The impact of the racist police officer stereotype on Dutch police officers' behaviour in stop-and-search scenarios: a randomized study with deepfake technology in virtual reality.

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Abstract

In recent years, high-profile incidences of racism, including ethnic profiling, in the police force and the subsequent fight against institutional racism have sparked the narrative of 'the racist police officer'. Consequently, many police officers feel unjustly targeted and stigmatised as a group. Emotional responses can significantly impact individuals' cognition and behaviours. Therefore, this study investigates how the racist stereotype influences police officers' stop-and-search behaviour using VR and deepfake technology. The study was set up as a 2 (Ethnic background: yes versus no) x 2 (Racist stereotype: yes versus no) between participants design with stop-and-search behaviour as the dependent variable and stereotype threat and stigma feelings as potential mediators. Therefore, the study utilises mixed methods, including a questionnaire and a VR environment. The central analysis showed that neither the ethnic background nor the racist stereotype impacted police officers' stop-and-search behaviour and that neither stereotype threat nor stigma feelings mediated this relationship. However, additional analyses revealed that, despite the situational racist stereotype confrontation, the mere presence of a person from an ethnic minority led police officers to avoid checking the person with a migration background and instead check a western-looking person. Based on these findings, the concept of *Chronic Stereotype Reactance* is introduced. This phenomenon describes that police officers who are frequently exposed to the racist stereotype display conduct opposing the racist stereotype to prevail one's individual and social positive values, following the confrontation with a person from an ethnic minority. This new conceptual model should be investigated in future research. Qualitative insights revealed that police officers feel strongly emotionally affected by public debates on racism in the police force, reporting unfair treatment and stigma, since the officers displaying misconduct remain to represent the minority. Based on this study, previous and future research, police officers and the public must be educated on how to deal with the racist stereotype to foster a more positive relationship between citizens and the police force which allows a more constructive fight against institutional racism and increases societal safety.

1. Introduction

Institutional racism in the form of ethnic profiling among executive authorities in the Netherlands continues to be a highly controversial and emotional topic. Most recently, The Court of Appeals in the Hague has ruled that the Dutch border force is guilty of ethnic profiling, a "serious form of discrimination" and must stop using ethnicity-related external characteristics such as skin colour (NLTimes, 2023; Court of Appeal in The Hague, 2023). Moreover, numerous high-profile incidences like the tragic death of George Floyd in 2014 (USA) or the Dutch rapper Typhoon, who was ethnically profiled and used his reach to bring more media attention to the issue of discrimination in the police force, have profoundly damaged the police' reputation. Consequently, several reports accuse the PolitieNL of institutional racism and demand an immediate change in policing practices (e.g., Open Justice Foundation, 2013) and the police chief of the Netherlands himself describes racism and discrimination in the police force as a 'structural problem' (DutchNews, 2022).

Following the immense public accusations towards the police force in the past years, the stereotype of 'the racist police officer' has gained far-reaching attention. For example, movements like Black Lives Matter have identified the police force and police officers as the main threat to equal justice and hence. as target in their fight against structural discrimination. Therefore, many police officers feel unjustly targeted and emotionally agitated by the debate about structural racism in the police force (Böing & de Vries, 2021). Recent research suggests that frequent exposure to the racist stereotype can have a significant impact on emotions, and behaviour and hence on policing practices (e.g. Burke, 2022). However, there has been quite some controversy regarding the concrete effects that confrontation with the racist stereotype can have.

On one hand, researchers argue that the stigmatisation of police officers as being racist can cause police officers to exercise passive policing behaviour. MacDonald (2016) first identified the "Ferguson effect". The Ferguson effect describes an increase in crime rates due to de-policing following public scrutiny regarding the police force and police officers. In other words, according to this theory, the harsh criticism, and the implicated distrust in police officers can lead to de-policing, so the avoidance of active policing (Rushin & Edwards, 2017). According to MacDonald (2016), de-policing concretely refers to the withdrawal from stop-and-search procedures. In line with that, Böing

and de Vries (2021) found that 9% of Dutch police officers decline to continue conducting traffic stops due to the fear of appearing racist. To counteract this tendency, it is important to train police officers, possibly increasing police officers' self-efficacy and willingness to engage in stop-and-search situations again. However, in this regard, Böing and de Vries (2021) found that only one-third of the police officers' intended to participate in training and courses on this topic. Consequently, passive policing and the low willingness to participate in reformative measures might significantly reduce the citizens' safety and hence put individuals in danger.

On the other hand, studies suggest that the exposure to 'the racist police officer' stereotype might increase the use of police force and discrimination. Contrary to the expectations based on the Ferguson effect, Koslicki (2022) found a significant rise in the use of force following the killing of George Floyd and the Black Lives Matter movement formation. Accordingly, Trinkner et al. (2019) found that perceiving a stereotype threat increases the support for coercive policing towards both groups, ethnic minorities, and non-ethnic minorities. McCarthy et al. (2021) confirmed these findings with a sample of Australian police officers. The stereotype threat describes a phenomenon in which individuals who are concerned about fulfilling a negative stereotype, are more likely to engage in these stereotypical behaviours (Pennington et al., 2016). Consequently, the racist stereotype which has emerged in the past years might cause more racist and violent behaviour by police officers and therefore pose a threat to the safety of ethnic minorities and society at large.

To shed some light on the controversy regarding the concrete effects of the racist stereotype on police officers' stop-and-search behaviour, this study aims to answer the question of **"How does the racist police officer stereotype impact Dutch police officers' stop-and-search behaviour?"**. The outcome of this study can be beneficial on multiple levels. On one hand, the public, including politics, media, non-governmental activist organisations etc., can be educated about the possible detrimental effects of stigmatising police officers as being racist. On the other hand, police officers can be trained to better handle racism accusations, to avoid the emotional and behavioural impact and therefore prevent problematic policing caused by racism accusations. In sum, gaining these insights might not only contribute to increased societal safety through more just policing but also increase police officers'

work satisfaction. Ultimately, this might lead to a more positive relationship between citizens and the police force.

1.1. Theoretical Framework

Regarding the underlying psychological mechanisms of how the racist stereotype influences police officers' behaviour, several crucial concepts potentially accounting for this relationship have been identified. In the context of how stereotypes affect individuals' behaviour, the psychological phenomenon of stereotype threat has been found to be an influential variable (Pennington et al., 2016). Moreover, stigmatisation affects individuals' emotions and behaviours and therefore represents a possible explanation for how the racist stereotype influences Dutch police officers' stop-and-search behaviour. Therefore, this paper primarily focuses on the concepts of stereotype threat and stigma feelings as potential mediators in the relationship between the racist stereotype and Dutch police officers' stop-and-search behaviour. For the sake of transparency, all additional concepts which may be relevant to this relationship, namely self-legitimacy, workplace racial anxiety, and user experience, can be found in Appendix A.

Stereotype threat

First, stereotype threat might play a crucial role in the relationship between the racist stereotype and the police officers' stop-and-search behaviour. Stereotype threat can be generally described as the concern to conform to stereotypes about one's social group salient in a particular situation, leading to in fact performing stereotypical behaviours. This mechanism is based on the principle of a self-fulfilling prophecy (Spielman et al., 2014; Trinkner et al., 2019). In academic settings, this phenomenon has been shown to account for gender and racial disparities (Steele & Aronson., 1995; Osborne, 2001; Gilovich et al., 2006). For example, Steele and Aronson (1995) found that African Americans performed worse than their peers on a verbal reasoning examination when it was presented as a diagnostic indicator of intellectual ability, but performed equally when they did not present it as a diagnostic indicator of intellectual ability. This example shows that the mere salience of stereotypes can influence one's task performance. Since police officers are confronted with the racist stereotype daily, it may affect their performance in stop-and-search scenarios.

In this regard, Richardson and Goff (2014), Trinker et al. (2019) and McCarthy et al. (2021) suggested that perceiving a stereotype threat is associated with increased support for coercive policing. Moreover, Burke (2022) investigated the mechanisms underlying the racist police officer stereotype threat and found that in interracial interactions contextual anxiety provokes cognitive depletion which leads to decreased empathy and finally conforming to the racist police officer stereotype. These studies indicate that stereotype threat may play a significant role in explaining the impact of the racist stereotype on policing practices. However, until now, there is no scientific research examining the role of stereotype threat in the relationship between the racist stereotype and stop-and-search behaviour in the context of ethnic profiling.

Stigma feelings

Second, stigma feelings may represent an important factor in understanding police officers' behaviour following the confrontation with the racist stereotype. Generally, stigmatisation describes the discreditation of one or more individuals based on certain characteristics (Goffman, 1963). Commonly, people are stigmatised based on their culture, gender, race, religion, and disease but also political ideation or belongingness to a certain social group. More specifically, individuals are discriminated against based on a characteristic which distinguishes them from other groups in society. For example, in the Netherlands, Turkish-Dutch Muslims are often stigmatised due to the political ideation of some individuals from this group which deviates from the rest of society (RaceED, 2022). The stigmatisation of a group implies the assumption that its members have a lower value in society than oneself which can serve as justification for discrimination. Hence, it promotes the division and exclusion of individuals based on their social identity. More specifically, stigmatisation threatens one's identity (Major & O'Brien, 2004).

Consequently, being stigmatised can have detrimental consequences for the individuals' mental and physical health as well as for behavioural performance. Perceiving stigma can provoke involuntary stress responses like feelings of anxiety and loneliness, which can lead to a variety of psychological problems like lowered self-esteem, sleep problems and depression. This psychological and social burden can ultimately lower one's physical health and impair working performance (Heatherton, 2003; Major & O'Brien, 2004; Hicken et al., 2013; Himmelstein et al., 2014).
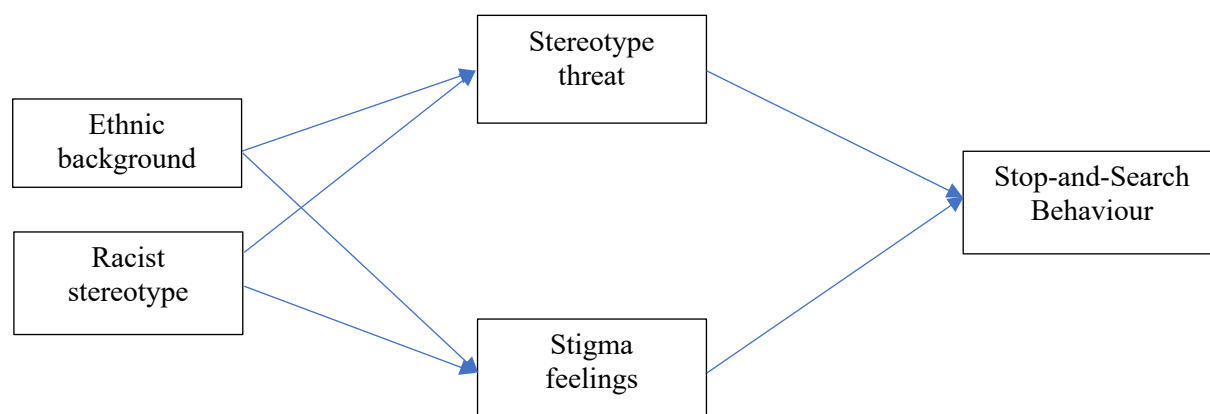
In the context of police officers' stop-and-search behaviour, perceiving stigma feelings may impact their performance through its various negative effects on the individual. Following high-profile incidences and emotional debates about structural racism in the police force, police officers have become a group which is strongly associated with racism. Although there are no concrete numbers, it can be assumed that only a minority of police officers indeed have racist attitudes. Consequently, although the fight against discrimination by the police is justified, many police officers now carry the burden of being stigmatised as racist following the misconduct of colleagues. Therefore, stigma feelings with its multiple layers of negative effects, may represent an explanation for how the racist stereotype impacts police officers' stop-and-search behaviour. However, so far, there has been no empirical research on the role of stigma feelings in the context of policing.

1.2. The present research

This study is administered to obtain knowledge about how 'the racist police officer' stereotype influences police officers' stop-and-search behaviour. Therefore, the study was set up as a 2 (Ethnic background: yes versus no) x 2 (Racist stereotype: yes versus no) between participants design with stop-and-search behaviour as the dependent variable and stereotype threat, stigma feelings, user experience, self-legitimacy, and workplace racial anxiety as potential mediators. This paper, however, solely focuses on the concepts of stereotype threat and stigma feelings. The independent variable ethnic background refers to the ethnicity of one individual in the stop-and-search scenario, with value 0 indicating no migration background and value 1 indicating a migration background. The independent variable racist stereotype refers to the exposure to racism accusations before the stop-and-search scenario, with value 0 indicating no exposure and value 1 indicating exposure to the racist stereotype before the stop-and-search scenario. The study utilises VR technology to simulate stop-and-search scenarios to assess police officers' behaviour. Additionally, a questionnaire is applied to determine the participants' scores regarding the potentially relevant concepts mentioned above. It is expected that the confrontation with an individual from an ethnic minority and the racist stereotype influences Dutch police officers' stop-and-search behaviour, leading to more overpolicing and that this relationship is mediated by stereotype threat or stigma feelings. In the context of this study, overpolicing refers to an unjustified check on the person with migration background.

Figure 1

Conceptual Model for the Effect of the Racist Stereotype on Stop-And-Search Behaviour

H1: The racist stereotype influences Dutch police officers' stop-and-search behaviour, resulting in a higher likelihood of overpolicing behaviours among officers who are confronted with the racist stereotype compared to those who are not.

H2: The ethnic background influences Dutch police officers' stop-and-search behaviour, resulting in a higher likelihood of overpolicing behaviours among officers who are confronted with a person from an ethnic minority compared to those who are not.

H3: The effects of ethnic background and racist stereotype on Dutch police officers' stop-and-search behaviour, respectively, are mediated by stereotype threat, meaning the confrontation with the racist stereotype and a person from an ethnic minority increases stereotype threat, leading to more overpolicing.

H4: The effects of ethnic background and racist stereotype on Dutch police officers' stop-and-search behaviour, respectively, are mediated by stigma feelings, meaning the confrontation with the racist stereotype and a person from an ethnic minority increases stigma feelings, leading to more overpolicing.

<center>**2. Methods**</center>

2.1. Participants and Design

96 police officers were gathered through purposive sampling utilising a LinkedIn post. All police stations across the Netherlands were invited to reply to the conduction of a social psychological experiment using VR-Technology (see Appendix B). Before analysing the data, several participants had to be removed from the dataset to obtain valid results. More specifically, from the initial 96 police officers, nine participants were removed because their reported code associated with the checked person in the VR was not in line with the allocated condition. Therefore, after deleting invalid participants, eighty-seven Dutch police officers (65*M*, 22*F*, *Mage* = 35.05, *SDage*= 9.87) represented the final sample for analysis. The officers or detectives had to have stop-and-search experience to be included. The working experience was assessed on a scale ranging from 1 to 5 where 1 indicates a working experience of less than 10 years, 2 equals 10-20 years, 3 means 20-30 years, 4 is 30-40 years and 5 represents a working experience of more than 40 years. Based on this scale, the police officers had an average working experience of 1.87 (SD = 0.96).

Participants worked at the police stations in Amsterdam, Rotterdam, Utrecht, Zwolle, and Wageningen. The VR study was conducted in a 2 (Ethnic background: yes versus no) x 2 (Racist stereotype: yes versus no) between participants design. The stop-and-search behaviour in the VR-Environment represents the dependent variable. Additionally, the potentially mediating concepts of stereotype threat, stigma feelings, user experience, self-legitimacy and workplace racial anxiety were included in the study. The participants were randomly distributed across the conditions, namely racist stereotype and ethnic background.

2.2. Procedure

Before VR-Environment Phase

For the data collection, at least two researchers travelled to the respective police stations within the Netherlands. Upon arrival, two or three stations for the experiment conduction were set up, including a laptop, Oculus VR goggles and headphones. All participants were given a short introduction to the structure of the experiment. The exact aim of the study was not disclosed in advance. Participants were told that the study investigated how the public opinion influences police

officers. Next, participants were provided with a digital informed consent sheet (see Appendix C) as well as a short pre-questionnaire to assess demographic information on a laptop using Qualtrics XM as part of the following questionnaire.

Thereupon, the participants were shown a short video with headphones on, representing the racist stereotype manipulation (Figure 1). To elicit differences between the participants' perceived stereotype threat and stigma feelings, half of the participants saw a video from YouTube posted by the account *Godgiven* depicting Dutch officers being accused of ethnic profiling. The video showed a black individual videoing himself while talking to two white police officers in the Netherlands. Concretely, he is videoing the officers while calling them racist and elaborating that this is normal policing practice in the Netherlands. He speaks loudly into the camera explaining that he was pushing two rented bicycles which would not have been suspicious if he was white. The video is three minutes long and in English. The other half of the police officers were shown a racism-unrelated video. This video stemmed from the social media platform Twitter and was posted by *KombijdePolitie*. It depicts a police representative sitting in a car explaining recent successes. It is 0.44 min long and in Dutch.

Figure 1

Stereotype Video and *Stereotype Unrelated Video*

Subsequently, all participants put on VR goggles and headphones. Before entering the VR-Environment, the researchers explained that one can select a person by simply staring at them for two seconds. This was also explained again in a short introduction to the VR-Environment itself. Moreover, it was explicitly stated that it is not required to choose a person.

VR-Environment

To test whether the independent variable ethnic background has an impact on the officers' stop-and-search behaviour, half of the participants were presented with a VR-Environment in which

the person sitting on a scooter has facial characteristics which are typically associated with a native Dutch person without migration background. The other half of the police officers were shown the version of the VR-Environment in which the person on the scooter possesses facial characteristics associated with a migration background. In the following, for the sake of simplicity and under consideration of the limitations of these terms, among others, the terms Western-looking and non-western-looking person are going to be used. The non-western facial characteristics were applied to the originally Western-looking person using deepfake technology. By doing so, behavioural differences between the police officers towards Western-looking and non-western-looking persons can be observed. The participants virtually find themselves in the financial district of Amsterdam. Surrounding them, four men are standing at differing distances. One man sitting on a scooter, one man on his phone, a man in a suit and a man on a bike. In the background, there are typical street noises, pedestrians, cyclists, and cars.

After having selected one of the four individuals, or if the participant decided not to select anyone, the VR part was finished. Then, the police officers selected 'feedback' and received a code depending on which person was chosen which then had to be indicated in the following questionnaire. The officers who did not select a person did not receive a code and subsequently indicated that in the questionnaire. The individuals depicted in the VR can be found in Figure 2.

Figure 2

Person Overview

Person 1   Person 2   Person 3   Person 4

In the following, the people depicted in the VR are going to be referred to as Person 1, Person 2, Person 3, and Person 4. Importantly, Person 1 possesses facial characteristics associated with a migration background in the ethnic background condition, and typically Western facial characteristics in the original VR version. All other individuals remain the same in both VR versions.

Post VR Environment Phase

After finishing the VR-Game, participants conducted the main part of the questionnaire. The first questions were asked regarding the participant's motivations and intentions underlying the decision to choose or not choose a person (i.e., "It is possible that you addressed someone in the simulation. If so, what do you think was the reason for this?"). Thereupon questions regarding user experience, self-legitimacy, stereotype threat, workplace racial anxiety, force support, stigma feelings, and training willingness were asked. After responding to all items of the questionnaire, the participants were asked to accept a digital post-consent form (see Appendix D) and finally, a thank-you notice was displayed. Upon completion of the questionnaire, participants were offered further explanations concerning the true nature of the study. Additionally, there was space for debriefing and open conversations.

2.3. Measures

To test whether stereotype threat or stigma feelings play a role in the relationship between the racist stereotype and Dutch police officers' stop-and-search scenario, they were included in the questionnaire. Additionally, measures for other potentially insightful variables, namely user experience, self-legitimacy, workplace racial anxiety, force support and training willingness were included in the questionnaire. Since this paper solely focuses on stereotype threat and stigma feelings, the measures for the remaining concepts are provided in Appendix E.

Stop-and-search behaviour

The police officers' stop-and-search behaviour was operationalised by applying specific criteria to categorise the VR behaviour of police officers as either underpolicing (0), neutral policing (1) or overpolicing (2), building the stop-and-search behaviour variable. This distribution was chosen based on the previously discussed controversy of whether the racist stereotype provokes more passive or active policing. Ultimately, one police officer showed underpolicing, 46 showed neutral policing and 40 showed overpolicing

In the present study, all items could be answered on a 5-point Likert scale, ranging from "Strongly disagree" (1) to "Strongly agree" (5). A list of all items used for this study and the scales' reliability coefficients can be found in Appendix F.

Stereotype threat

A five-item scale was used to determine the police officers' perceived stereotype threat. For Example, the items contain statements like "I worry that people may think of me as racist because I am a police officer.". The reliability assessment suggested acceptable internal consistency based on Cronbach's α = .78. Since Cronbach's Alpha is vulnerable to a low number of items, Guttman's lambda2 was determined, suggesting a high degree of internal consistency with a Guttman's lambda2 of .82. Therefore, the scale chosen represents a reliable measure to determine the police officers' perceived stereotype threat.

Stigma feelings

A three-item scale was used to measure Stigma Feelings. These items were entirely self-constructed. For example, these items included statements like "I think it is unfair that people often expect police officers to be racist.". The psychometric properties of the Stigma Feelings Scale were assessed by Cronbach's α = .51 and Guttman's lambda2 of.52 suggesting poor internal consistency. Therefore, the scale needs to be revised and improved for future usability. Moreover, the second item of the stigma feelings scale was reversed.

Open questions

To gather qualitative insights, the questionnaire included several open questions. First, after leaving the VR Environment the police officers were asked to continue filling in the questionnaire. Here, they were asked about their motives and reasons for why they did or did not select a person in the VR. The open questions were: "It is possible that you addressed someone in the simulation. If so, what do you think was the reason for this?" and "If you did not address anyone, what do you think was the reason for this?". Secondly, to give additional information about the user experience regarding the VR-Environment, police officers answered the question "How do you feel about the VR environment? Explain the extent to which you felt it was realistic and reflected your actions in real life (please explain why).". Moreover, to gather qualitative insights on how the police officers feel emotionally affected by the publicity all around the topic of institutional racism, they could answer the question "Would you tell us a little more about whether, and if so, in what ways you, as a police officer, feel emotionally affected by the public debate about structural racism in policing?".

3. Results

3.1. Manipulations

First, the data were analysed using RStudio version 4.0.2. Using MANOVA, it could be determined whether the ethnic background or racist stereotype manipulation provoked the intended group differences regarding stereotype threat and stigma feelings. However, no significant effects of ethnic background or racist stereotype on stereotype threat or stigma feelings were found. Since there are no remarkable differences between the groups of police officers, the findings suggest that the situational confrontation with the racist stereotype before, or the exposure to a person with a migration background in the stop-and-search scenario did not affect the police officers' perceived stereotype threat nor stigma feelings. The police officers' absolute scores can be found in Table 1.

3.2. Descriptives

Correlations

The correlational analysis was conducted to obtain insights into relevant associations between the variables of interest, namely age, working experience, ethnic background, racist stereotype, stop-and-search behaviour, stereotype threat, stigma feelings and training willingness. Additionally, the four persons who the police officers could select in the VR, as well as the option 'no selection', indicating that none of the citizens was checked, were included as dummy variables (Table 1).

First, there were no meaningful correlations between stop-and-search behaviour and any other variable. Second, ethnic background was significantly negatively correlated with Person 1 ($r = -.24$) This indicates that participants who saw Person 1 as a person with a migration background in the VR Environment were less likely to select Person 1 in the virtual stop-and-search scenarios. Contrary, there was a strong positive correlation between ethnic background and Person 2. This shows that police officers who were exposed to the person from an ethnic minority were more likely to select Person 2 in the VR stop-and-search scenario. In other words, the mere exposure to Person 1 as a person with a migration background sufficed for police officers to avoid checking this person and instead checked someone else.

Regarding the racist stereotype, the opposite could be observed. The racist stereotype was positively correlated with the selection of Person 1 ($r = .20$), which shows that people who saw the

video containing the racist stereotype before the VR-Environment were more likely to select Person 1. However, this correlation was not statistically significant. Regarding Person 2, the analysis showed a significant negative correlation with the racist stereotype (r = -.29). Therefore, the police officers who were exposed to the racist stereotype were less likely to select the second person in the VR-Environment.

Next, stigma feelings were significantly negatively correlated with 'no selection' in the virtual stop-and-search scenario (r = .23). In other words, police officers who were more likely to perceive feelings of stigma were more inclined to choose a person rather than not doing so. Last, there was a negative correlation between training willingness and ethnic background (r = -.23). This indicates that participants who were less willing to undergo training were more likely to have seen the ethnic minority in the VR-Environment.

3.3. Stop-And-Search Behaviour, Stereotype Threat, and Stigma Feelings

To answer the research question of how the racist stereotype affects police officers' stop-and-search behaviour a multivariate analysis of variance (MANOVA) was performed to investigate the effects of the independent variables, namely ethnic background and racist stereotype, on various outcome variables including the stop-and-search behaviour, stereotype threat, stigma feelings, workplace racial anxiety, self-legitimacy, force support, user experience and training willingness (Table 2). Considering the unequal distribution of participants regarding the stop-and-search behaviour variable, Pillai's trace was used as the test statistic as it is robust to non-normality and unequal covariance matrices (Kaymaz et al., 2019). The results of the MANOVA indicated that there were no statistically significant effects for ethnic background, racist stereotype or the interaction between ethnic background and racist stereotype. These findings suggest that neither the confrontation with the racist stereotype in a video nor the exposure to an ethnic minority in the stop-and-search scenario had a significant impact on stop-and-search behaviour, the perceived stereotype threat, or stigma feelings. Therefore, all hypotheses must be rejected.

However, it is crucial to mention that the construction of the stop-and-search behaviour variable based on the police officers' behaviour in the VR may have limitations in representing the behaviours of police officers. Due to the design of the VR and the categorisation criteria,

Table 1

Correlation Table

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. **Age**	35.05	9.87												
2. **Working experience**	1.87	0.96	.78**											
3. **Ethnic background**	0.53	0.50	-.18	-.03										
4. **Racist stereotype**	0.47	0.50	.03	.08	.01									
5. **Stop-and-search behaviour**	1.45	0.52	-.17	-.16	-.16	-.06								
6. **Stereotype threat**	2.57	0.76	.06	.09	.06	-.12	-.03							
7. **Stigma feelings**	3.64	0.71	-.00	.09	-.02	.05	.05	.19						
8. **Training willingness**	3.76	0.90	.16	.17	-.23*	-.18	.03	.08	-.03					
9. **Person 1**	0.51	0.50	.02	-.11	-.24*	.20	.37**	-.07	.15	-.06				
10. **Person 2**	0.13	0.33	-.07	.05	.36**	-.29**	-.13	-.02	.13	.10	-.38**			
11. **Person 3**	0.14	0.35	.05	.09	.04	-.11	.10	.01	-.19	-.00	-.40**	-.15		
12. **Person 4**	0.14	0.35	-.12	-.02	.04	.16	-.22*	.01	.05	-.12	-.40**	-.15	-.16	
13. **No selection**	0.09	0.29	.12	.04	-.10	-.06	-.35**	.13	-.23	-13	-.32**	-.12	-.13	-.13

* Indicates $p < .05$. ** indicates $p < .01$.

the MANOVA analysis did not provide meaningful insights into the relationship between the racist stereotype and Dutch police officers' stop-and-search behaviour. Further explanation will be provided in the discussion.

Table 2

MANOVA Results for the Effects of Ethnic Background and the Racist Stereotype on All Outcome Variables

Variable	Df	Pillai	F value	P value
1. **Ethnic background**	1	0.11	1.16	0.34
2. **Racist stereotype**	1	0.06	0.63	0.76
3. **Ethnic background x Racist stereotype**	1	0.09	0.90	0.53
4. **Residuals**	83			

3.4. The Emotional Impact

To gather qualitative insights regarding the emotional impact of the racist stereotype on police officers, the participants were offered to answer the question "Would you tell us a little more about whether, and if so, in what ways you, as a police officer, feel emotionally affected by the public debate about structural racism in policing?". In total, 62 police officers (71%) responded to the question. The responses revealed various perspectives and emotional experiences among the officers. Due to the comprehensive nature of this paper, a concise summary of the findings is provided. However, the complete results of this study are available upon request.

Feeling Stigmatised

More than half of the police officers expressed feeling stigmatised or discriminated against by the public perception that all police officers are the same and judged as racist. Thereby, they emphasized their individuality and efforts to help society. For example, one police officer stated that "people who feel discriminated against often lump everyone together themselves.". Other police officers explained that it is "(…) annoying that the police are already looked at as if we are all the same. Every human being, including every police officer, is different. As soon as it is about 'the police' in combination with racism, it affects me as a human being, because it is far away from my own norms and values." or that "it does bother (…) when in the public debate the police are judged as

racist. Especially when I see around me that colleagues work every day to help society and do not discriminate between races.". Accordingly, another police officer complained that "(…) As an officer myself, I am confronted with prejudice. I often hear: All cops are racists (…). I can be very disturbed by lumping them together (…)". In sum, these example statements represent that many police officers feel emotionally impacted by the stigmatisation based on the racist stereotype.

Feelings of Unfairness

Around 29 police officers expressed a sense of unfairness and annoyance regarding the negative portrayal of the police based on the actions of a few individuals. They felt that the actions of a minority tarnish the reputation of the entire police force. Some police officers believed that "people quickly and unjustly draw the racism card (…)" and "(…) find this very disturbing and annoying". In line with that, one officer described a recent experience: "I was baselessly accused of discrimination, racism, and abuse of power. This was brushed off the table by the complaints committee, but it took more than six months. I was accused with very ugly words and facts of something I had not done and against which I fight with all my heart as ambassador of police for everyone. The fact that the other party did not mention facts and circumstances, but feelings, meant that I was unable to provide a reply and that we as parties were unable to understand each other. That touched me enormously."

Others were bothered that they are "(…) looked at as a person what others may have done.", since "It's a small part that embarrasses a large part of the police.". One police officer elaborated more on the causes and consequences of viewing the police only in the context of racism: "It affects me because I treat everyone respectfully the way I want to be treated myself. I can get easily irritated when I am called racist because I am just doing my job. That feels unfair and I often feel that people are very quick to call us racist. (...) We are no longer taken seriously by a large group of citizens. This is (partly) supported by our leadership and the public prosecutor's office who continuously answer to us instead of standing up for us. Everyone is allowed to shout and say anything under the banner of freedom of speech, but factual falsehoods towards the police are also allowed to be addressed.".

Being Understanding

Around ten police officers acknowledged the importance of the public debate and recognized that incidents of racism within the police contribute to negative perceptions. They believed that open

dialogue and self-reflection were necessary to learn from these issues. One officer summarised this attitude well explaining that "Public debate is good. As an organization, we are still sometimes quite racist, both internally and externally. Public debate holds up a nice mirror to us and allows us to learn about who we are, and who we want to be. I would love it if we as an organization not only shared our successes but also showed the difficult and sometimes ugly sides of our work."

Avoidance

Interestingly, one police officer described how his stop-and-search behaviour is affected by the racist stereotype. He mentioned being extra cautious about the perception of their ethnicity during interactions with citizens to avoid being accused of racism: "(…) during my work and when checking people, I am extra aware of their ethnicity and the feelings that can arise in the citizen as a result of the police check. This sometimes causes me not to perform a check that I would like to perform. (…). This reported avoidance behaviour aligns with the findings of the correlational analyses.

Not Affected

Only a few police officers expressed that they did not feel affected by the public debate about structural racism in policing. For example, one police officer explains: "I personally do not feel addressed because I very consciously carry out my work with this theme.". However, out of all responses, only three police officers state to hold this viewpoint.

3.5. Re-Evaluating Stop-and-Search Behaviour

As previously mentioned, the stop-and-search behaviour variable was not considered appropriate to make meaningful statements about the officers' stop-and-search behaviour. Therefore, a multinomial logistic regression was conducted. The multinomial logistic regression contained the dependent variables Person 1, Person 2, Person 3, Person 4, and 'no selection', representing the behavioural options which the police officers had during the virtual stop-and-search scenario. The variables ethnic background, racist stereotype and their interaction were included as predictors in this model. Doing so allows to investigate police officers' stop-and-search behaviour more accurately by determining the differences between the four groups in selecting persons in the virtual stop-and-search scenario.

The coefficients for ethnic background, racist stereotype and their interaction represent the differences in log odds of being in the respective category compared to the baseline category, which is 'no selection'. The main effects, interactions, and their corresponding p-values can be found in Table 3, respectively. The results show that none of the predictors or interaction terms are statistically significant, as all the p-values are above 0.05.

However, it is still important to analyze the magnitude of certain coefficients for better interpretation. The coefficient for the ethnic background variable regarding Person 1 was estimated to be 0.09 (SE = 1.02). Therefore, when holding other variables constant, a one-unit increase in the ethnic background variable is associated with an odds increase of 1.09 of being in category Person 1 compared to the baseline category. The coefficient for the Person 2 variable was estimated to be 15.53 (SE = 546.33). Hence, the odds increase around 724830.27 with a one-unit increase in the ethnic background variable. Based on that, these results suggest that police officers who were confronted with an ethnic minority as Person 1 in the VR-Environment would be far more likely to choose Person 2 instead of the ethnic minority. This finding is in line with the correlational analysis and qualitative insights which already suggested that the mere exposure to a person from an ethnic minority can lead to avoiding checking the person with a migration background and the shift to Person 2. Regarding Person 3 and 4, ethnic background was associated with an increase in the odds of 1.50 and 0.000003 with estimated coefficients of 0.41 (SE = 1.16) and -13.78 (SE = 600.97), respectively.

Table 3

Multinomial Logistic Regression Results for the Effects of Ethnic Background and the Racist Stereotype the Behavioural Options in the VR

Variable	*Ethnic background*	*Racist stereotype*	*Ethnic background x Racist stereotype*
1. **Person 1**	0.09	0.72	0.20
2. **Person 2**	15.53	-1.35	-0.26
3. **Person 3**	0.41	-0.98	1.39
4. **Person 4**	-13.78	-0.98	16.42

Table 4

P-Values of the Multinominal Logistic Regression

		Independent Variable	*P-Value*
1.	**Person 1**	Ethnic background	.93
		Racist stereotype	.47
		Ethnic background x Racist stereotype	.90
2.	**Person 2**	Ethnic background	.98
		Racist stereotype	.99
		Ethnic background x Racist stereotype	1
3.	**Person 3**	Ethnic background	.73
		Racist stereotype	.50
		Ethnic background x Racist stereotype	.50
4.	**Person 4**	Ethnic background	.98
		Racist stereotype	.50
		Ethnic background x Racist stereotype	.98

4. Discussion

4.1. Practical Background

High-profile incidents of police discrimination have sparked protests and 'the racist police officer' stereotype. This stereotype stigmatises many officers as racist, despite a minority displaying such attitudes. Concerns exist regarding the impact of the racist stereotype on police officers. Hence, this study examined how this racist stereotype affects Dutch officers' stop-and-search behaviour, aiming to educate both officers and the public to prevent negative consequences.

4.2. The Findings

The results of the study revealed several interesting findings. First, the analyses revealed that neither the ethnic background nor the racist stereotype manipulation provoked the intended group differences regarding the perceived stereotype threat and stigma feelings. Next, the findings of the initial analysis showed no influence of the confrontation with a person with a migration background in the VR or the exposure to a video depicting the racist stereotype on the police officers' stop-and-search behaviour, perceived stereotype threat or stigma feelings. The research question focused on investigating the impact of the racist stereotype on Dutch police officers' stop-and-search behaviour. In

this regard, based on these findings, neither the exposure to a person with a migration background in the stop-and-search scenario nor being confronted with the racist stereotype influenced the police officers' stop-and-search behaviour. Moreover, stereotype threat or stigma feelings do not mediated this relationship. Therefore, on the basis of these findings, all hypotheses are rejected.

However, during the course of this analysis, it became evident that due to the design of the VR and the operationalisation of the virtual stop-and-search behaviour in three categories, namely under-, neutral- and overpolicing, only one police officer was categorised as under policing, while the other 86 officers were almost equally distributed between neutral- and overpolicing. Therefore, to provide more meaningful insights into the impact of the racist stereotype on police officers, additional analyses were considered.

The correlational analysis showed that the police officers who were exposed to the deepfake version of the VR, depicting Person 1 as an individual with a migration background, significantly avoided conducting a check on Person 1. Instead, they mostly decided to check Person 2 who possesses facial characteristics associated with a Western origin. Accordingly, the multinomial logistic regression revealed a higher likelihood of police officers choosing to check Person 2 rather than Person 1 in the VR scenario when Person 1 was depicted as an individual from an ethnic minority. It must be noted that these findings were not significant and must therefore be treated with caution. Nonetheless, both findings suggest that police officers who are confronted with individuals with migration background tend to avoid checking them and instead shift the check to individuals seemingly without migration background.

The qualitative insights into the officers' emotional impact regarding the racist stereotype revealed diverse perspectives and emotional experiences. Generally, the police officers provided elaborate and thoughtful insights into their strong cognitive and emotional responses to the whole topic of institutional racism in the police force. Many officers expressed feeling stigmatized or discriminated against due to the public perception that all police officers are racist. They emphasized their individuality and efforts to help society, and some officers expressed a sense of unfairness and annoyance regarding the negative portrayal of the police based on the actions of a few individuals. However, some officers acknowledged the benefits of the public debate on structural racism in

policing and recognized the need for open dialogue and self-reflection to address these issues. One officer reported being extra cautious about the perception of ethnicity during interactions with citizens to avoid being accused of racism.

4.3. Ethnic Background and the Racist Stereotype

It must be noted that the absence of a significant effect of ethnic background and racist stereotype on the perceived stereotype threat and stigma feelings does not prove that police officers do not perceive a stereotype threat or stigma feelings. More concretely, the findings show that being confronted with a person with a migration background does not increase perceived stereotype threat or stigma feelings in police officers. Moreover, it suggests that the situational confrontation with the racist stereotype does not provoke an increase in the levels of perceived stereotype threat and stigma feelings. Consequently, it can be assumed that one situational confrontation with the racist stereotype, compared with the constant presence of the topic and the daily confrontation with racism accusations police officers experience, does not have a considerable effect on the police officers' perceived stereotype threat and stigma feelings. Accordingly, many police officers explained that they suffer from frequently being accused of racism, but that they got used to it since it has been part of their daily working life for years now.

The acute confrontation with the racist stereotype does not seem to impact police officers. However, the qualitative insights reveal how strongly emotionally affected they are by the constant debate about racism in the police force. Hence, these findings indicate that police officers suffer more from the chronic effects of the racist stereotype, rather than the effects of situation-specific accusations. This can also explain the failure of the manipulations. While the stereotype threat refers to a situational predicament (e.g., Steele & Aronson, 1995), the chronic stereotype threat describes the repeated experience of stereotype threat. Research comparing the effects of acute stereotype threat and chronic stereotype threat suggests that both significantly impact performance. Although this study did not show effects of acute stereotype threat, the impact of chronic effects cannot be excluded. Hereby, the chronic stereotype threat may exceed cognitive depletion which influences task performance, leading to conforming to the negative stereotype long-term (Bedyńska et al., 2018; Woodcock et al.,

2012). Moreover, Trinkner (2019) and McCarthy et al. (2021) found that police officers experiencing chronic stereotype threat are more likely to engage in coercive policing.

4.4. Interpreting Insignificant Results Regarding Stop-and-Search Behavior

However, the results of the analyses do not suggest that police officers confirm the racist stereotype. As previously mentioned, the analysis does not suggest any significant effects of individuals' ethnic background or the racist stereotype on police officers' stop-and-search behaviour. Importantly, it must be considered that several circumstances could have contributed to these insignificant results. First, since the four groups emerging from the distribution in two conditions only have around 20 participants, the sample size may be too small to detect significant differences between the groups. Second, as previously discussed, the design of the VR and the operationalisation of the participants' virtual stop-and-search behaviour does not accurately capture police officers' stop-and-search behaviour. On top of that, both manipulations, ethnic background and the racist stereotype, did not provoke significant differences across the groups. Consequently, the inaccurate representation of police officers and the insufficient manipulation effectiveness do not allow to establish a clear statistical causal relationship and hence may explain the insignificant results.

In sum, the small sample size, the limited informative value of the operationalised stop-and-search behaviour and the unsuccessful manipulations can reduce the statistical power (Faber & Fonseca, 2014; Tabachnick & Fidell, 2021). Therefore, the insignificant results must be interpreted with caution.

4.5. Questioning the Applicability of Stereotype Threat and Self-Fulfilling Prophecy

Contrary to the expectations, multiple analyses revealed that police officers showed avoidant behaviour towards the person with a migration background and instead decided to check a person seemingly without a migration background. In other words, police officers seem to display the opposing behaviour of the racist stereotype. In contrast, much research regarding 'the racist police officer' stereotype has been devoted to the stereotype threat, arguing that 'the racist police officer' stereotype may become a self-fulfilling prophecy confirming racist stereotypical behaviours (e.g., Richardson & Goff, 2014; Trinkner et al., 2019; McCarthy et al., 2021). Studies show that the confrontation with the racist stereotype leads to more support for using coercive policing. However, it

was not determined whether perceiving the racist stereotype leads to more racist behaviours, which should be the case according to the stereotype threat and self-fulfilling prophecy (Richardson & Goff, 2014; Trinkner et al., 2019; McCarthy et al., 2021).

The psychological concepts of stereotype threat and self-fulfilling prophecy imply that individuals who are confronted with a certain negative stereotype confirm the negative behaviours associated with the stereotype. Therefore, according to these psychological phenomena, police officers display more racist and aggressive policing behaviour after being confronted with the racist stereotype. However, the research arguing for this idea could only partially show this causal chain, since they did not investigate how police officers behave towards persons from an ethnic minority in comparison to persons seemingly without migration background. Hence, while it may be true that confronting police officers with the racist stereotype may generally increase their support for coercive policing, it was not assessed whether the police officers also display more racist behaviour (Richardson & Goff, 2014; Trinkner et al., 2019; McCarthy et al., 2021; Burke 2022). Therefore, this paper argues for a more differentiated use of the terms stereotype threat and self-fulfilling prophecies, since the findings do not entirely represent these phenomena.

4.6. Introducing the Chronic Stereotype Reactance

Contrary to the previously discussed idea, this study suggests that in stop-and-search scenarios police officers tend to shy away from checking citizens from ethnic minorities and instead check western-looking persons, following the mere exposure to a person with a migration background. This is partially supported by previous literature. MacDonald (2016) and Böing and de Vries (2021) demonstrate that police officers withdraw from conducting stop-and-search following racism accusations. This may then lead to increased crime rates, which represents the Ferguson effect (MacDonald, 2016). However, these studies did not investigate police officers' concrete behaviours in stop-and-search scenarios itself.

In this regard, the police officers' behaviour may be explained by the concept of stereotype reactance. Stereotype reactance describes the refutation of the activated stereotype following the need to disprove the stereotype, which leads individuals to engage in behaviours contrary to the stereotype (e.g., Kray et al., 2001). One police officer precisely described this phenomenon when explaining that

he is cautious about the perception of their ethnicity during interactions with citizens to avoid being accused of racism. More concretely, police officers perceiving chronic stereotype reactance may explain why the mere confrontation with an individual from an ethnic minority in a stop-and-search scenario can suffice to provoke avoidant policing, as the findings of this study show. Several characteristics of stereotype reactance may explain this relation.

Desire to Maintain Behavioural Freedom

First, according to Brehm (1966), psychological reactance occurs due to the feeling of restricted freedom. In other words, individuals try to restore their perceived behavioural freedom by resisting external expectations. Accordingly, police officers reported feeling unjustly judged and less free to exhibit their policing tasks. Consequently, police officers may desire to resolve this feeling of restriction by proving the external criticisms wrong, which means checking on the Western-looking person instead of the non-western-looking person.

Explicit Stereotype Activation

Moreover, Kray et al. (2001 & 2004) demonstrated that especially explicit stereotype activations lead to stereotype reactance, while more implicit stereotype activations trigger stereotype confirmation. Neither high-profile publicity nor organisations or individuals hesitate to directly associate the police force with racism. Therefore, the narrative of 'the racist police officer' can certainly be considered as an explicit stereotype activation due to its very direct and confrontative nature. Consequently, the exposure to a person with a migration background in a stop-and-search situation may then trigger stereotype reactance.

The Desire to Maintain a Positive Image

Additionally, Lemus et al. (2015) stress that besides the threat to one's personal identity, threatening an individuals' social identity provokes psychological reactance to maintain the social groups' values and morals. This reaction can be labelled as *group resistance* (Lemus et al., 2015). Police officers have a strong sense of group identity (e.g. Hoggett et al., 2014, 2019). This is often promoted by police officers' strong sense to collectively fulfil the mission of ensuring societal safety (Loftus, 2009; Cockcroft, 2012, 2019). In line with that, many participants of this study explained that police officers as a group mainly work to protect citizens. Therefore, in the context of stop-and-search

scenarios, police officers may desire to prevail this positive image about their social group, which leads them to avoid checking the non-western-looking person, and instead check the western-looking person.

Chronicity

In sum, the psychological concept of stereotype reactance serves as a plausible explanation for police officers' stop-and-search behaviour observed in this study. However, current conceptualisations of stereotype reactance do not specifically grasp the chronic nature in the context of the racist stereotype. Therefore, this paper proposes a new conceptual model, namely the *Chronic Stereotype Reactance*. The *Chronic Stereotype Reactance* describes that individuals display and progressively internalise stereotype adverse behaviours as a response to repeated negative stereotype activation. Hence, in sum, the desire to maintain behavioural freedom, the explicit stereotype activation, and the willingness to maintain a positive group image may lead to *Chronic Stereotype Reactance*. Consequently, the mere confrontation with a person from an ethnic minority can lead police officers to display avoidant behaviour towards that person, and instead check a person seemingly without a migration background. This conceptual model should be empirically investigated in future research (Figure 4).

Figure 4

Conceptual Model of Chronic Stereotype Reactance
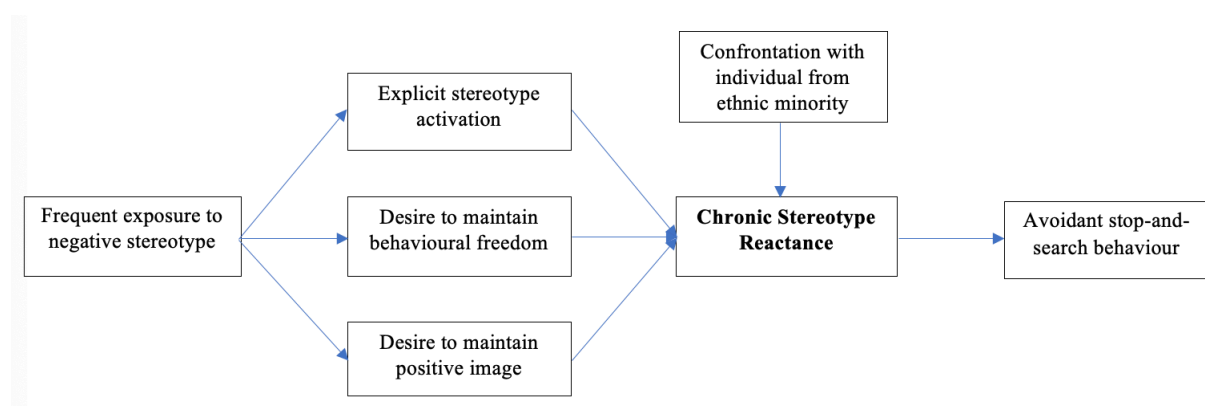
4.7. Practical Implications

Assuming that the findings of this study have a considerable degree of generalisability, several crucial practical implications must be considered. The present study aimed to investigate the impact of

the racist stereotype on Dutch police officers' stop-and-search behaviour and whether stereotype threat or stigma feelings mediate this relationship. Although the central analyses did not show significant results, additional analyses provided meaningful insights. Police officers seem to avoid checks on citizens with migration background and may check individuals who seem to not have a migration background instead. Moreover, qualitative, and quantitative insights revealed that police officers feel unjustly judged and stigmatised. Both aspects can have detrimental consequences for the police officers themselves and for citizens' and hence societies' safety.

Policing behaviour must always be based on objective facts since biased policing practices can reduce trust in the police force followed by decreased societal safety (Cilevičs, 2020). However, if the mere presence of persons with migration background leads police officers to avoid checking them and instead focuses on a person seemingly without a migration background, this cannot be considered objective policing. Next, persistent stigma feelings can lead to a variety of psychological and physiological consequences like anxiety, depression and sleep problems which impair working performance. Therefore, in sum, the racist police officer stereotype can have severe consequences for police officers, citizens, and society at large. It adversely affects police officers' job satisfaction and overall well-being, while also promoting policing actions that are not grounded in objective evidence. Consequently, this can result in a decrease in fair and unbiased stop-and-search practices. Therefore, it is in everyone's interest to counteract the variety of negative consequences the racist police officer stereotype can have.

Based on these insights, this paper calls for immediate action by several stakeholders. First, research must further investigate the mechanisms underlying the impact of the racist stereotype on stop-and-search behaviour to better understand and prevent problematic policing. Second, the police force must establish training programs to educate police officers on how to better deal with racism accusations. Third, all organisations engaging in the fight against structural racism in the police force must be informed about the police officers' perspective and the possibly detrimental consequences of promoting the racist police officer stereotype. Implementing these measures can help to increase police officers' health and job satisfaction and lead to increased societal safety by supporting just

policing practices. Ultimately, these positive developments may foster a more positive relationship between citizens and police officers, allowing a more constructive fight against structural racism.

4.8. Limitations and Strengths

Limitations

While this study provided crucial insights, it is important to acknowledge and address its limitations and how these may have impacted the outcomes of this research. First, the design of the virtual environment poses an issue in evaluating the participants' virtual stop-and-search behaviour. In the VR, the police officers could check one out of four persons. However, they did not have the integrated option to not select anyone. This behavioural option was only communicated in advance by stating that the VR goggle should be handed back to one of the researchers in case they did not want to select anyone. This flaw may have caused the unequal distribution when categorising the participants' stop-and-search behaviour in under- neutral- and overpolicing with only one police officer showing underpolicing. Consequently, additional analyses had to be conducted to gain meaningful insights. Additionally, this limitation may also partially account for why participants chose Person 2 after avoiding Person 1 with a migration background, just to have some interaction with the virtual environment. Nonetheless, this limitation did not affect the participants' decision of whether to check the person with a migration background or not.

However, one factor which might have affected this decision is social desirability. Social desirability can be described as a general willingness to present oneself in a favourable manner (Holden & Passey, 2009). Therefore, since showing racist behaviours is nowadays mostly considered as something bad, police officers may have avoided checking the person with a migration background due to the fear of procedural consequences. The experimental setting and prior experience with VR technology in the context of ethnic profiling could have contributed to this fear. However, the true nature of the experiment was not disclosed in advance to limit the risk of socially desirable behaviours. Moreover, this concern about appearing racist may even reflect reality. Still, the potential impact of this limitation must be considered.

Next, another limitation of this study is the sample size. Due to the 2 x 2 experimental study design and a total sample size of 87 participants, each of the four groups only had around 20

participants. A small sample size can reduce statistical power and limit generalisability. Therefore, the small number of participants in each group may have caused the analyses to show insignificant results, despite clear quantitative differences across the groups. Also, the applicability of the findings to a larger group of police officers must be made with caution. Last, it must be mentioned that the scale assessing the police officers' level of stigma feelings has poor reliability and may therefore not accurately represent the participants' perceived stigma feelings.

Strengths

Despite the previously discussed limitations, this study managed to provide novel insights into the effects of the racist stereotype on Dutch police officers' stop-and-search behaviour, including VR and deepfake technology. In recent years, some research has been conducted regarding the impact of the racist stereotype on police officers' behaviour (e.g., Trinkner et al., 2019; McCarthy et al., 2021). However, there was no empirical research on how the racist stereotype concretely influences police officers' stop-and-search behaviour. Since stop-and-search scenarios are considered to possess a high risk for ethnic profiling, they represent a crucial situation to examine whether police officers display racist policing practices or not. This study is the first study addressing this gap. While there has been some research considering the stereotype threat as an important factor in this relationship, stigma feelings have not yet been addressed in this context, until now. Additionally, an interactive virtual reality was created to assess police officers' stop-and-search behaviour. Research shows that VR technology in psychological experiments serves as a useful tool to elicit realistic emotional responses and behaviours (Roberts et al., 2019). On top of that, the novel deepfake technology was used to compare police officers' behaviours towards persons with facial characteristics of a person with a migration background versus those without, while keeping all other physical characteristics the same. The combination of focusing on stop-and-search behaviour, a VR-Environment which was specifically designed to recreate a stop-and-search scenario and the use of deepfake technology represents a unique methodological approach allowing novel and realistic insights into the impact of the racist stereotype on Dutch police officers' stop-and-search behaviour.

4.9. Future Research

Considering the discussed findings, strengths and limitations of this study, multiple directions for future research can be suggested. First, the present study had a relatively small sample size, which may have limited the statistical power to detect significant effects. Future research should aim to replicate this study with a larger sample size to increase the generalizability of the findings and improve the statistical power to detect subtle effects. Second, the VR Environment needs to be adjusted to include the behavioural option of not selecting any person. By doing so, the virtual stop-and-search scenario becomes more realistic allowing to capture police officers' stop-and-search behaviour more accurately. Doing so also reduces the risk that police officers choose a person solely to somehow interact with the environment. Next, the present study focused on the situational effects of the racist stereotype on police officers' behaviour. However, to better understand the chronic effects of the stereotype, longitudinal studies could be conducted. These studies could assess the long-term impact of exposure to the racist stereotype on police officers' behaviour, attitudes, and well-being over time. Or, in future studies, concepts which grasp the chronic nature of 'the racist police officer' stereotype should be determined. In this regard, the paper proposed a new conceptual model, namely *Chronic Stereotype Reactance*, to explain police officers' avoidant behaviour towards individuals with ethnic minority backgrounds. Future research should empirically investigate this model to determine its validity and further explore the underlying mechanisms and factors contributing to *Chronic Stereotype Reactance*. Last, future research should focus on developing and evaluating intervention programs aimed at mitigating the negative effects of the racist police officer stereotype. These interventions should include training programs to enhance police officers' ability to deal with the racist stereotype, and public education about the potential impact of promoting the racist stereotype on police officers' stop-and-search behaviour.

5. Conclusion

In conclusion, this thesis aimed to examine the influence of the racist police officer stereotype on Dutch police officers' stop-and-search behaviour and the mediating role of stereotype threat and stigma feelings. While some theoretical frameworks suggest that the racist stereotype leads to withdrawn policing behaviour, others state that it leads to a confirmation of racist stereotypical

behaviours. To shed light on this controversy, multiple police stations were visited to conduct a psychological experiment with police officers. Hereby, a questionnaire assessed demographic characteristics, potentially mediating variables, like stereotype threat and stigma feelings, and qualitative insights regarding the participants' perception of the public debate and their VR user experience. Moreover, VR and deepfake technology were used to realistically evaluate and compare police officers' stop-and-search behaviour towards persons with and without migration background. Contrary to the expectations, the outcome showed that the police officers tended to avoid conducting a check on a person from an ethnic minority, and instead checked a seemingly Western-looking person. Therefore, all hypotheses, stating that the confrontation with a person from an ethnic minority and the racist stereotype leads to more overpolicing and that the stereotype threat or stigma feelings mediate this relationship, are rejected. Instead, based on the findings of this study and previous literature suggesting a similar tendency, the concept *of Chronic Stereotype Reactance* was introduced. This phenomenon describes that police officers who are frequently exposed to the racist stereotype display conduct opposing the racist stereotype to prevail one's individual and social positive values. The applicability of this phenomenon to a larger population should be empirically tested in future research. Based on this study and previous research, the urgency to further investigate the impact of the racist stereotype on police officers' behaviour becomes apparent. Accordingly, policymakers, executive powers and non-governmental organisations must be informed about the potential consequences of the racist stereotype. Consequently, police officers should be educated to better handle racism accusations and organisations must be sensitised in promoting the racist stereotype. This can ultimately foster a more positive relationship between citizens and the police force which allows a more constructive fight against institutional racism and increases societal safety.

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Appendix A

Theoretical Framework of Additional Concepts

Self-Legitimacy

Self-legitimacy has been identified as a crucial predictor for negative police behaviours towards citizens. According to Trinker (2019) self-legitimacy in the context of policing can be described as "the degree to which officers are confident in their authority and their position within society as formal agents of the law.". Prince et al. (2022) found that low self-legitimacy can lead to racially biased behaviour and the use of deadly force, possibly to reaffirm the lawfulness of their authority. In line with that, Trinkner et al. (2019) and McCarthy et al. (2021) found that perceiving a stereotype threat was associated with low self-legitimacy, which finally led to an increased support for coercive policing. Self-legitimacy can be significantly reduced by public accusations. Therefore, it might serve as one explanation for why the racist stereotype impacts police officers' decision-making.

Workplace racial anxiety

Workplace racial anxiety describes the anxiety regarding interracial interactions at the workplace which can influence the police officers' behaviour in various ways. Burke (2022) suggests that the racist stereotype threat leads to more racist and violent behaviours. Regarding the underlying mechanisms, the investigations show that being confronted with the racist stereotype provokes anxiety which leads to cognitive depletion. Consequently, the cognitive depletion reduces empathy and increases the probability for engaging in racist and violent behaviours. Renden et al. (2017) found similar results with a sample of Dutch police officers. Moreover, McCarthy et al. (2016) suggests that workplace anxiety impairs work performance through emotional exhaustion.

With regards to de-policing, anxiety may be one reason for why police officers hesitate to engage in stop-and-search situations. This has not been yet investigated. Considering that police officers over-proportionately suffer from anxiety due to the frequent exposure to stressful situations at work (Hartley et al., 2011; U.S. Department of Labor, n.d.) and that racial anxiety was found to impair performance especially in interracial situations (McCarthy et al., 2016; Godsil & Richardson, 2017; Richardson, 2018), police officers' level of anxiety might play a crucial role in the relationship of the racist stereotype and stop-and-search behaviour. In sum, several studies suggest that racial related

anxiety impairs work performance and therefore represents a possible explanation for the potential influence of the racist stereotype on police officers stop-and-search behaviour.

User experience

      The theory of technological mediation suggests that technology actively shapes social structures, interpersonal connections, and human behavior. It emphasizes that technology is not a passive tool but an active agent that transforms culture, communication, and social interactions. However, with the rise of deepfake technology in VR environments a new type of mediation, which mediate between alternate reality and the individual, is needed (Niculescu-Dincă, 2021). Therefore, the concept of immersion is used to measure user experience, focusing on elements such as presence, engagement, enjoyment, and embodiment in virtual or immersive experiences (Barbot & Kaufman, 2020; Cornet & Van Gelder, 2020). Hence, study aims to explore the degree of mediation and user immersion in the context of this new technology.

Appendix B

LinkedIn Post for Gathering Participants

Bas Böing
Program Lead, PhD researcher, chair
3 Monate

• • •

Teamchefs opgelet!

Na ruim een jaar voorbereiding en afstemming (o.a. met collega's van de **#IACP**), is het dan nu eindelijk zover.

In april starten we met een splinternieuw sociaal psychologisch experiment, en hiervoor zijn we op zoek naar een aantal basisteams die mee willen doen. Bij voorkeur in de randstad.

Deelname wordt wederom gaaf (zowel voor ons als voor de deelnemer) en ook lekker, want we komen nooit met lege handen. Dus ben je benieuwd, neem ajb contact op!

#politievooriedereen #buildingtrust #iacp Politieacademie Kennis en Onderzoek University of Twente Peter de Vries Maike Gieling Vlad Niculescu-Dinca

Appendix C

Informed Consent Before the Questionnaire

Welkom

Dit onderzoek wordt uitgevoerd door Tobias Siepenkort, Meret Paululat en Bas Böing, allen psychologiestudenten aan de Universiteit van Twente. Zij worden begeleid door dr. Peter de Vries van de Universiteit Twente, dr. Maike Gieling van de Politieacademie en Vlad Niculescu-Dinca van de Universiteit Leiden. Het doel van dit onderzoek is tweeledig. Enerzijds wordt gekeken hoe deelnemers interacties met het publiek ervaren en hoe dat doorwerkt in gedrag. Anderzijds wordt gekeken of Virtual Reality (VR) een geschikt middel is om dit inzichtelijk te maken.

Potentiële risico's en ongemakken

In dit onderzoek wordt jouw mening gevraagd. Deze vragen kun je mogelijk als (zeer) persoonlijk ervaren. Deze vragen worden enkel en alleen in het belang van het onderzoek gesteld. Je hoeft geen vragen te beantwoorden die je niet wilt beantwoorden. Deelname is vrijwillig en kan op elk gewenst moment gestopt worden. Je kunt mogelijk ook ongemak ervaren door gebruik van de VR. Dit kan gepaard gaan met stress, duizeligheid, misselijkheid en vermoeide ogen. In zeldzame gevallen kan het een epileptische aanval veroorzaken.

Vertrouwelijkheid

Wij doen er alles aan jouw privacy zo goed mogelijk te beschermen. Er wordt op geen enkele wijze vertrouwelijke informatie of persoonsgegevens van of over jou naar buiten gebracht, waardoor iemand je zou kunnen herkennen. Data wordt anoniem verzameld en opgeslagen op een beveiligde omgeving van de Universiteit Twente. Niemand anders dan de onderzoekers kunnen de individuele responsen inzien. Interne rapportage zal alleen geschieden op basis van groepsgemiddelden.

Vragen of klachten

Wil je stoppen met het onderzoek, of heb je vragen en/of klachten? Neem dan contact op met de onderzoeksleiders (Bas, Meret en Tobias), of met de begeleider (Peter):

- Meret Paululat. Email: m.a.paululat@student.utwente.nl

- Tobias Siepenkort. Email: t.siepenkort@student.utwente.nl

- drs. Bas Böing. Email: Bas.boing@politie.nl

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- dr. M. Gieling. Email: Maike.Gieling@politieacademie.nl

- dr. Vlad Niculescu-Dinca Email: v.niculescu-dinca@fgga.leidenuniv.nl

Door op de knop hieronder te klikken geef je aan dat je voldoende bent geïnformeerd.

Appendix D

Informed Consent After the Questionnaire

Dit is het einde van de studie. Voor dat we jouw **TOESTEMMING** vragen om gebruik te mogen maken van de antwoorden, delen we ten slotte deze openbaarmaking.

Dit onderzoek heeft zoals gezegd als doel de impact van interacties met burgers op gedrag beter te begrijpen. Daarbij zijn we in bijzonder geïnteresseerd in de impact van racistisch stereotypes, in de hoop uiteindelijk te begrijpen welke gevolgen dit heeft voor agenten van de Nederlandse politie. In dit onderzoek hebben we gebruik gemaakt van een VR-setting met deepfaking technologie. Vanwege het gebrek aan literatuur hierover, wordt in deze studie ook van de gelegenheid gebruik gemaakt om verder te onderzoeken hoe deze technologie de experimentele resultaten beïnvloedt.

We willen je eraan herinneren dat alle resultaten anoniem zijn. Als je geen toestemming geeft, worden jouw antwoorden verwijderd. **Mogen wij de door jouw gegeven antwoorden gebruiken voor ons onderzoek?**

Appendix E

Measures of Additional Concepts

User experience

Seven items measuring participant's quality of *user experience* to test for a potential technological mediation were incorporated based on the scale utilized in the unpublished doctoral thesis of Böing. Consistency measures were calculated for this scale and revealed a Cronbach's a of .78 and a Guttman's lambda2 of .80. An example Item is "During the simulation, interaction with the other people felt realistic.".

Self-Legitimacy

To measure self-legitimacy, the three items with the highest factor loadings out of the seven items used by McCarthy et al. (2021) were chosen. For the sake of this study, the three original items were transformed into statements since they are questions in its original format. For Example, the item "How confident are you, as a police officer, that you have enough authority to do your job well?". was reformulated into "I am confident that I, as a police officer, have enough authority to do my job well.". The reliability assessments Cronbach's α = .56 suggests a low and Guttman's lambda2 of .58 a moderate internal consistency.

Force support

Force support was measured by a four-item scale. The items are based on the items used by McCarthy et al. (2021) who derived these from U.S. National Law Enforcement Applied Research and Data Platform (McCarthy et al., 2021; Rosenbaum et al., 2011). However, it must be noted that item five of the original questionnaire was not included due to its low factor loading value. Moreover, item one, which states that "Police officers should use physical force more often to get citizens to comply." was reformulated into "Police officers should be free to exert more physical force when needed.", to reduce its suggestive connotation and prevent negative emotional responses by the police officers. Cronbach's Alpha suggests a questionable internal consistency with α = .67 while Guttman's Lambda 2 indicates good internal consistency a Guttman's lambda2 of .70. Since Lambda 2 is a more appropriate reliability assessment for short scales, it can be concluded that the chosen scale is a reliable measure. for assessing force support in this study.

Workplace racial anxiety

Workplace racial anxiety was measured by a three-item scale. The three items are inspired by McCarthy's et al. (2016) Workplace Anxiety Scale. Out of the original eight items, three items were chosen which were considered most suitable and adjusted for the context of interracial interactions. An example item is "I feel anxious in interracial work-situations.". Cronbach's Alpha suggests a questionable internal consistency with $\alpha = .61$, and Guttman's lambda2 of .62 suggesting moderate internal consistency. Therefore, it can be concluded that the scale needs improvement but represents a reasonable measure of workplace racial anxiety in this experiment.

Training willingness

To find out how willing the police officers are to participate in training to better handle racist accusations, they were asked "Within the program 'Police for everyone', training is offered, which provides tools on how to deal with racist stereotypes. To what extent are you willing to participate in this type of activity?". This question could be answered on a 5-point scale ranging from "very willing" to "not willing at all".

Appendix F

Scales in Chronological Order of the Questionnaire

	Items	Scale Reliability
1. User experience	1. During the simulation, I often thought I was there.	$\alpha = .78$
	2. During the simulation, the situation felt realistic.	$\lambda^2 = .80$
	3. During the simulation, interaction with the other people felt realistic.	
	4. During the simulation, I had the feeling that my choices influenced the course of the story.	
	5. During the simulation, I felt involved in the story.	
	6. I had a lot of fun during the simulation.	
	7. I felt immersed in the VR.	
2. Self-Legitimacy	1. I am confident that I, as a police officer, have enough authority to do my job well.	$\alpha = .56$
	2. I belief, that I, as a police officer, occupy a position of special importance society.	$\lambda^2 = .58$
	3. I am confident that I, in the role of a police office, am effective in contributing to crime prevention and community safety.	
3. Stereotype threat	1. I worry that people may think of me as racist because I am a police officer.	$\alpha = .78$
	2. I worry that people I deal with on the job might misinterpret something I say as racist.	$\lambda^2 = .82$
	3. I worry that being a police officer makes it harder for me to be friendly with people from racial or ethnic minority groups.	

	4. I worry that being a police officer influences what people who are racial or ethnic minority group members think of me.		
	5. I worry about whether I come across as racist when I deal with people from racial or ethnic minority groups.		
4. Workplace racial anxiety	1. I fear that I perform poorly in interracial interactions.	$\alpha = .61$	
	2. I worry that I will not be able to successfully avoid appearing as racist.	$\lambda^2 = .62$	
	3. I feel anxious in interracial work-situations.		
5. Force support	1. Police officers should be free to exert more physical force when needed.	$\alpha = .67$	
	2. Members of the public will have more confidence in police if officers use a tough, physical approach on the street.	$\lambda^2 = .70$	
	3. Sometimes forceful police actions are very educational for members of the public.		
	4. If officers don't show that they are physically tough, they will be seen as weak.		
6. Stigma feelings	1. I, as a police officer, feel treated unfairly by the publicity regarding structural racism in the police.	$\alpha = .51$	
	2. When people think I am racist, it does not bother me. (r)	$\lambda^2 = .52$	
	3. I think it is unfair that people often expect police officers to be racist.		

7. **Training willingness**	Within the program 'Police for everyone', training is offered, which provides tools on how to deal with racist stereotypes. To what extent are you willing to participate in this type of activity?

α = Cronbach's alpha, λ^2 = Guttman's lambda2