; Wilson 1989), for instance, low education levels in a population of clients.

Theoretical foundations of interventions

We define interventions as planned, behavioural actions designed to reduce the impact of organizational or individual bias or discriminating behaviour on bureaucratic practice and clients at one or several of the four stages mentioned above. Interventions rely on an underlying theory of change – that is, a set of assumptions about how such interventions would translate into bureaucratic attitudes, behaviour, and/or client outcomes – which is not always made explicit. As Sager et al. (2010) outline, a theory of change entails first a *causal hypothesis* about whose and which behaviours or attitudes causes the problem (here: bureaucratic discrimination). Second, the *intervention hypothesis* posits how the intervention is intended to alter these behaviours or attitudes. Such a theory of change could either aim at eliminating the root causes of discrimination, or it could procedurally target the opportunities and processes for biases to influence bureaucratic behaviour at the four stages. We now

briefly discuss the main root causes of discrimination acknowledged in the behavioural literature.

Organizational context

The *organizational contexts* in which individual street-level bureaucrats operate strongly influences how bureaucratic discrimination develops, operates, and could potentially be controlled (Christensen and Opstrup 2018; Flom 2019). Organizational contexts create crucial conditions for why bureaucrats use boundedly rational heuristics rather than resorting to informed, rational decision-making (Moseley and Thomann 2021). Pressurized organizational circumstances may leave them little other choice, such as under time pressure, high workload, administrative burden, multiple conflicting accountability relationships, or ambitious performance targets; or they may actually encourage or incentivize biased behaviours. Moreover, 'how organizational structure and practices influence the cognitive and social psychological processes of decision makers (. . .), create disparate outcomes that may be independent of decision makers' (Pager and Shepherd 2008, 194). Consistent with this view, Epp et al. (2017) note the institutional determinants of racially biased police practices. Organizational initiatives to reduce social disparities can be effective using specific goals to which organizational leadership is held accountable (Pager and Shepherd 2008, 195).

Individual level

Frontline workers interpret signals and cues to evaluate clients. Social psychology tells us that discrimination is a conscious or unconscious response to prejudice (attitudes) or stereotypes (beliefs) associated with the social identity of a given client (Jilke and Tummers 2018; Tajfel 1982). However, predispositions to certain ideas and views do not automatically translate into action (Smith and Louis 2009; Smith and Terry 2003; Vescio and Weaver 2013). Several theoretical explanations exist for the micro-mechanisms of why individuals discriminate against others (Assouline, Gilad, and Ben-Nun Bloom 2022; Whitley and Kite 2016). These theories diverge about the source of discrimination and whether it has an objective and explicit basis.

Bureaucratic discrimination can be *taste-based*, i.e. purely individual-level and subjective, and is typically conscious (Allport 1954; Assouline, Gilad, and Ben-Nun Bloom 2022; Becker 1971). Conversely, the theory of *statistical discrimination* posits that rational and non-prejudiced individuals make conscious decisions on the grounds of 'average' individuals, which they use as signals of group-based attributes (Grohs, Adam, and Knill 2016; Jilke, Van Dooren, and Rys 2018; Phelps 1972). Third, cognitive or affective *aversive racism* is unconscious and associated with stressors in the decision environment stressors, such as ambiguity and cognitive load, that undermine the capacity for systematic information processing (Assouline, Gilad, and Ben-Nun Bloom 2022; Schram et al. 2009). In these situations frontline bureaucrats use heuristics such as deservingness notions, meaning a 'simple mental short-cut, used intuitively, which simplifies and assists decision-making (. . .) Heuristics can be, and often are, useful, in creating efficiencies and reducing complexity (. . .) However, relying on heuristics can lead to systematic bias when decisions do not conform to a normative standard of how things ought to be done in the particular circumstance, had all

relevant information been taken into account' (Moseley and Thomann 2021, 50, 54). Finally, some theories contend that individuals are *socialized* into culturally and institutionally embedded stereotypes (Schneider and Ingram 1993; see also Epp, Maynard-Moody, and Haider-Markel 2017; Soss, Fording, and Schram 2008), that is, simplified cognitive representations of how members of a distinct group are similar or different, which can provoke discrimination (Fernandez, Koma and Lee 2018; Moynihan and Herd 2010). Whatever the ultimate explanation may be, 'the definition of discrimination does not presume any unique underlying cause' (Pager and Shepherd 2008, 182).

We return to the theories of change underlying interventions in the discussion section and now introduce the data and methods that inform our systematic review.

Data and methods

Many studies of frontline discrimination only *propose* potential interventions. In contrast, the goal of our systematic review is to identify the existing *empirical evidence* of interventions and their effectiveness. To this end we identified, selected and critically appraised publications relevant to our topic through a systematic procedure (Liberati et al. 2009) and applied content analysis. We used a well-established method for reviews in four steps: identification, screening, eligibility, and inclusion and followed the guidance for reporting such reviews (PRISMA; Liberati et al. 2009), see Figure 1.

The review process we followed, drawing on the PRISMA framework, recognizes the risk of reporting bias including publication bias in reviews. Published studies are in general more likely to report beneficial effects of treatment and unpublished studies are

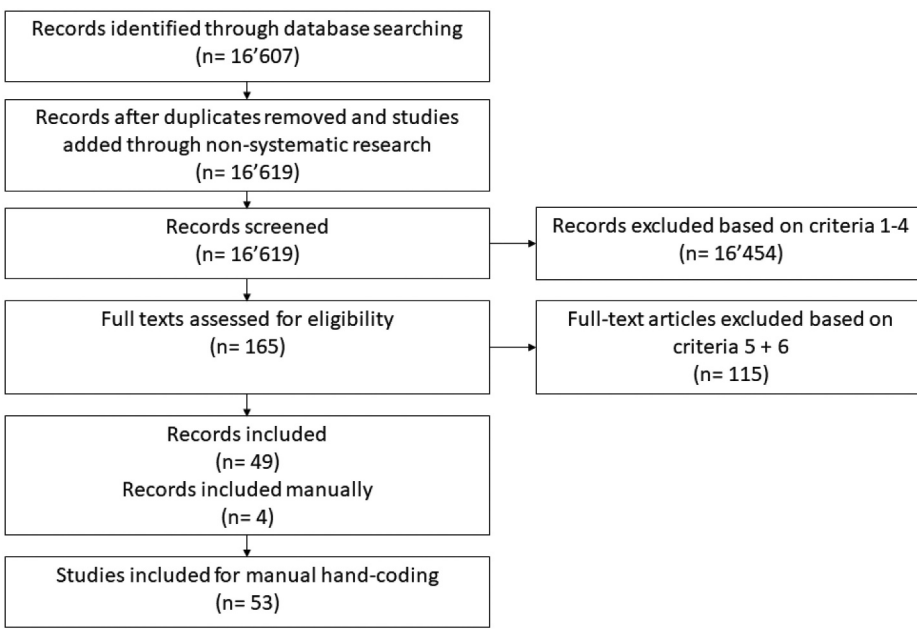

Figure 1. PRISMA flow chart.

more likely to report negative effects of an intervention (for a discussion in the context of clinical trials see Dickersin et al. 1987). We followed the PRISMA guidance for transparent reporting which is recommended to help assessment of publication bias risk. Our review does not have a risk of incorrectly estimating effect sizes from meta-analysis of an unrepresentative collection of effect sizes (Schulzke 2021). We further mitigated the risk of publication bias by supplementing the review of articles with the discussion of books and reports that contain broad overviews of the topic areas to include a broader range of evidence beyond that contained in published articles.

Study selection

Identification

We chose the database Web of Science (Social Sciences Citation Index SSCI–1956-present) to run large searches across the behavioural social sciences including public administration, psychology, political science, economics, sociology, management, social policy, and related fields. The studies address individuals' perceptions, attitudes, behaviour and also consider their institutional and general situational context. We included publications that address bureaucratic discrimination without necessarily using the conventional terms used in public administration, including publications from practitioners' journals. Our search strategy includes various professions depending on the national and policy context, for example, nursing and social work.

Our search included peer-reviewed publications published in English language in regular journals issued from 1973 until 18 January 2022. This start date follows on from the publication of Pressman and Wildavsky's (1973) seminal work on implementation and street-level bureaucracy. We compiled a list of search terms covering three categories: the *explanandum*, that which is to be changed (discrimination, stereotypes, bias, and synonyms), the *unit of analysis* (street-level bureaucrat, frontline worker, public employee, and synonyms), and the main *characteristics* associated with discrimination in the contemporary literature (age, gender, race and ethnicity, socio-economic status, disability, and synonyms). We searched for studies displaying at least one search term for the *explanandum*, the unit of analysis, and the characteristics associated with discrimination (see Appendix A). Appendix A also lists the fields and document types excluded from our search and the key words used for our search in Boolean form. Using these criteria, we identified 16,607 records in the database. After adding 13 studies that had been collected through broader research about the topic areas and after removing duplicates, we obtained 16,619 records.

Screening and eligibility

While screening consisted of reading the abstracts, eligibility consisted of reading the papers. We based screening and eligibility on six criteria (see annexes, Figure A1): the study must include a definition of bias or discrimination (1), the discrimination must be based on visible characteristics such as physical attributes or names (2), discrimination must be the dependent variable of the study (3), the discriminator and the discriminated must not be working in the same organization (4), the study must describe a type of intervention that intentionally or unintentionally affects discriminatory practices (5), and interventions must be the independent variable of the study (6).

At screening level, we focused on Criteria 1 to 4 which led to the exclusion of another 16,454 studies. An overwhelming majority of the database results neither

fulfilled Criteria 3 (discrimination must be the dependent variable of the study) nor Criteria 4 (as a vast array of the literature discusses discrimination in the workplace) and were discarded. Additionally, studies from political philosophy, and/or theoretical papers without empirics were discarded.

To determine eligibility, we focused on Criteria 5 and 6 which demanded a careful analysis of the papers. Among the remaining results ($n = 165$), Criteria 5 or 6 were not fulfilled by 116 studies: these studies discussed the extent of discrimination without discussing an intervention to reduce it, or they discuss possible interventions but without empirically testing/analysing them.

Inclusion

We only included studies that explicitly define bias or discrimination, focus on discrimination based on visible client characteristics as an *explanandum*, include at least one modifiable intervention that affects discriminatory practices, and where the discriminator and the discriminated are not employed by the same organization. Our sample includes 49 studies from the database search and four studies included manually because they were identified as substantively relevant after the database search, for a total of 53 studies reporting *empirical results* on the effects of intervention.

Review method and coding

We performed content analyses of this sample of studies based on qualitative human coding. Table B1 in online Appendix B summarizes the main variables that were coded regarding five main categories of interest: study characteristics, research design, the nature of the intervention, the nature of discrimination analysed, and the reported effects of the interventions. Given that coding is a subjective process, we took measures to address the associated potential risks and to maximize measurement validity (Krippendorff 2018). A first round of coding was performed by the main coder, after which two secondary coders independently analysed a randomly drawn subset of 10% of the coded studies each, and a research assistant was hired to perform a last round of coding. Unclear codes were discussed, and an intersubjective agreement was reached. Based on the revised coding scheme, the main coder performed a second round of coding of all studies. All resulting codes for the eight variables of interest to this review were examined and corrected by a senior researcher, with an intercoder agreement of 93% (see Table A1 in the online appendix).

Results

The individual study results are summarized in Table C4 in the online appendix. Figure 2 shows that our sample of studies utilized a range of methods: 10 studies (18.9%) used field or survey experiments, as opposed to 5 reviews or meta-reviews (9.4%), while the majority of the studies (71.7%) are based on observational data. The main part of these (23 studies) used quantitative methods of data analysis, followed by fewer (11 studies) qualitative and a minority of mixed methods studies (4 studies). Most studies about interventions on bureaucratic discrimination focused analytically on the national level. There is little research that has analysed the effectiveness of

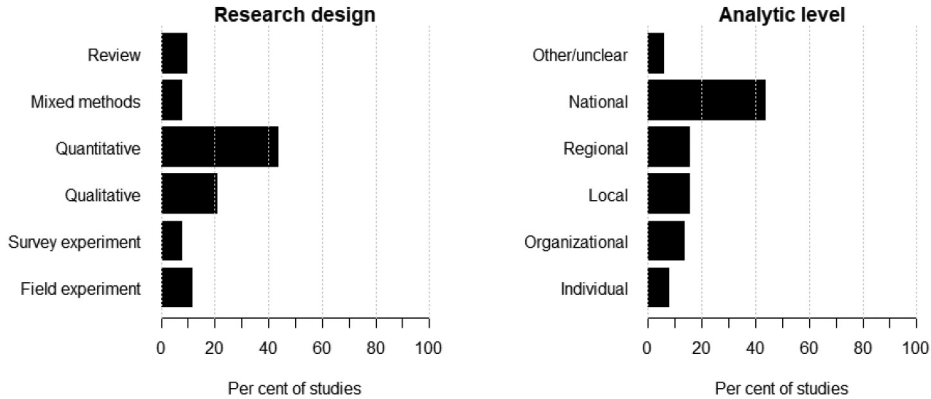

Figure 2. Research designs and analytic levels.

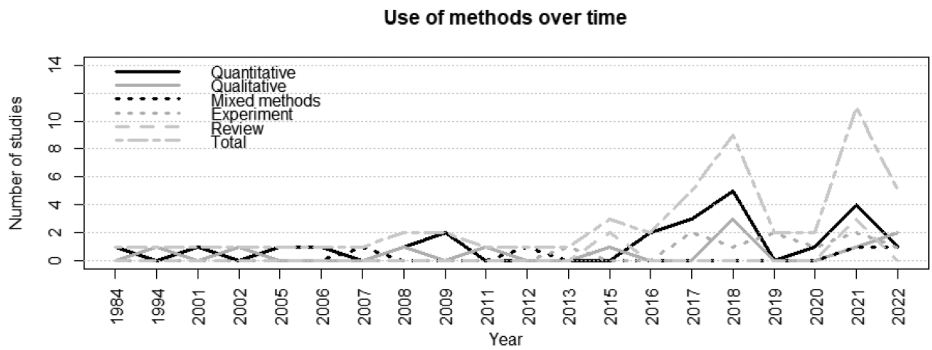

Figure 3. Use of methods over time.

interventions among individuals – which is puzzling, given the micro-level emphasis of behavioural research.

Figure 3 illustrates that our review covers a growing body of empirical research about bureaucratic discrimination, with the first such study published in 1984. The increase of research since 2015 indicates that scholars attribute an increasing importance to the question how bureaucratic discrimination can be reduced, and mirrors a broader trend of researching equity in public administration (Cepiku and Mastrodascio 2021). There has also been particularly strong growth in the use of quantitative and experimental research designs. Experiments, while less common, have also enjoyed increasing popularity in recent years.

Figure 4 highlights that about half the studies focused on racial or ethnic-based discrimination, with gender-based discrimination the next largest group. Only five studies in our sample analysed discrimination according to more than one characteristic. Mangla (2022), Michener et al. (2019) and Park and Mwihambi (2022) study the discrimination according to gender, sexual orientation, and social status, whereas Kennedy and Bishu (2022) study the effects of gender, race and disability on organizational equity outcomes. Dee (2005) tackles the intersection of gender and race. The studies focused quite evenly on the different stages of access and process, while

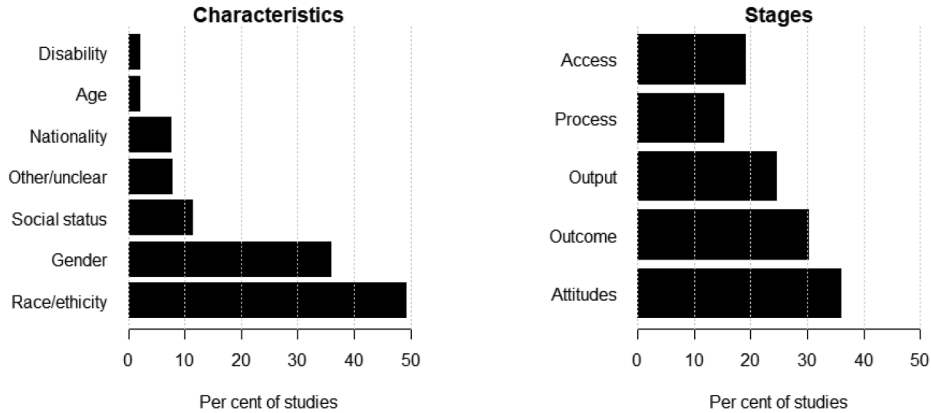

Figure 4. Characteristics and stages of discrimination studied.

comparatively more studies looked at discrimination at the level of outputs (24.5%) and particularly outcomes (30.2%). 11 studies looked at more than one stage, with 17% combining two stages, and 3.8% had three stages in their analysis. Rather than directly scrutinizing behaviour, the largest part of the studies (35.8%) also included interventions addressing the biased attitudes of street-level bureaucrats. Overall, we can thus say that complexity in bureaucratic discrimination remains, by tendency, understudied, especially with regard to the intersectionality of different attributes of both those who discriminate and those on the receiving side, and the contexts in which they interact (Fay et al. 2021).

We now discuss the findings of these studies regarding the effectiveness of different interventions in reducing bureaucratic bias and discrimination.

Interventions and their effects

We relied on the vocabulary used in our sample studies to categorize different types interventions. Interventions that are well-known from the literature include: 'lowering caseloads', 'training on biases', 'accountability mechanisms', 'passive representation', and 'active representation'. 'accountability mechanisms' are interventions that reduce the discretion of street-level bureaucrats in decision-making. These include randomization, sanctions, and shared decision – making. Passive representation refers to measures ensuring that a bureaucracy's demographic characteristics mirror the demographic characteristics of the general population. Active representation, in turn, refers to situations where individual street-level bureaucrats push for the interests of the clients they represent or treat clients of a similar identity as their own more favourably than other frontline bureaucrats do. This form of representation may lead to, but does not necessarily indicate, reduced overall bureaucratic discrimination of that client group (since that also depends on how other client groups are treated in comparison). It also does not necessarily involve positive discrimination by favouring individuals belonging to groups known to have been discriminated against previously.

Two additional categories were derived inductively from our literature review. The category 'outreach/engagement with clients' underlines a form of outreach towards specific groups at risk of being discriminated against. Unlike active representation, this

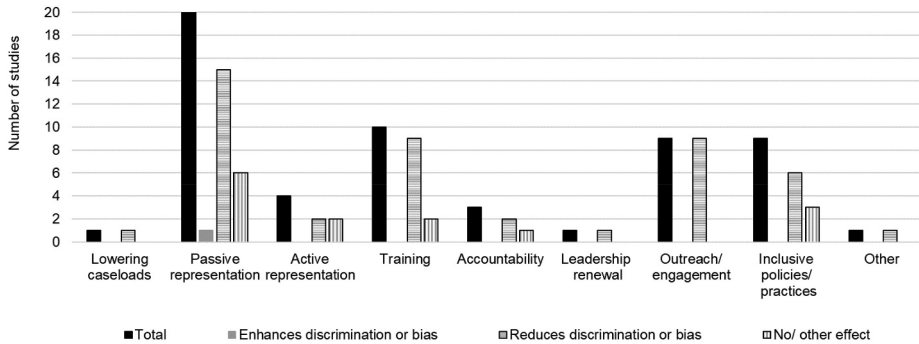

Figure 5. Types and effects of interventions.

category captures forms of advocacy and engagement that are unrelated to the match between characteristic of clients and frontline workers. Finally, the 'implementation of inclusive policies and practices' includes interventions that modify rules and practices towards more inclusivity in a top-down manner including sensitization messages.

Figure 5 reports the types of interventions that the studies identified and whether they had a decreasing, increasing, or no detectable effect on bureaucratic discrimination. The interventions that are studied most often are passive representation (42% of studies), training designed to reduce bias (19%), outreach and engagement with clients (17%), and inclusive policies and practices (17%). 77% of the interventions studied were successful in reducing discrimination, while one study found that an intervention actually worsens outcomes for the group.

To assess the robustness of the available evidence, we followed the proposal by Møller and Skaaning (2017), see Table 1. We identify the extent to which the studies display the theoretically predicted effect of the intervention (i.e. reducing discrimination), and compare it with a random distribution of effects that we would see if the intervention does not work as theoretically predicted. For each intervention type, three observable effect types are possible: enhancement of discrimination, reduction of discrimination, or no/unclear/other effect on discrimination. The random coefficient of reproducibility (CR) would thus be 1/3, that is, one out of three studies should find that the intervention reduces discrimination if the theory is wrong. However, for instance, with passive representation, the actual CR indicating the probability of

Table 1. Assessing the robustness of interventions' effects.

Intervention	Actual CR	Probability of success (per cent)	P-value[1]	N
Outreach/engagement with clients	9/9	100	0.000***	9
Training	9/10	90	0.000***	10
Passive representation	15/22	68.2	0.001***	22
Implementation of inclusive policies or practices	6/9	66.7	0.04**	9
Accountability	2/3	66.7	0.26	3
Lowering caseloads	1/1	100	0.333	1
Other	1/1	100	0.333	1
Active representation	2/4	50	0.407	4

CR= Coefficient of reproducibility. Random CR = 1/3. The probability of success indicates the proportion of times in which the intervention was found to reduce discrimination. [1]One-sided binomial probability test comparing actual CR with random CR. *Significant at 0.1 level; **significant at 0.05 level; ***significant at 0.01 level.

success is 15/22, as 15 out of 22 studies found it reduces discrimination. By comparing actual CR and random CR, we can assess whether the observed distribution is statistically significant based on the theoretical expectations. We use a simple one-sided binomial probability test that does not make strong assumptions about the number of observations, normal distribution, randomness, independence, or measurement level (Møller and Skaaning 2017).

Interventions where the evidence consistently and robustly suggests that they reliably reduced bureaucratic discrimination include increasing engagement with potential clients (DePrince et al. 2012), anti-bias training (Williamson and Foley 2018), and passive representation (Meier 1984). There is also decent evidence that inclusive policies and practices such as the inclusion of multicultural curricula in high schools (Andersen and Guul 2019) more often than not reduces bureaucratic discrimination. Conversely, the evidence available in the reviewed studies does not robustly support the notion that active representation of minorities among street-level bureaucrats reduces discrimination. For other interventions, too few studies exist to make a full assessment of the robustness of the evidence, such as accountability measures and lowering caseloads.

Fourteen studies detected no significant or unclear effects of interventions in reducing discrimination. In one case, the intervention is not adapted to the diversity of organizational contexts where it is applied (Nicholson-Crotty, Nicholson-Crotty, and Fernandez 2017, on the share of Black police officers). In other cases, the intervention is not effective due to the lack of accountability on frontline practices (Grant and Rowe 2011 on the use of assessment tools in police forces), or because it is seen as 'lip-service' to the reduction of discrimination (Williamson and Foley 2018 on gender-bias training). Michener et al. (2019) could not find a discernible effect of accountability measures on bureaucratic discrimination and suggested that intervening on attitudes rather than behaviour could be more efficient in reducing discrimination. We will now discuss the different interventions in more depth, taking advantage of the substantive insights that the studies provide.

Outreach/Engagement with clients

Interventions that entail engagement with clients often involve street-level bureaucrats proactively *looking for* clients, with the goal of improving their access (DePrince et al. 2012; Morin et al. 2002; Vu 1994). For example, these interventions can tackle language barriers (Madden 2018; Snowden et al. 2006), especially in the context of migrants (Lewis and Karthick Ramakrishnan 2007), or they may involve fieldworkers reaching out to encourage the use of public services such as education or maternal health services (Mangla 2022; McBride et al. 2018). The co-production of services involving street-level bureaucrats and clients is an important strategy to increase engagement (Jakobsen and Andersen 2013; Vu 1994). The nine interventions surveyed in this review involving outreach/engagement with clients were all successful in reducing discrimination, whether by linking clients to services, reducing discrimination in terms of access, or by improving the service at the output level (DePrince et al. 2012; Morin et al. 2002), specifically when language barriers are involved (Jakobsen and Andersen 2013; Madden 2018).

Training

Professional training and development initiatives can mitigate the influence of client characteristics on frontline decisions (Cantarelli, Belle, and Belardinelli 2018; Pedersen, Stritch, and Thuesen 2018) and effectively de-bias decision makers over the long-term. For example, by normalizing conversations about race or gender, sensitizing employees about privilege, and reducing biased attitudes (Bezrukova, Jehn, and Chester 2012; Ford et al. 2004; Morewedge et al. 2015). Such training is most effective when mandatory, held in small groups, and led by a skilled facilitator (Gooden 2015). There is some discussion in existing literature on diversity or bias trainings about short-term versus long-term effects of such training; this may also depend on the timing, length, and frequency of such trainings (Dobbin and Kalev 2016).

Ten studies in our sample, of which three are review studies, analysed training to reduce bias, typically regarding gender or race, of which nine found that it reduces discrimination, typically regarding attitudes rather than bureaucratic behaviour (e.g. Coulter et al. 2020; J. E. Lerner 2021; Mangla 2022; Salazar et al. 2021). However, the context and duration of the trainings matter. Miller et al. (2020) found that a one-day racial bias training on its own is insufficient to impact street-level behaviour. One study found that training on gender bias had unclear effects (Williamson and Foley 2018). The study is based on interviews with public service managers in Australia who overwhelmingly support unconscious bias training, but also express some reservations, as it focuses on individual behavioural change but does not address systemic discrimination. Williamson and Foley (2018) thus conclude that unconscious bias training needs to be incorporated in broader workplace interventions that are ongoing, iterative, multi-level, and collective. Overall, the result suggest that training may successfully address biased attitudes in the short term under some circumstances (Coulter et al. 2020; J. E. Lerner 2021, Ricks et al. 2021; Salazar et al. 2021), and can improve access for marginalized groups (e.g. Mangla 2022). Conversely, there is little evidence that it would change longer-term bureaucratic behaviours (Iqbal et al. 2021).

Passive and active representation

Representative bureaucracy scholarship (Dolan and Rosenbloom 2003; B. Kennedy 2014) argue that strategies to get excluded minorities better represented in public employment, such as equal opportunity, affirmative action approaches, and diversity management (Wrench 2016), can be a key moderator between employment diversity and organizational performance (Pitts et al. 2010). In more diverse bureaucracies, 'individual bureaucrats reflect the views of those who share their demographic backgrounds' (M. Bradbury and Kellough 2011, 157). Moreover, 'the mere existence of a passively represented bureaucracy can itself improve outcomes by influencing the attitudes and behaviours of clients' (Riccucci and Van Ryzin 2017, 21).

Twenty-two studies assessed interventions aimed to increase representation of the target population within the public administration (passive representation) or that analysed the degree to which bureaucrats advance the interest of client groups they belong to (active representation). In most studies, passive representation indeed reduced discrimination (for instance, An, Song, and Meier 2021; Baniamin and Jamil 2021; de Graauw and Vermeulen 2022; Gilad and Dahan 2021; Headley and Wright 2020; Li 2021), while sometimes it had no discernible effect (A. H. Kennedy and Bishu 2022; Park and Mwihambi 2022). Only one study (Johnston and Houston 2018), focusing on the question of female leadership in police forces, finds that passive

representation worsens equity outcomes: gender-based violence arrests decreased as female leadership grew. The study acknowledges limitations regarding the reliability of the data analysed and emphasizes that the effects of female leadership might have been mitigated by a dominant masculine organizational culture or because leadership is too removed from the bureaucratic-client interface.

Moreover, the effects of active representation on discrimination are hard to pin down. Xu and Meier (2021), for instance, find that the effects of passive representation are due not to active representation but rather symbolic representation. These mixed findings reflect the ambiguity in the more general literature quite well (Fernandez, Koma, and Lee 2018; Hong 2017; B. Kennedy 2014; Meier, Wrinkle, and Polinard 1999; Nicholson-Crotty, Nicholson-Crotty, and Fernandez 2017; Pedersen, Stritch, and Thuesen 2018; Riccucci and Van Ryzin 2017; Schram et al. 2009). Overall, findings point to the potential of passive representation to reduce bureaucratic discrimination and bias. While most studies about representation discussed race (13 studies), nine studies discuss gender (e.g. Wagner et al. 2017; Song 2018). One study tackles the intersection of gender and social status (Park and Mwihambi 2022), one that of gender and race (Dee 2005), and one that of gender, race, and disability (A. H. Kennedy and Bishu 2022).

Implementation of inclusive policies and practices

The *implementation of inclusive policies and practices* can be organization-specific or the result of a policy change. In our sample, these include implementation of new standards following a recently established legislation (Andersen 2017; Burman and Johnstone 2015; Estrada and Messias 2015), guidelines and precepts derived from the literature such as 'cultural responsiveness' (Chow and Austin 2008), and sensitization messages (Falisse and Leszczynska 2022. These studies reported a decrease in discrimination in six)cases (An, Song, and Meier 2021, Chow and Austin 2008; de Graauw and Vermeulen 2022; Jakobsen and Andersen 2013; Estrada and Messias 2015; Falisse and Leszczynska 2022), while the effects were either unclear or insignificant in three studies (Andersen 2017; Burman and Jones 2015; Grant and Rowe 2011). These results show that a top-down approach for the implementation of inclusive policies and practices that is not adapted to specific contexts does not reduce discrimination.

Accountability mechanisms

Accountability mechanisms refer to an institutional relation in which an actor can be held to account by a forum for discriminatory behaviour (Adam et al. 2021). Accountability includes the presence of another (audience), identifiability, evaluation, and reason-giving. Generally, a de-biasing effect of accountability mechanisms 'is most likely to be activated when decision makers learn prior to forming any opinions that they will be accountable to an audience' (J. S. Lerner and Tetlock 1999, 259). Various accountability mechanisms might serve as a to counter discriminatory practices, such as formalizing a pre-screening process for applications and having multiple screeners (Ford et al. 2004), oversight and enforcement on police officers (Epp, Maynard-Moody, and Haider-Markel 2017), procedural legislation improving transparency and reducing uncertainty for clients, inspections, and regulation (Cohen and Gershgoren 2016). Accountability mechanisms, such as removing clients' identifiers, can decrease bias in individual decisions, encourage extensive and effortful

information processing, and self-critical awareness of one's judgement processes (Dobbs and Crano 2001; Ford et al. 2004; Paolini, Crisp, and McIntyre 2009).

In our sample, two out of three studies find that monitoring, sanctioning, and the creation of independent agencies can reduce discrimination among street-level bureaucrats. While increasing street-level bureaucrats' awareness of their own decision-making process may reduce discrimination, the two studies in our sample suggest that interventions that run in the opposite direction also hold promising results. Cárdenas et al. (2017) and Wenger and Wilkins (2009) show that randomization that decreases the importance of human decision-making in the allocation of services reduces discrimination significantly. Randomization is particularly relevant to situations in which street-level bureaucrats are meant to allocate resources to clients such as a place in school (Cárdenas et al. 2017). It bears similarities with another type of accountability measure: anonymization of client information (Michener et al. 2019). In both cases, street-level bureaucrats may no longer use irrelevant information (such as race or ethnicity) to produce biased decisions.

One study could not find a discernible effect of accountability measures on bureaucratic discrimination. Michener et al. (2019) found that it is difficult to hold street-level bureaucrats accountable for the practice of 'googling' the requester. Underlining the limits of accountability, the study suggests that an intervention that would change street-level bureaucrats' attitudes would be more desirable. Indeed, accountability can also have undesirable effects, for example by resulting in self-justification rather than self-criticism (see J. S. Lerner and Tetlock 1999; Tetlock and Mitchell 2009).

Lowering caseloads

High caseloads are a significant cause of unethical behaviour in the public sector (Belle and Cantarelli 2017). Street-level bureaucrats resort to coping techniques, especially when having to take decisions quickly, that can lead them to prioritize certain clients or ration their services (Tummers et al. 2015). Decisions that are made quickly are more likely to be based on shortcuts of client categorization that reflect explicit or implicit biases (Keiser 2010; Pager and Shepherd 2008).

Only one study (Andersen and Guul 2019) studied the effect of lowering caseloads, which was found to reduce bureaucratic discrimination. Andersen and Guul (2019) conclude that Danish schoolteachers with a lower workload are better suited to promote social equity and pay greater attention to the way their students face discrimination. The success of this type of intervention is dependent on street-level bureaucrats' commitment to reduce discrimination in the first place.

Interventions, theories of change, and causal mechanisms

Many studies reviewed were not fully explicit about what links the interventions to their effects. Table 2 gives a stylized summary of the theory of change underlying the different types of intervention, and the extent to which the evidence review supports them. Interventions take a root-cause approach if they directly aim at altering the organizational or individual biases underlying bureaucratic discrimination. Conversely, procedural approaches rely on changing the opportunities or dynamics through which these root causes could bias bureaucratic behaviour, without tackling them directly. On balance, the evidence appears stronger for interventions to successfully tackle procedural aspects of bureaucratic discrimination. Conversely, tackling the

Table 2. Stylized theories of change for intervention types.

Intervention	*Theory of change*	Evidence (cf. Table 1)	*Root-cause vs procedural approach*
Outreach/engagement	Tools designed to overcome language barriers, reach out to clients, and co-produce public services can empower and engage clients, resulting in reduced barriers to access and better uptake.	Supportive	Procedural
Training	Training helps bureaucrats to reflect on their decision criteria, sensitizes and debiases them, resulting in more equitable bureaucratic attitudes and behaviours.	Supportive only for short-term attitudes	Root-cause
Passive representation	Diversifying the bureaucratic workforce can overcome lack of representation of women and minorities, resulting in more equitable bureaucratic behaviours.	Mostly supportive – mechanisms unclear	Procedural
Inclusive policies/ practices	Prescribing and communicating inclusive concepts and messages from the top down will promote leadership by example, commitment, changed awareness and culture, resulting in more equitable bureaucratic attitudes and behaviours.	Supportive only if not 'patronizing' and adapted to context	Root-cause
Accountability	Mechanisms through which bureaucrats need to justify their decisions or align them with prescribed principles reduce the scope for bias to influence bureaucratic decisions, resulting in more equitable bureaucratic behaviours.	Not robustly supportive	Procedural
Lowering caseloads	Lowering caseloads gives bureaucrats the time and space needed to base their decisions on unbiased, informed criteria and reduce their need to rely on heuristics, resulting in more equitable bureaucratic behaviours.	Supportive but not robust	Procedural
Active representation	Diversifying the bureaucratic workforce means that bureaucrats advocate and improve outcomes for clients who are 'like themselves', resulting in more equitable bureaucratic behaviours.	Not robustly supportive	Root-cause

root causes of discrimination appears more challenging – but also not a necessary condition for an intervention to reduce bureaucratic discrimination.

In a similar vein, only a minority of studies detailed empirically the causal mechanisms (Webeck and Lee 2022) that reduced discrimination (Andersen 2017; Andersen and Guul 2019, Burman and Jones 2015; de Graauw and Vermeulen 2022; Grissom, Kern, and Rodriguez 2015; Ko et al. 2021; Levin and Schwartz-Tayri 2017; Mangla 2022; Nicholson-Crotty et al. 2016). Nevertheless, we can infer a broad range of causal mechanisms. Our results show that effects of the interventions are highly contextual. Therefore, it is necessary to specify the mechanisms to identify when, where, and how an intervention might bring about a reduction in discrimination. For example, research reviewed suggests that increasing accountability (i.e. reducing discretion) reduces discrimination. Randomization for instance is used as a way to bypass biases on the frontline (Cardenas 2016; Michener et al. 2019; Wenger and Wilkins 2009), and Burman and Johnstone (2015) describe how

public accountability is a key mechanism in reducing discrimination when the intervention is inscribed in legislation. Levin and Schwartz-Tayri (2017) describe how shared decision-making effectively improves decision-making within a team of social workers in Israel.

In other cases, *increasing* discretion can improve outcomes for groups at risk of discrimination (Meier and Bohte 2001). This is specifically the claim defended by the literature on active representation (Grissom, Nicholson-Crotty, and Nicholson-Crotty 2009; Nicholson-Crotty, Nicholson-Crotty, and Fernandez 2017), which postulates that bureaucratic partiality will correct systematic discriminations. Headley and Wright (2020) suggest that racial representation may be insufficient for dealing with disparities among other policing outcomes in situations when there is less discretion, such as arrests. Research on reducing workloads defends a similar thesis about bureaucratic partiality as it allows street-level bureaucrats to exercise their discretion (Andersen and Guul 2019). Bradbury and Kellough (2008) show that this might even lead some bureaucrats to assume the role of minority advocate in an administration in order to change attitudes around them. However, this is not always the case as Wagner et al. (2017) show that this mechanism does not work for female police officers in Uganda.

A mechanism discussed (but not probed) by Grissom et al. (2009) is that passive representation changes the behaviour of clients and helps in building trust between clients and street-level bureaucrats. Neggers (2018) describes how bureaucratic diversity at the polls may impact election results in India. Nicholson-Crotty et al. (2017) show how African-American students in the U.S. fare better with a teacher of a similar race, suggesting mechanisms of self-identification. This mechanism could also be relevant for interventions that increase engagement with clients (DePrince et al. 2012; Jakobsen and Andersen 2013; Lewis and Karthick Ramakrishnan 2007; Morin et al. 2002; Vu 1994).

Discussion and implications for practice

While discrimination against clients by street-level bureaucrats is increasingly recognized as an important problem, our multi-step literature search has revealed a research gap regarding the empirical assessment of the actual possibilities to reduce such biased behaviours. The comparatively low number of eligible studies coming out of our screening process underscores that there is an abundance of recommended interventions, but little empirical scrutiny. By systematizing this knowledge, the present review significantly advances our knowledge about how to tackle bureaucratic discrimination. Compared to the five review studies included, ours has a much more encompassing geographical and sectoral focus – Estrada and Messias (2015), Grissom et al. (2015), Lerner (2021) and Ricks et al. (2021) focus only on one intervention/sector in North America. Three of the five review studies included focus on training interventions, whereas our review allows for the full range of possible interventions. Beyond a relatively narrow idea of inequality based on one or two characteristics, we consider biases relating to a range of identifiable characteristics beyond gender and race. The use of the PRISMA methodology enhances the robustness of our review. Our results unambiguously support and incorporate the findings of the five reviews. Future research could thus confidently transcend sectoral and geographical boundaries and employ a more intersectional understanding of social inequalities (Fay et al. 2021).

Our sample is too diverse and not representative enough to provide a solid statistical interpretation of effect sizes. We find that there are studies across a wide set of interventions, but there are only a few on the same form of intervention, and even fewer with comparable effect sizes that would enable a formal meta-analysis of effects. Overall, the evidence provided by the reviewed studies can be considered reasonably robust (see Table C5 in the online appendix). More research into the factors that effectively reduce bureaucratic discrimination is therefore needed. Finally, street-level bureaucrats (who operate at the bottom of organizational hierarchies, exercise high discretion when carrying out public policy, and interact directly with clients) are studied under many different labels in different disciplines, which poses as a challenge when screening studies. We have found particularly robust evidence that four types of interventions work to reduce bureaucratic discrimination: direct outreach and engagement with clients, de-biasing training, passive representation, and the implementation of inclusive practices and policies aimed at combating discrimination. We now discuss implications for practice and conclude with avenues for future research.

To inform the design of interventions, our findings show that public managers, politicians, and other practitioners seeking to reduce discrimination in public organizations should focus on two dimensions: the relationship between street-level bureaucrats and clients, and whether the desired outcome is to change attitudes or behaviours.

Type of relationship with clients

There are important differences among street-level bureaucrats in the way they interact with clients. The contact may be voluntary (in the case of clients applying for welfare programmes) or involuntary (such as health issues), it may be antagonistic (police officers arresting clients) or protective (victims reporting crimes to the police). However, clients are not passive targets of such interventions. One way for interventions to be successful is to reach out and engage with clients, particularly when the barriers they must overcome are not the direct result of frontline staff behaviour. Unsurprisingly, in our sample, outreach and engagement with clients tackles the discrimination of at-risk populations: marginalized groups with problems of access to services (see Jakobsen and Andersen 2013; Lewis and Karthick Ramakrishnan 2007; Vu 1994 for migrants; see Madden 2018; Morin et al. 2002 for marginalized groups; see Snowden et al. 2006 for ethnic minorities) or female victims of domestic violence or child marriage (DePrince et al. 2012; Mangla 2022). Indeed, if discrimination is not the result of street-level bureaucrats' behaviour, interventions that aim at changing the behaviour of clients instead, by reaching out and engaging with them, appear highly effective. One must not be necessarily chosen over the other, representative bureaucracy for instance, may change both street-level bureaucrats' and clients' behaviour (Grissom, Kern, and Rodriguez 2015).

Focus of intervention on attitudes and/or behaviour

Stark differences exist between interventions designed to change behaviour and interventions designed to change attitudes. Nineteen studies in our dataset describe interventions that aim at changing the attitudes of street-level bureaucrats, with five of them presenting either insignificant or unclear results. This suggests that interventions on attitudes may not have a positive effect on behavioural change (Smith and Terry 2003; Smith and Louis

2009; Swanson et al. 2010). Out of those five, three studies (Grant and Rowe 2011; Miller et al. 2020; Williamson and Foley 2018) describe new organizational practices to promote awareness regarding discriminated groups. They underline that such interventions may be lip service and thus do not truly change attitudes. The other two studies suggest that interventions aimed at street-level bureaucrats' attitudes may result in boomerang effects, i.e. self-justification rather than self-reflection (e.g. Wagner et al. 2017). This is the case with policies designed to support minorities in Texas' education system (Andersen 2017). The intervention has a positive effect on all groups of bureaucrats tested except those holding views unfavourable to minority supportive policies and may adopt more hostile attitudes. Due to boomerang effects, it is important to know street-level bureaucrats' initial beliefs in order to assess the likely effects of these interventions.

Overall, interventions tackling attitudes are successful when they also contain sanctions or require important reconfiguration of the day-to-day work of street-level bureaucrats (see Levin and Schwartz-Tayri 2017 for shared decision-making, Andersen and Guul 2019 for lowering workloads), which might be taxing. Moreover, intervening on attitudes may be without effects on discrimination (Grant and Rowe 2011; Williamson and Foley 2018), while at other times it may be preferable to measures focused on behaviour, such as accountability (Michener et al. 2019 on the question of googling requesters). This is particularly relevant, as research on rule-bending shows that interventions that modify workplace attributes may increase a bureaucrat's willingness to bend the rules (DeHart-Davis 2007).

Other variables were considered in our analysis but were not associated with clear differences in findings about interventions. The categorization of different stages of the process of policy implementation did not reveal clear differences in the type of implemented interventions or their effectiveness. The way interventions operate and their effects differ between policy sectors (for example between education, police, and health care), are one of several contextual factors that the effects of interventions depend upon.

Our findings highlight that there cannot be a one-size-fits-all solution in combatting bureaucratic discrimination. Thus, interventions should be carefully considered, based on a evidence-based causal model of the barriers for an equitable treatment of clients (Sager, Ritz, and Bussmann 2010), and their field utility tested. For example, by consulting frontline staff about them. Social equity goals and tools can be integrated into performance measurement and thereby be subject to continuous organizational analysis and evaluation. Gooden (2015, 146–161, 152–153) argues for normalizing the measurement of social equity as just another routine dimension of organizational performance. This should allow for rewarding managers and frontline workers for their efforts to minimize the effects of bias.

Conclusions: avenues for future research

Based on a systematic review of empirical behavioural research, we have found evidence that three types of interventions are reliably effective in reducing bureaucratic discrimination: outreach to and engagement with clients, anti-bias training, and passive representation. Inclusive policies and practices can reduce discrimination as well. Our findings suggest the need for further, systematic empirical research on what works to combat bureaucratic discrimination along three lines.

First, *more empirical research is needed in diverse country and policy contexts*. Many interventions are *proposed* to promote social equity in street-level

organizations, but their effects are not comprehensively tested empirically yet. For example, lowering caseloads is often mentioned in the literature, but there is little empirical evidence about its effects. Moreover, more research across a variety of regional contexts is needed. The majority of studies focused on North America (31), with fewer studies on Asia (7) and Europe (6)Africa, South America, and Oceania are understudied in our sample. Much of the research on the topic comes from a few policy areas, notably employment, housing, policing, welfare and (higher) education. The literature on representative bureaucracy is increasingly looking at a broader variety of professional contexts, such as fire-fighters (Andrews, Beynon, and McDermott 2016), emergency responders (Zamboni 2020), international organizations (Badache 2020), and research on the effects of interventions against discrimination should follow suit.

Second, scholars need to *account for the contextual nature of bureaucratic discrimination*. Many of the studies that found that interventions did not reduce discrimination showed that interventions worked in some places, but not others. Interventions are either not implemented correctly (Grant and Rowe 2011 on the lack of accountability of police officers using a risk assessment tool) or ill-fitted to the diversity of cases (see Nicholson-Crotty, Nicholson-Crotty, and Fernandez 2017 for racial representation in the U.S. across different cities, and Morin et al. 2002 for assistance to minority groups and drug use in the U.S.). Scholars should formulate context hypotheses and use appropriate analytical methods to test them (James et al. 2020). Experiments, for instance, are less suited to account for contextual influences than methods accounting for causal complexity (Thomann and Ege 2019). Research in this area should explicitly formulate scope conditions for findings (Goertz and Mahoney 2009), regardless of the methods employed. More comparative research is needed across policy, cultural, country contexts, and also comparing different interventions.

Third, more research should tackle the *promise and pitfalls of digitalized public service provision, automated decision-making, and the use of artificial intelligence in public sector management on the impartiality and equity of public sector outcomes* (Ruijer et al. 2023). The results of our own review suggest that techniques like randomization and anonymization that reduce the importance of human decision-making may facilitate more equitable outcomes, although research on artificial intelligence also reveals that it can sometimes result in discriminatory outcomes (Cárdenas and Ramírez de la Cruz 2017; Michener et al. 2019; Wenger and Wilkins 2009).

Finally, more research is needed on *the underlying causal mechanisms and the theories of change for interventions to bring about effects*. Our analysis suggests that while interventions may struggle to sustainably tackle the underlying root causes of bureaucratic discrimination, they can pragmatically influence the dynamics and processes through which these causes can bias bureaucratic behaviour. We find that the robustly successful theories of change often focus on how bias can be prevented from entering bureaucratic decision processes, how interventions change decision environments, or how clients can be empowered to fight for their rights. Priorities for empirical research are to address how active representation affects bureaucratic discrimination through advocacy (Song 2018; Webeck and Lee 2022), how interventions may foster learning between bureaucrats themselves, as well as from the groups they represent

(Moynihan and Landuyt 2009), and how interventions may increase or undermine the legitimacy of public administration in the eye of the public (Rothstein 2012). Research responding to these suggestions can help generate robust evidence to inform bureaucratic practices that contribute more to achieving the values of justice and equity.

Note

1. We use the term 'clients' to refer to those members of policy target groups with whom frontline bureaucrats have direct interaction.

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