The Effect of Change of Perspective on Empathy through Virtual Reality

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Master Thesis
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October 27th, 2023

Abstract

Ethnic profiling is a social problem that gained attention in recent years, due to a number of high-profile incidents primarily in the United States. This research paper studies possible avenues that could help preventing ethnic profiling. This study looks at the effect of change of perspective (CoP) on state empathy, by comparing police officers to students. Trait empathy and psychological flexibility are studied as additional variables to look for individual differences between the participants. With the use of a Virtual Reality (VR) training targeting ethnic profiling of police officers, 38 police officers and 38 students were studied and afterwards half of the participants of each group viewed a video containing a CoP. This study found support for the main effect of CoP on state empathy and this effect appears to be stronger for students. In the additional analysis some effects of gender, reflection, satisfaction and field of study on state empathy were discovered. Finally, no effect is discovered of trait empathy and psychological flexibility on state empathy.

1 Introduction

Ethnic profiling is a social problem that gained attention in recent years, due to a number of high-profile incidents primarily in the United States. In the Netherlands, a famous rapper with stage name 'Typhoon' was pulled over by the police without sufficient reasonably justification in 2016. The police officer in charge later admitted that he stopped Typhoon primarily because of his skin colour in combination with him driving an expensive car. A well-known example that gained worldwide attention was the death of George Floyd in 2020 in the United States, were he also became a victim of ethnic profiling by a police officer. The police officer pushed his knee on the neck of George Floyd eventually leading to his death. Examples like this resulted in social justice movements, such as Black Lives Matter who demand equal treatment and rights, mostly regarding ethnic profiling within the police. Ethnic profiling in police context is a form of discrimination, with skin colour, religion and racial/ethnic background as main factors in determining the actions of the police officers (Harris, 2002).

These examples create an image of how police officers engage in ethnic profiling, which leads to a tension between citizens and police officers. Ethnic profiling also causes reduced trust in police officers (Schlosser et al., 2021). From the perspective of police officers, some groups in society are more at risk of engaging in criminal behaviour compared to other groups, based on the crime rates. According to the crime rates in the Netherlands in 2020 reported by Centraal Bureau voor de Statistiek, the average crime rate is lower for people without a migration background compared to people with a migration background. People with a migration background are more involved with the police. This could also be a result of ethnic profiling and to mitigate this it could be helpful to intervene within the police organization.

Ethnic profiling is often associated with negativity in the police organization, which makes it an uncomfortable topic to discuss. The impact of ethnic profiling is often ignored or denied by the police (Landman & Kleijer-Kool, 2016) and the extent to which ethnic profiling actually occurs is difficult to determine (Amnesty International, 2013). These factors contribute to ethnic profiling being an avoidant topic to discuss within the police organization.

The underlying causes of ethnic profiling are important to ensure it is reduced. This research focusses on the influence of empathy and perspective taking on ethnic profiling, because both constructs are related to reducing ethnic profiling (Tassinari et al., 2022). The effect of empathy and perspective taking on ethnic profiling is analysed in this study using an

experiment in Virtual Reality. This results in the following research questions: *"Does the effect of Change of Perspective on state empathy differ between police officers and students?"*

1.1 Theoretical framework

1.1.1 Ethnic Profiling

The first topic that is discussed is ethnic profiling and how ethnic profiling develops and arises in general. Ethnic profiling is related to stereotyping, which is a belief about a group of people with certain characteristics about them (Kassin et al., 2021, p156). This could result in categorizing people based on their characteristics. For example, the perception that ethnic minorities engage easily in criminal activities (Kassin et al., 2021, p156). Stereotyping together with prejudice often leads to ethnic profiling. Prejudice is referred to as a negative attitude or feeling towards a person or group based on their membership, followed by on opinion on that stereotype belief. If this leads to an actual behaviour towards people based on prejudice, it is called discrimination (Kassin et al., 2021, p156). Ethnic profiling is an example of discrimination and is unaccepted in society.

Ethnic profiling is defined within the police as the use by the police, with no objective and reasonable justification, of grounds such as race, colour, languages, religion, nationality or national or ethnic origin in control, surveillance or investigation activities (Council of Europe, 2019). Police officers are targeting and discriminating people because of their racial background instead of looking at evidence or other reasonable explanations to find the suspect.

The difficulty of mitigating ethnic profiling is that a lot of police officers in the Netherlands are not aware of their own behaviour regarding ethnic profiling. This is a form of implicit discrimination. The impact of ethnic profiling is often ignored or denied by the police (Landman & Kleijer-Kool, 2016). Amnesty International (Amnesty International, 2013) has looked at the impact of ethnic profiling in the Netherlands and concluded that the Dutch police and government need to recognize more that ethnic profiling actually takes place. In addition Amnesty International also recommend that the Dutch police should make more effort to prevent ethnic profiling, e.g. with training or education. To understand how ethnic profiling occurs, some underlying constructs are elaborated in the next paragraphs that could influence ethnic profiling.

1.1.2 Empathy

Empathy is the first construct that is discussed, because empathy is related to reducing ethnic profiling (Tassinari et al., 2022). Empathy in general is the ability to understand how someone else is feeling in a particular situation (Wiederhold, 2020). According to Davis (1980), empathy consists of two domains, the cognitive and affective empathy. Cognitive empathy is described as the ability to understand another person's emotions and perspective. Additionally, it is the ability to understand what the other person is thinking (Shen, 2010). Affective empathy is the ability to share feelings of other people (Zillmann, 2006).

Empathy can be divided in two different categories: trait empathy and state empathy. Trait empathy describes the empathy of a person in general and is more stable over time, compared to state empathy that is fluctuating over time depending on how a person feels at that particular moment (Shen, 2010). The state empathy is the main focus of this study later referred to as empathy. The state empathy of a person depends on the character and emotional state at that particular moment.

The tendency to like others more if you are closer to them, is called the proximity principle and explains how more empathy leads to a higher likeability of that group (Hargrove et al., 2020). A higher likeability and more empathy towards a group is related in reducing negative attitudes against stereotyped groups (Beelmann & Heinemann, 2014; Tassinari et al., 2022). Reducing negative attitudes towards stereotyped groups leads to a reduction of prejudice and eventually to a reduction of ethnic profiling.

1.1.3 Perspective Taking

Perspective taking is defined as the ability to understand how another person perceives a situation and how this person reacts to the situation, emotionally and cognitive (Gehlbach, 2004). It is a cognitive process that provides the ability to perceive a different perspective (Galinsky et al., 2005).

Perspective taking is often used in psychological research to look at behavioural science. Perspective taking and empathy are both predictors for prejudice that could lead to ethnic profiling (David, 1980). Several studies found that perspective taking and empathy has a positive effect on reducing ethnic stereotyping and prejudice (Galinsky et al., 2005; Wang et al., 2018; Beelmann & Heinemann, 2014). A reduction of ethnic stereotyping and prejudice have a positive influence in reducing ethnic profiling (Beelmann & Heinemann, 2014).

The reduction of ethnic stereotyping and prejudice is influenced by that perspective taking results in more recognition and similarity of another person compared to themselves

which creates a social bond (Galinsky et al., 2005). So, if both groups know more about each other, the intergroup biases are reduced. Intergroup biases influence how an individual identifies with another person or group (Forsyth, 2019). Empathy and perspective taking both positively influences intergroup attitudes and social-cognitive abilities (Bigler & Libe, 2007). Applied on the example of ethnic profiling, if police officers are able to increase their perspective taking and empathy level towards ethnic minorities, police officers will have a positive intergroup attitude with reduced intergroup biases. This results in less stereotyping and prejudice leading to a reduction of ethnic profiling regarding ethnic minorities.

Perspective taking in VR increases empathy to other persons (van Loon et al., 2018). Perspective taking in a VR environment is used to make people more aware and more engaged in adapting their behaviour to other people. Using perspective taking in VR makes it possible to keep a high experimental control, which is beneficial for a social psychological experiment (van Loon et al., 2018). Perspective taking in VR is examined in different settings and concluded that perspective taking in a VR environment induces social behaviour and leads to a reduction of in-group racial prejudice (Hasler et al., 2017).

1.1.4 Virtual Reality in Police Context

Virtual Reality (VR) is a simulation in a 3D environment. The user can interact in this virtual environment with endless possibilities as programmed. The 3D environment could be artificially simulated or simulated with camera recordings with real-life situations (Gandhi & Patel, 2018), with the possibility to create a 360 degree view in VR.

The effectiveness of VR is determined by how deeply the user is engaged, by looking at immersion and presence of the user (Bowman & McMahan, 2007). Immersion is defined as how the user is engaged in the VR environment and presence is described as how deeply the user is experiencing the virtual environment as a real-life situation (Bowman & McMahan, 2007; Cornet, 2019; van Loon et al., 2018). Immersion is created by blocking most of the sensory stimuli of the real world and focusing on the virtual created stimuli instead. The more sensory stimuli outside the VR environment are replaced by stimuli created in VR, the more the user is feeling engaged in the VR program (Bowman & McMahan, 2007). This makes it possible to let the user feel like they experience the VR environment as a real-life situation, created by the immersion and presence (Cornet, 2019; van Loon et al., 2018).

A possibility of VR is to simulate a perspective taking to give the user more insight of other people's perspective (Tassinari et al., 2022; Cornet et al., 2019). This effect is used to educate people about their own behaviour and how to cope differently in difficult situations.

Several studies shown that empathy can also be increased by using VR (Wijma et al., 2018), which is more likely if the level of presence is high (Barbot & Kaufman, 2020). This is explained by that VR increases emotional proximity, which positively influence the proximity effect, leading to a higher empathy level and a more positive attitude towards a stereotyped group (Forsyth, 2019; Hargrove et al., 2020).

Police officers are often confronted with unique situations, because it is unpredictable how people will behave. This makes it difficult to reflect and learn for police officers on coping with difficult situations (Landman, 2016). Ethnic profiling is a difficult topic for police officers and police officers are easily engaging in defensive behaviour as a result of discussing ethnic profiling. To stimulate police officers on learning and reflecting about ethnic profiling and making it more accessible, a VR training focusing on ethnic profiling is used. Previous research about this VR training suggest that the training is able to contribute effectively to the knowledge and reflection of ethnic profiling. In addition the training contributed to an improved dialogue regarding ethnic profiling (de Vries et al., 2021).

1.1.5 Characteristics of Police Officers

Before explaining the behaviour of police officers, it is important to know which people are motivated to actually become police officers. Early research on the motives of becoming a police officer concluded that the desire to be of service to people and the desire to enforce laws were main reasons to become a police officer (Lester, 1983). In addition, other research shown that older people, particularly in developing countries, are motivated to join the police for economic stability. Younger recruits focussed more on social-capital motives compared to older recruits who prioritized job availability (Elntib & Milincic, 2021).

New recruits of police officers are often highly motivated and willing to be of service to people upon joining the organization. In practice, new police officers are often influenced by police socialization (Charman, 2017). Police socialization a learning process were new police officers learn from the knowledge of experienced police officers on the organization and occupational practices, both the negative and positive qualities (McCartney & Parent, 2015).

A negative influence of socialization is that police officers lose confidence in the organisation and it can erase the positive influence of police training (Charman, 2017; McCartney & Parent, 2015). New police recruits are confronted with disappointments during the socialization, mainly because of a different reality than the individual's expectation and negative attitudes of experienced colleagues about being a police officer. The negative

attitudes of experienced police officers could be influenced by a confirmation bias, meaning that police officers perceive information as a confirmation of their existing beliefs (Schlosser et al., 2021). The disappointment of new recruits could possibly result in more negative attitudes and behaviour of the new recruits with lower levels of empathy and higher levels of authoritarianism (Charman, 2017). For this reason police officers often have lower empathy levels and police officers in general are less empathic compared to other people in the eyes of citizens (van den Brink, 2010). It is suggested by van Loon et al. (2018) that people with a low empathy level are more sensitive to improve their empathy level due to training and intervention.

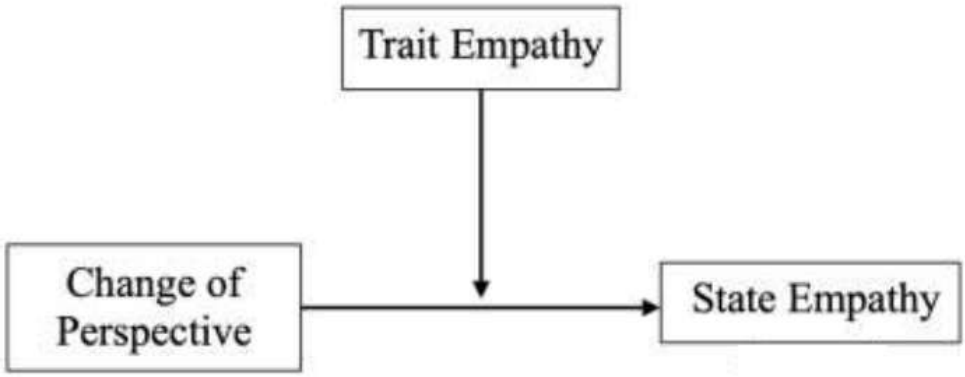
Empathy and perspective taking of a police officer have a positive effect on reducing prejudice and psychological flexibility is an additional predictor for general prejudice (Valdivia-Salas et al., 2021). Psychological flexibility is the capacity to be in the present moment, aware of others persons' thought, emotions and sensations and accepting it (Cherian & Phillip, 2021). So empathy, perspective taking and psychological flexibility of a police officer could indirectly predict ethnic profiling through their general prejudice (Levin et al., 2016), and for that reason these constructs could be relevant for this research.

1.1.6 Conceptual Model

Before stating the hypothesis of this study, figure 1 shows the conceptual model with the dependant variable and independent variable. Trait empathy is analysed for individual differences between the participants as a covariate.

Figure 1

Conceptual Model



1.2 Hypotheses

The main goal of this study is to see if perspective taking affects state empathy, that might reduce ethnic profiling. The researched variables are state empathy and perspective taking. To accomplish a reduction of ethnic profiling, this study tries to increase the participants' state empathy with a training in VR. This training is manipulated by letting the experiment group watching a video that shows the VR training from a different perspective. By means of using questionnaires the demographic variables, trait empathy and state empathy are measured. Based on the literature, the following hypothesis are stated:

H1: The level of state empathy is higher when a change of perspective takes place, compared to when a change of perspective does not take place.
H2: It is expected that this effect is stronger by police officers compared to students.

2 Methods

2.1 Design

2.1.1 Design

This study had 2 (CoP: yes versus no) x 2 (Group: police officers versus students) between-participants design with the state empathy (scale) as dependent variable. Trait Empathy (measured by both police officers and students) and Psychological Flexibility (only measured by students) are both analysed for individual differences between the participants as a covariate. Some variables were derived from the open questions of the questionnaire, recoded into quantitative data. These additional variables are interaction perspective, interaction empathy, approach satisfaction, satisfaction orientation, reflection approach and reflection form. The results of the group of voluntary police officers and the results of the students were also compared to each other.

2.1.2 Participants

In collaboration with the National Dutch Police, voluntary Dutch police officers were invited to participate in this research. Compared to regular police officers, voluntary police officers have the same tasks and authorities, but they only work less hours and are therefore suitable for this research. The invitation to the voluntary police officers was sent to the police departments in the east of the Netherlands in the cities Apeldoorn, Arnhem, Enschede and Zwolle. The sample of voluntary police officers consisted of 38 participants, with a mean age

of 55 years old (*SD* = 10.65, range 28-72) and an average of 23 years of experience working as a police officer (*SD* = 12.40, range = 4-49). The group were random equally divided in the CoP condition: yes (*n*=18) and no (*n*=18), with a total of 34 male and 4 female participants.

The second group that is participating and were compared to the voluntary police officers, are Dutch students studying in the Netherlands. No further restrictions were used to constitute this research population, as long as this person is participating in higher education in the Netherlands and speak the Dutch language. The sample of students also consisted of 38 participants, due to start and stop criterion regarding limited time to collect the data of the student sample. The mean age is 25 years old (*SD* = 1.85, range 21-29). Both CoP condition: yes (*n*=18) and no (*n*=18) were equally divided, with a total of 28 male and 10 female participants.

Both groups were combined to one dataset consisted of 76 participants. The group was random equally divided in the CoP condition: yes (n=36) and no (n=36), with a total of 62 male and 14 female participants. The mean age is 40 years old (*SD* = 6.25, range 21-72).

2.2 Procedure

The police officers were invited to join this study in the police departments of Apeldoorn, Arnhem, Enschede and Zwolle. Each police department provided a room in the relevant police station were the experiment took place. The students were invited to join the experiment in a project room at the University of Twente or at a study room at the home of the researches. The experiment took place with 5 to 10 participants per session. With exception of were the experiment took place, the following procedure is applicable for both groups.

Before the start, participants were randomly selected in the CoP condition: yes versus no. The experiment took simultaneously place with one participant in each group of the CoP: yes versus no. The experiment then starts with an introduction to these participants. Before the practical part of the experiment in VR, both participants were asked about their demographic information (age, gender and years of experience by the police, study background for students), see Appendix 1. Followed by measuring their Trait Empathy by using the Empathy Assessment Index (EAI), see appendix 2. Additionally for students, Psychological Flexibility is measured after the EAI by using Flexibility Index Test (FIT-60), see Appendix 3. Trait Empathy and Psychological Flexibility were both measured as an additional variable to look for individual differences between the participants. For this first

part laptops were already set up in the designated room. After the participants were finished, both participants of each CoP condition started with the VR experiment.

During this part, both participants were separated from each other to prevent any distractions. The VR experiment was done by using VR-glasses with the software of the VR training installed. First, instructions of the VR experiment were given to the participants, followed by starting with the VR experience. The location of the virtual environment is in front of train station 'Amsterdam Sloterdijk'. During the VR experiment, both participants were asked to confront a specific group of adolescents with a North-African/Turkish background, see figure 2. After the VR experiment, only the participants of the CoP condition: yes were shown a CoP manipulation video that was linked to their choices during the VR experiment, followed by completing the second questionnaire. The choices made during the VR training were linked to a specific code (Alfa, Golf or Juliet) and each participant received a personal code after the VR experience. For example, they could ask the group of youths for their identification or could ask the group to leave the entrance of the train station. The CoP manipulation is a short video with some background information of the group and the VR training in the perspective of the young people, instead of the police officer, filmed by the person on the most right in figure 2. This created a virtual Change of Perspective of the young people and is used to reflect on the behaviour and choices of the police officer during the VR experience in the eyes of the group of youths, see figure 3. The participants of the CoP condition: no were asked to complete the second questionnaire immediately after the VR experience. The second questionnaire focused on measuring the state empathy of the participants using the state empathy scale (SES), see Appendix 4. Followed by open questions reflecting on how the participants experienced the VR experience.

Participants were also asked to reflect and evaluate on their choices made during the experiment. Afterwards, the participants were guided to the next room to talk and evaluate about their experience with other participants and a mediator to guide them in talking about their choices and experiences during the VR experience. During the experiment, participants had the possibility to ask questions about anything that was not clear.

Figure 2

Screenshot of Virtual experience.

Figure 3

Screenshot of CoP-video.

2.3 Materials

2.3.1 Virtual Reality

For this study the Oculus GO All-in-One VR Headset was used during the immersive VR experiment. The VR environment was filmed with in a 360 degrees view of the area. Participants could do the experiment while standing and looking around from the same position without further movement.

2.3.2 Data Collecting and Analysis

Qualtrics TM was used to collect the data. The data then was analysed using IBM SPSS Statistics (version 28). Both linear regression, Chi-square test analysis and Andrew F. Hayes' PROCESS macro were used to analyse and visualize the data. For the correlation between students and police officers both results will be compared to each other.

2.4 Measurement Scales

2.4.1 Variables

The first variable derived from the data is the CoP: yes versus no, followed by asking demographic information and general information about their background, such as age, gender (male, female, rather not to say), years of experience by the police and field of Study for the students. Then the Trait and state empathy were measured in both the students and the police population. Only for students, their Psychological Flexibility was measured as an additional variable to measure for induvial differences between participants. The

questionnaire also consisted of open questions and this data was coded into quantitative data. These explorative analysis were derived from the open questions and are stated in table 1.

Table 1

Explorative Variables Derived From Open Questions.

Open question	Variables	Label	Codes
What is your opinion about the interaction with the group of youths?	Interaction perspective	From which perspective did the participant view the interaction?	Police, Youths, No perspective
	Interaction empathy	How did the participant view this interaction in respect to empathy?	Low, Neutral, High
Are you satisfied with your approach in the VR experience? Please explain your answer.	Approach satisfaction	Is the participant satisfied with his/her approach?	No, Neutral, Yes
	Satisfaction orientation	How did the participant substantiate his satisfaction about own approach?	Task-oriented, People-oriented, Both
Looking back, would you approach this situation the same as you did? Please explain your answer.	Reflection approach	Would the participant approach the situation the same another time?	Negative, Neutral, Positive
	Reflection form	Based on which view would the participant (not) change his/her approach?	Factually, Emotionally, Both

2.4.2 Empathy Assessment Index

First the Trait Empathy was a self-report measurement before the VR experiment to look for individual differences between the participants, which was based on a 17-item EAI consisting of five subscales: Perspective Taking (PT), Self-other Awareness (SOA), Empathic Attitude (EA), Affective Response (AR) and Emotional Regulation (ER) (Lietz et al., 2011). This questionnaire used is designed to measure Trait Empathy by police officers (Inzunza, 2015). Answering this scale is based on a 5-item Likert-scale, with: 1 = never, 2 = rarely, 3 = sometimes, 4 = frequently, 5 = always. This 17-item EAI has acceptable internal consistency with an overall Cronbach's alpha ($\alpha = .82$), that indicates a high reliability. Each subscale separately is also reliable with Cronbach's alphas determined for each component: affective response (3 items; $\alpha = .75$), cognitive-based component (11 items; $\alpha = .79$) and empathic attitude component (3 items; $\alpha = .67$) stated by Lietz (2011).

Some statements of the 17-item EAI scale were removed to make the questionnaire shorter, which was desired to make it more suitable for the participants. The removed statements were all part of a subscale that is not included in this study, the Empathic Attitude,

which indicates how likely an person is to take empathic action. Empathic attitude is more often excluded from scales as EAI, because there no evidence that Empathic attitude a predictor is for empathic action (Lietz et al., 2011). This resulted in a 14-item EAI scale used for both the police officers and students.

To improve the reliability of EAI of the whole dataset (*n*=76), two items with a low reliability and the reversed-scored items were deleted (items 5, 7, 10 and 13). The reliability analysis for police officers are presented in table 2. The reliability analysis for the students are presented in table 3. The last reliability analysis of the combined dataset is presented in table 4.

Table 2

Police: Overview Reliability 10-item EAI with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Self-Other Awareness	2, 4	.63	.63
Perspective Taking	1, 8, 11, 14	.21	.30
Emotion Regulation	6, 9	.27	.27
Affective Response	3, 12	.55	.55
Total EAI	All Above	.52	.58

Table 3

Students: Overview Reliability 10-item EAI with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Self-Other Awareness	2, 4	.55	.55
Perspective Taking	1, 8, 11, 14	.64	.65
Emotion Regulation	6, 9	.70	.70
Affective Response	3, 12	.76	.76
Total EAI	All Above	.74	.77

Table 4

Combined: Overview Reliability 10-item EAI with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Self-Other Awareness	2, 4	.58	.58
Perspective Taking	1, 8, 11, 14	.52	.54
Emotion Regulation	6, 9	.55	.55
Affective Response	3, 12	.65	.65
Total EAI	All Above	.67	.70

2.4.3 Flexibility Measurement Scale

An additional psychological characteristic is measured using the Flexibility Index Test (FIT-60) only measured in the student population to look for induvial differences between the participants. This variable is measured for the additional analysis. For the police population this questionnaire is not asked, because it would take too much time and concentration for police officers to complete it. This scale is used to determine a person's Psychological Flexibility (Delespaul, 2017).

The FIT-60 consists of 60 items total, divided in 6 subscales each with 10 items. The 6 subscales are: Acceptance, Defusion, Self as Context, Present Moment, Values and Committed Action. Each item is answered with a 7-item Likert-scale with 0 = "completely disagree" and 6 = "completely agree" (Delespaul, 2017). The internal consistency is high, determined with an overall Cronbach's alpha (α = .94). For each subscale the internal consistency is determined: Acceptance (α = .81), Defusion (α = .86), Self as Context (α = .66), Present Moment (α = .83), Values (α = .72) and Committed Action (α = .81), according to Delespaul (2017).

To improve the reliability of the FIT-60 for this study, only the subscale Self as Context scored low on reliability (α = .41). Therefore the items 17, 19, 24, 33 were deleted for further analysis, which resulted in the reliability analysis shown in table 5.

Table 5

Students: Overview Reliability 56-item FIT with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Acceptance	1, 10, 14, 22, 26, 31, 35, 45, 53, 54	.84	.85
Defusion	9, 28, 29, 30, 32, 39, 42, 52, 57, 58	.80	.83
Self as Context	2, 3, 23, 46, 51, 56	.64	.67
Present Moment	15, 16, 18, 20, 36, 38, 43, 44, 49, 60	.79	.81
Values	6, 8, 21, 25, 27, 34, 37, 41, 50, 55	.76	.78
Committed Action	4, 5, 7, 11, 12, 13, 40, 47, 48, 59	.82	.83
Total FIT	All Above	.94	.94

2.4.4 State Empathy Scale

The third scale used is the State Empathy Scale (SES). The SES consists of 12 questions divided in three different subscales: Affective Empathy, Cognitive Empathy and Associative Empathy (Shen, 2010).

Each question is answered with a 5-item Likert-scale with: 0 = "not at all" and 4 = "completely". The reliability of this scale is high, based on a Cronbach's alpha (α = .93). For this scale each subscale is also high in reliability, determined by their induvial Cronbach's alpha of each component: affective empathy (α = .83), cognitive empathy (α = .86) and associative empathy (α = .82) (Shen, 2010). In this study, for both the police officers and the students, no items needed to be deleted for an acceptable reliability analysis. These reliability analysis are shown in table 6 for the police officers and in table 7 for the students. The combined reliability analysis are presented in table 8.

Table 6

Police: Overview Reliability 9-item SES with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Affective Empathy	1, 2	.64	.64
Cognitive Empathy	3, 4, 5, 6	.74	.75
Associative Empathy	7, 8, 9	.65	.66
Total SES	All Above	.84	.85

Table 7

Students: Overview Reliability 9-item SES with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Affective Empathy	1, 2	.82	.82
Cognitive Empathy	3, 4, 5, 6	.80	.81
Associative Empathy	7, 8, 9	.84	.85
Total SES	All Above	.91	.92

Table 8

Combined: Overview Reliability 9-item SES with Cronbach Alpha and Guttman Lambda 2.

Subscale	Statements	α	λ-2
Affective Empathy	1, 2	.74	.74
Cognitive Empathy	3, 4, 5, 6	.78	.79
Associative Empathy	7, 8, 9	.77	.78
Total SES	All Above	.88	.88

3 Results

Table 9 shows the general findings of the dataset, including the subscales of EAI and SES. There is one main significant correlation between CoP and state empathy. In addition, there are significant correlations found between the subscales for empathy and other variables. There is a significant correlation between the subscale Self-Other Awareness and state empathy. The last significant correlation is between CoP and each subscale of state empathy separately (affective, cognitive and associative), see table 9.

Table 9

Mean (M), Standard Deviation (SD,) and Correlation between the Variables (n=76).

Variables	*M*	*SD*	Gender	CoP	Trait Empathy	State Empathy
Gender	1.18	.39				
CoP	1.50	.50	-.07			
Trait Empathy	3.92	.36	-.18	-.13		
- Self-Other Awareness	4.01	.53	-.15	-.06		.23*
- Perspective Taking	3.94	.45	-.15	-.10		.16
- Emotion Regulation	3.68	.68	-.38**	-.14		.08
- Affective Response	3.97	.61	.25*	-.01		-.01
State Empathy	3.56	.59	.11	-.53**	.18	
- Affective	3.31	.85	.19	-.47**	.11	
- Cognitive	3.81	.57	.02	-.40**	.22	
- Associative	3.39	.71	.09	-.50**	.13	

* $p < .05$.

** $p < .01$.

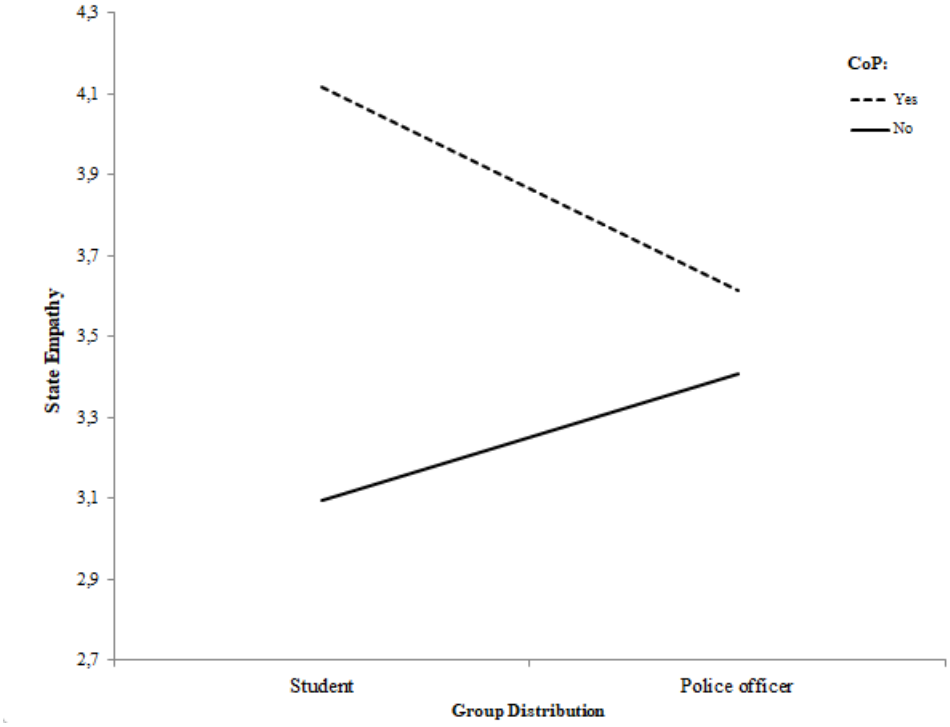
3.1 Change of Perspective and State Empathy

For the first hypothesis the effect of Change of Perspective on state empathy is measured by conducting a linear regression. Hypothesis 1 expected a higher state empathy level after that CoP takes place compared to if CoP does not take place. The mean score of state empathy in the CoP condition: yes (M=3.87) is higher compared to the CoP condition: no (M=3.25). This effect is significant (B = -0.61, t (75) = -.53, $p < .001$), and therefore the first hypothesis is accepted.

The second hypothesis predicts that police officers are more positively influenced by the CoP (yes versus no) compared to students. This is analysed by using Andrew F. Hayes' PROCESS macro, considering the average state empathy as the dependent variable, the CoP as independent variable and the Group distribution (police officer versus student) as the moderator. The analysis found a significant interaction effect on state empathy (B = .82, t (74) = 3.86, $p < .0002$), see figure 4. Figure 4 shows that both by students and police officers a higher state empathy is measured in the CoP: yes compared to the CoP: no. The difference in the student population is considerably higher, which implies that the students have a higher state empathy increase as a result of the CoP manipulation compared to police officers. The manipulation effect of CoP is higher for students and for that reason the second hypothesis is rejected.

Figure 4

Interaction effect Change of Perspective, state empathy and Group.



Note. State empathy is the dependent variable, CoP is the independent variable and Group as the moderating variable.

3.2 Additional Analyses

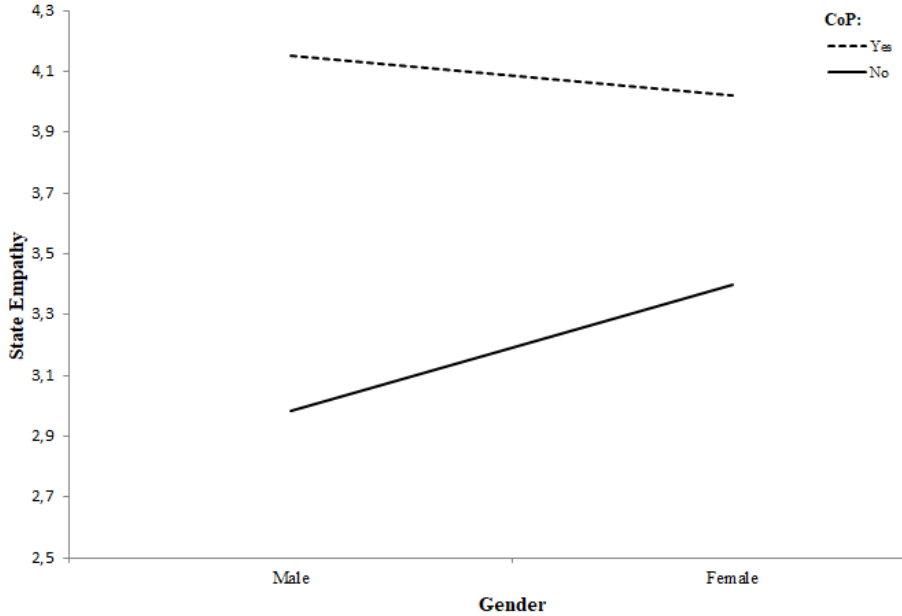
During this study some additional variables are analysed in the explorative data. During this paragraph the effect of Gender, Reflection, Satisfaction and field of Study for students is analysed. The last part is about two variables analysed to look for individual differences between the participants, the Trait Empathy and Psychological Flexibility. In each part the specific analysis is described and elaborated.

3.2.1 Gender as Moderator

Within the student population a significant interaction effect is found between CoP, Gender and state empathy. The relationship between gender and other variables is not analysed for police officers, because only four participants were female. The effect is analysed by using PROCESS by Andrew Hayes, finding a marginally significant interaction effect on state empathy (B = .54, t (34) = 1.90, $p < .07$) in the student population, see figure 5. The average state empathy is higher for females if CoP does not take place. The state empathy after the CoP manipulation is higher for males, which indicates that the CoP has a stronger effect on the state empathy by males. Looking at figure 5, this effect is probably a result of that the average state empathy by males is lower, and for that reason it is easier to increase this value compared to females.

Figure 5

Interaction effect CoP, Gender and state empathy for students.



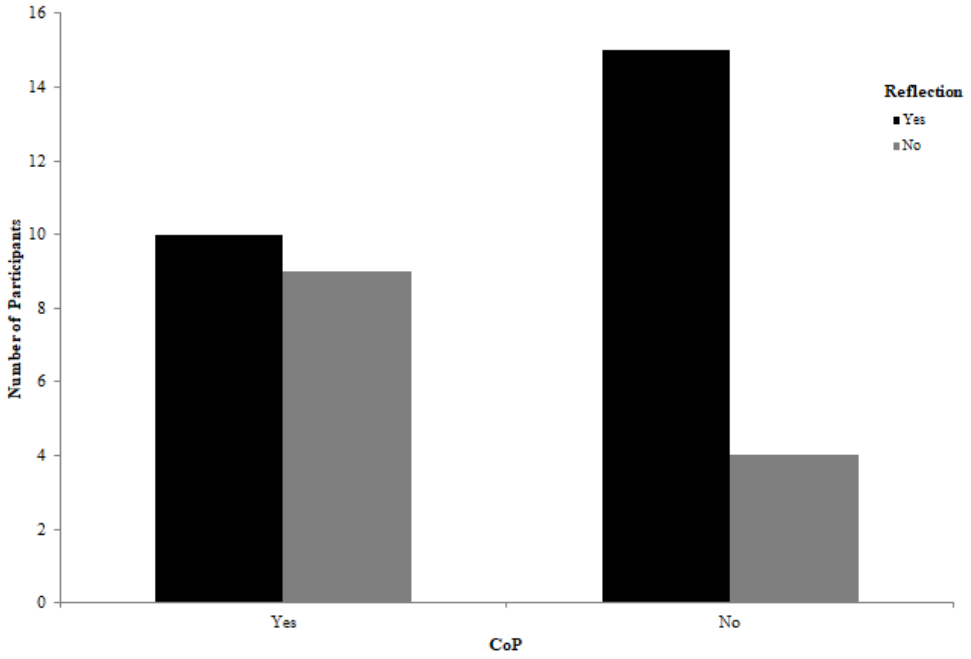
Note. State empathy is the dependent variable. CoP is the independent variable and Gender as the moderating variable.

3.2.2 Reflection

After the VR experiment the participants were asked questions to reflect about their choices made during the VR experiment. One of the questions were as follows: “Would you handle the situation the same in hindsight?”. The participants could answer Yes or No. This association is analysed in the student population by using Chi-Square test with the CoP and the results of Reflection question. The association found is marginally significant (χ^2 (1) = 2.92, $p < .09$), see figure 6. Looking at the results, the participants without a CoP answered that they would more often handle the situation the same compared to the condition with CoP. So, participants are more likely to change their behaviour as a result of the CoP manipulation.

Figure 6

Distribution of CoP and Reflection.



Note. The question asked in the questionnaire: “Would you handle the situation the same in hindsight?”.

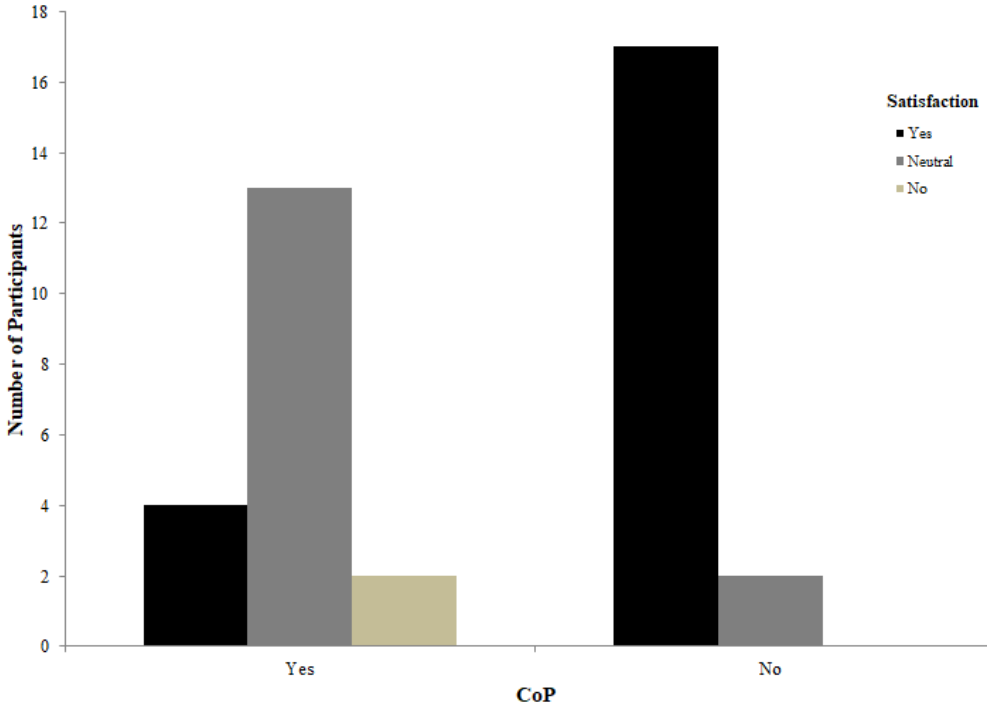
3.2.3 Satisfaction

Another question asked to the participants after the VR experiment was about if they were satisfied with their way of handling the situation. The question asked was: “Are you satisfied with the way you handled the situation? ”. Participants could answer Yes, Neutral or No. This is analysed for students by using Chi-Square test with the CoP and the results of Satisfaction question. The association found is significant (χ^2 (2) = 18.11, $p < .001$), see figure

7. Participants without a CoP are more often satisfied with the way they handled the situation during the VR experience, compared to the participants with a CoP were relatively a low number of participants answered that they were satisfied. In addition, the participants with the CoP answered more often that they were not satisfied or neutral about the way they handled the situation. This indicates that the participants with the CoP manipulation have more doubts about how they handled the situation. The participants without the CoP manipulation are less critical about how they handled the situation. So, the participants were the CoP takes place are more critical about their own choices made during the VR experience.

Figure 7

Distribution of CoP and Satisfaction.



Note. The question asked in the questionnaire: "Are you satisfied with the way you handled the situation? ".

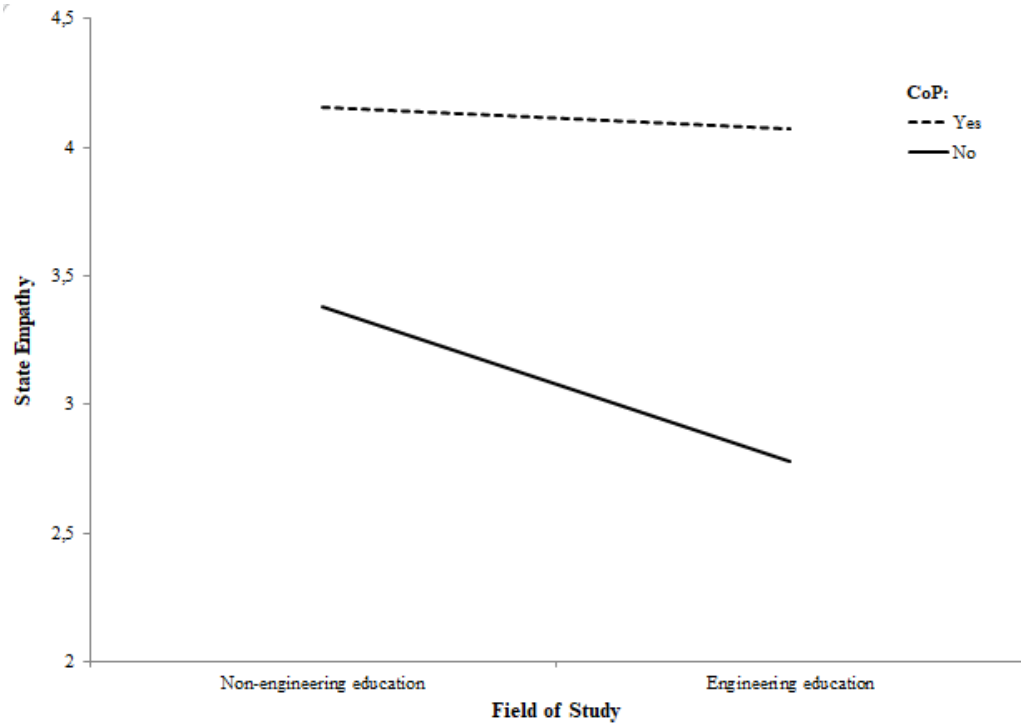
3.2.4 Field of Study as Moderator

Within the student population field of Study appears as a possible moderating variable. This is analysed by using PROCESS by Andrew Hayes, finding a significant interaction effect (B = -.52, t (34) = -2.30, $p < .03$) between CoP and field of Study on state empathy in the student population, see figure 8. The moderating variable field of Study is divided in two categories for the analysis, namely non-engineering and engineering education, see figure 8. The average state empathy for participants without the CoP manipulation following non-

engineering education is higher compared to participants following engineering education. However, the state empathy with the CoP manipulation increases relatively more for participants following engineering education compared to participants following non-engineering education. So, this indicates that the CoP manipulation has a higher positive effect for participants following engineering education compared to participants following non-engineering education. This effect could be elaborated by that the average state empathy can grow more easily for participants following engineering education and therefore there is more room for improvement for the participants following engineering education.

Figure 8

Interaction effect CoP, state empathy and field of Study by students.



Note. State empathy is the dependent variable, CoP is the independent variable and the field of Study as the moderating variable.

3.2.5 Trait Empathy

Trait empathy is measured in both populations, so the combined dataset is used. With this dataset, the interaction effect between CoP, Trait Empathy and state empathy is analysed using PROCESS by Andrew Hayes. There is no significant interaction effect found ($B = -.13$, $t(72) = -.37$, $p = .71$). This interaction effect is also analysed separately for police officers and students. Using PROCESS by Andrew Hayes, no significant interaction effect is

found between CoP and Trait Empathy on state empathy for police officers (B = -.10, t (34) = -.14, p = .89) and for students (B = -.26, t (34) = -.69, p = .50) separately.

A linear regression conducted between the variables state empathy and Trait Empathy shows that an effect between those variables is not significant (B = .30, *t* (75) = 1.59, *p* = .12).

3.2.6 Psychological Flexibility

Next, the interaction effect between CoP and Psychological Flexibility on state empathy is analysed. This is measured to look for possible individual differences between the participants only measured in the student population. For the analysis of Psychological Flexibility, PROCESS by Andrew Hayes is used. This concluded that there is no significant interaction effect (B = .23, t (34) = .88, p = .39) between CoP, state empathy and Psychological Flexibility.

A linear regression conducted between the variables state empathy and Psychological Flexibility also shows not a significant effect (B = 0.30, *t* (36) = 1.51, *p* < .14). On the other hand, a linear regression conducted between the variables trait empathy and Psychological Flexibility does show a significant effect (B = 0.22, *t* (36) = 1.88, *p* < .068).

4 Conclusion and Discussion

The main purpose of this study was to investigate if a Change of Perspective influences state empathy and if this differ between police officers and students. The result of this study indicate that a Change of Perspective could positively influences state empathy. It was expected that the people who were exposed to a CoP had a higher state empathy and therefore the first hypothesis is accepted. Furthermore, it was expected that the influence of CoP on state empathy differ between police officers and students. The results suggested that students were more positively influenced by a CoP regarding their state empathy compared to police officers. For that reason there is no support found for the second hypothesis.

However, the additional analysis showed some interesting findings by students. Firstly, it appears that the state empathy for males increases more compared to the state empathy of females, influenced by CoP. Gender appears to influence the effect of CoP on state empathy. Literature shows that women indeed have a higher level of (state) empathy and that males are more cognitive orientated regarding empathy (Davis, 1980; Christov-Moore et al., 2014). Both of the scales measuring state empathy and trait empathy have cognitive-based subscales. The cognitive-based subscales of trait empathy includes perspective taking (Lietz

et al., 2011). The cognitive empathy subscale of state empathy also refers to perspective taking (Shen, 2010). So, males are more influenced by cognitive-based subscales and in this case perspective taking. This suggest a higher influence of CoP by males and this is consistent with the results.

The next additional analysis suggested that students influenced by CoP, are more likely to change their behaviour and are more critical about their own choices made during the VR training compared to students without a CoP. The perspective taking leads to feeling more connected to the other group and a reduction of intergroup biases, explained by the intergroup projection model (Galinsky et al., 2005). The intergroup contact theory explains that more contact between groups can positively change attitudes and behaviours towards the other group (Pettigrew, 1998). Positive contact and perspective taking enhances the empathy towards the outgroup and diminishes prejudice (Pettigrew et al., 2011). The improvement of perspective taking and empathy results in a higher intention to change behaviour (Abdulrahman et al., 2021; Johander et al., 2022), which confirms the results of the study.

Through the following additional analysis by students, the field of Study appears to influence the effect of CoP and state empathy. The level of state empathy by students following engineering education is more positively influenced by CoP compared to students following non-engineering education. According to Wilson & Mukhopadhyaya (2022) students in North-America following engineering education are aware of the theoretical understanding of empathy and the importance of perspective taking and the benefits. They are aware of the importance of empathy, despite the lower level of empathy in general. This could indicate that students following engineering education are aware of the importance of perspective taking during the training, leading to a more positively influence of the CoP video. Previous research suggested that the level of empathy without a perspective taking is lower for students following engineering education (Rasoal et al., 2012), which is also consistent with the results of this study.

In the last part of the additional analysis Trait Empathy and Psychological Flexibility were investigated. Both were measured to look for individual differences. Trait empathy describes the empathy of a person in general and is more stable over time and could possibly tell something about the empathy of a person before the training. This study could not find an influence of trait empathy on state empathy and perspective taking, which is consistent with the results of a similar study conducted by de Haan (2023). Additional to the research of de Haan (2023), psychological flexibility is measured as an additional construct, because empathy, perspective taking and psychological flexibility could indirectly predict ethnic

profiling through general prejudice (Levin et al., 2016). However, this study did not find an influence of psychological flexibility on perspective taking and empathy.

This part of the discussion provides an explanation of the main findings of this study. It was expected that the state empathy of police officers was more positively influenced by CoP compared to students, but this study found the opposite effect. As described in the theory, police socialization could lead to disappointment of police officers, because of the different reality and their individual expectation (McCartney & Parent, 2015). These disappointments could possibly lead to more negative attitudes and beliefs with lower levels of empathy (Charman, 2017). The beliefs and attitudes of police officers are also influenced by the experience of other, often more experienced, police officers. After working longer for the police, police officers may engage more easily in confirmation bias. The existing police socialization positively influence that police officers perceive information as a confirmation of their existing beliefs (McCartney & Parent, 2015; Schlosser et al., 2021). This could result in overconfidence of police officers and overestimating their own ability to identify perpetrators (Tupper et al., 2023). These factors could possibly influence how police officers react to the CoP video and makes it difficult to convince police officers to change their behaviour and increase their empathy level through perspective taking. This is also consistent with the results of this study.

Furthermore, the characterises and reflective thinking skills of students were underestimated in this study. The theory of this research focussed on police officers and for that reason the input of students is underestimated. Students in higher education are confronted and challenged during their study to train with reflective learning in all different ways. Therefore students are more familiar and experienced with reflection in general. This is applicable for the students of this study and is consistent with the results.

The final part of the discussion explains the relevance of this study regarding ethnic profiling. The results are focussed on measuring empathy and finding effects and predictors to increase empathy, eventually to indirectly mitigate ethnic profiling. The level of ethnic profiling is not directly measured in this study, but the influence of empathy and perspective taking could possibly predict ethnic profiling (Valdivia-Salas et al., 2021). The case in the VR training is focussed on ethnic profiling and the results shown that people with an increased perspective taking are more likely to change their behaviour. This indicates that CoP leads to a more positive attitude and a reduction of stereotyping and prejudice. Both stereotyping and prejudice influences ethnic profiling (Kassin et al., 2021), so a decrease of stereotyping and prejudice possibly leads to less ethnic profiling.

4.1 Limitations

Some of the results show a different outcome than expected and this is explained by looking at the possible limitations of this study. Firstly, all scales were self-reported questionnaires and therefore the participants could give socially desirable answers. Ethnic profiling is a sensitive topic to discuss and this could result in socially desirable answers instead, called the social desirability bias (Chung & Monroe, 2003; van de Mortel, 2008). Socially desired answers could result in higher empathy levels measured, compared to the actually level of empathy of the participants. To prevent socially desired responses, all answers were anonymous and confidential and this is often emphasized during the experiment. For example, this is mentioned in the introduction, at the start of the questionnaire and above all pages during the training. However, the actually impact of socially desired answers on the results is difficult to determine, but it probably does have an influence overall (van de Mortel, 2008).

Afterwards, police officers had the opportunity to reflect and talk about the training independent of the results. During this reflection it appears that police officers that watched the CoP video had more understanding for the reaction of the group of youths. On the contrary, some police officers who did not watch the CoP video, had negative attitudes and beliefs and were more prejudiced towards the group of youths. This confirms the expected positive effect of CoP on state empathy, but this effect was not found by police officers. However, the combined dataset of both the students and police officers did find this effect. This indicates that police officers gave more socially desired answers compared to students. This could be explained by the environment in which the experiment was conducted. The police officers conducted the experiment in their police department which created a professional atmosphere, which could possibly influence police officers in giving more socially desirable answers during the study. However, the students were invited mostly in private rooms at home of the researches. This created a more friendly atmosphere, which may have made the students more inclined to give real answers during the study. It is recommended to conduct this study in more similar environments to reduce this effect.

Another limitation could be regarding the CoP video used to create a different perspective. This video contained only basic information about the group and showed how it looked like from the perspective of the group. The content and length of the CoP video was possibly not sufficient enough for police officers to change their behaviour as a result. As described before, police officers are sometimes overconfidence and overestimating their own

ability to identify perpetrators (Tupper et al., 2023). Therefore police officers could be difficult to convince. This could be a possible explanation that the CoP video was not good enough for police officers to identify with the group of youths.

The next remark is about the used measurement scales. The scale for measuring trait empathy was modified to make it more applicable and shorter for the participants. This could influence the outcome and consistency of the results for trait empathy, which could explain the low Cronbach alpha's of this scale in this study. Even with the modifications, especially police officers complained about that some questions were similar to each other, which was confusing to some of them.

Psychological flexibility could be a predictor of empathy according to the literature (Valdivia-Salas et al., 2021) and was only measured in the student population as an addition to the research of de Haan (2023). For a fair comparison and analysis of the results, this should be measured in both groups, modified for the topic ethnic profiling and with a reduced number of questions. The FIT-60 was used for measuring the psychological flexibility, consisting of 60 questions, but a more suitable questionnaire for both groups is probably more appropriate for this study.

The last limitation was regarding the study population of the police officers and students. First, the population of police officers consist of voluntary police officers working in police departments in the east of the Netherlands. This could result in a population with not enough variety to adequate analyse and represent police officers in general in the Netherlands. During the reflection with the police officers, they also acknowledged that for example police officers from other parts of the Netherlands, like departments in cities like Amsterdam or Rotterdam, are more familiar with ethnic profiling and difficult cases like the case in the VR training. Having more experience with ethnic profiling could influence the way of approaching the training and therefore it is advised to conduct this research with police officers from departments all over the Netherlands.

The age differential within the student population was small and on average considerable lower, which is not corresponding with the average age of the police officers. To compare the police population with a proper control population, the age distribution should be more similar to each other.

Finally, the sample size of both groups is too small, resulting in a weak statistical power and more variation in the analysis (Oakes, 2017). For that reason the student and police population are merged in one bigger dataset, but to actually compare both groups a bigger

sample size of each group is desired. So both populations need to be bigger and there should be more variety in variables like age, gender and (social) background.

4.2 Future Research

Police officers gave sometimes socially desired responses, because of the fear to get judged. Ethnic profiling is a sensitive topic to discuss and therefore it is likely that police officers give socially desired responses (Chung & Monroe, 2003; van de Mortel, 2008). This effect occurred also in this study, but is hard to conclude to what extent it actually happened. It is recommended to minimalize the social desirability bias to collect more useful data.

In addition, police officers often try to meet the expectations of the organization and other police officers, which could contradict their original expectations and opinion. Mainly new police recruits are often influenced by the existing police socialization (Charman, 2017), and this influence and the existing police culture could influence how police officers look at ethnic profiling. This could also possibly influence the willingness to change their behaviour regarding ethnic profiling. This influence on how police officers think and behave could be a useful aspect to consider for future research.

This study looked mostly at the state empathy, because it was important to analyse the empathy level immediately after the training at that particular moment (Shen, 2010). The state empathy could therefore differ between the participants and describes the empathy for that specific moment, measuring the short term effect of CoP on empathy. To analyse the long term effect, it could be interesting to analyse the long term effect of CoP on trait empathy conducting a cohort study.

Additional to the research of de Haan (2023), psychological flexibility is measured in this study as an additional construct. No support is found in this study for the effect of psychological flexibility on state empathy. Psychological flexibility, perspective taking and empathy level of an individual are correlated with prejudice (Valdivia-Salas et al., 2021). Psychological flexibility in itself is also a predictor for prejudice (Levin et al., 2016). This indicates that the psychological flexibility of a person indirectly can predict ethnic profiling. It is recommended to look at the possible effects of psychological flexibility on empathy and perspective taking. Some constructs within the FIT-60 seem less interesting for this study, so if using the FIT-60, it is recommended to use a smaller version focusing on the constructs Acceptance, Defusion, Values and Committed Action (Delespaul, 2017).

The effect of gender on empathy is only analysed in the student population. The data of the police population was not useable for analysing gender, because only four participants were female. The effect of gender could influence empathy (Toussaint & Webb, 2005), but therefore the male/female ratio need to be more equal.

The last recommendation is regarding the study population. It is desirable to conduct a population more representative for police officers and society in general, so an age differential from 18 to 67, with an equal distribution of age and gender. It is also recommended to increase the number of participants in total to increase the statistical power of this study (Oakes, 2017).

It seems promising what the VR training can do regarding ethnic profiling. Change of perspective, empathy and psychological flexibility are factors in predicting ethnic profiling and Virtual Reality could be a very useful instrument to teach people in general and more specific police officers to learn and reflect about their own behaviour. This is hopefully resulting in a more equal society with less ethnic profiling and fair treatment for all people.

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6 Appendix

Appendix 1 – Demographic Information

Questions for Police officers:

1. What is your Age?
2. What is your Gender?
   o Male o Female o Rather not to say
3. How many years are you working at the Dutch National Police?

Questions for Students:

1. What is your Age?
2. What is your Gender?
   o Male o Female o Rather not to say
3. Which study are you following or did you last follow?

Appendix 2 – Empathy Assessment Index (Trait Empathy)

1= never; 2 = rarely; 3 = sometimes; 4 = frequently; 5 = always.

1. I can imagine what it's like to be in someone else's shoes. (PT)
2. I am aware of my thoughts. (SOA)
3. Watching a happy movie makes me feel happy. (AR)
4. I can tell the difference between someone else's feelings and my own. (SOA)
5. When I am with a happy person, I feel happy myself. (AR)
6. When I am upset or unhappy, I get over it quickly. (ER)

7. I can explain to others how I am feeling. (SOA)
8. I can agree to disagree with other people. (PT)
9. Emotional evenness describes me well. (ER)
10. Friends view me as a moody person. (ER) – Reversed scored
11. I can imagine what the character is feeling in a well written book. (PT)
12. Hearing laughter makes me smile. (AR)
13. I watch other people's feelings without being overwhelmed by them. (ER) – Reversed scored
14. I can simultaneously consider my point of view and another person's point of view. (PT)

Appendix 3 – Flexibility Index Test 60 (Psychological Flexibility)

1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree.

1. Worries get in the way of my success.
2. I often feel limited by everything I need from myself.
3. I can have negative thoughts about myself and at the same time know that I am okay.
4. If I want to do something, I go for it.
5. I am well able to divide long-term goals into short-term goals.
6. My life is well balanced.
7. I find it difficult to stay focused.
8. I have enough friends.
9. My thoughts cause me discomfort or emotional pain.
10. It's OK if I remember something unpleasant.
11. I regularly make concrete plans for the future.
12. If something doesn't work for me, I persevere and try to tackle it in a different way.
13. I like going to work.
14. I am willing to fully admit to my fear.
15. I find it difficult to pay attention to what is happening in the present moment.
16. I am easily distracted.
17. I think of myself that I should always be nice.
18. It's hard for me to find the words to describe my thoughts.
19. I realize that my self-image doesn't say much about me as a person.

20. I observe my feelings without losing myself in them.
21. When I am at home I feel at ease.
22. I try my best not to experience negative things.
23. I suffer from a negative self-image.
24. If I don't do something right, I blame myself.
25. I realize that I chose the things I do.
26. If I allow painful feelings, then I'm afraid they won't disappear.
27. There are a number of things I do that are important to me.
28. I feel like I can't see the wood for the tram overwhelmed.
29. I tend to make my pain worse with my thoughts.
30. I find it easy to look at my thoughts from a different angle.
31. My painful experiences and memories make it difficult for me to live a worthwhile life.
32. If someone makes a nasty comment, it can bother me for a long time.
33. I don't always have to do things right from myself.
34. My work and/or study plays an important role in my life.
35. I have to control thoughts that come to my mind.
36. I can describe well what I feel.
37. I value my life.
38. I believe that some of my thoughts are abnormal or bad and I shouldn't be thinking that way.
39. Some words can hit me very hard.
40. I am on my way to achieve my goals and dreams.
41. I regularly spend time on my hobbies.
42. I tend to react very strongly to my own negative thoughts.
43. I disapprove myself when I have weird thoughts.
44. I can easily express my beliefs and opinions.
45. Emotions (such as anger, sadness) cause problems in my life.
46. I am detached from my environment.
47. I do several things that are important to me.
48. I enjoy taking on new challenges.
49. I can well describe what I experience with my senses, such as what I hear, see, smell.
50. I find support in the people around me.
51. The thoughts I have about myself do not define who I am.

52. Sometimes I'm scared of the thoughts I have.
53. I'm afraid of my feelings.
54. My thoughts and feelings don't get in the way of the way I want to live.
55. Family and/or friends are important to me.
56. When I compare myself to other people, it seems that most of them are in better control of their lives than I am.
57. It is difficult to let go of troubling thoughts, even when I know letting go would help.
58. Some thoughts upset me.
59. I'm out to do new things.
60. I think sometimes my emotions are bad or inappropriate and I shouldn't be feeling them.

Appendix 4 - State Empathy Scale (State Empathy)

1= totally disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = totally agree.

Affective Empathy:

1. The character's emotions are genuine.
2. I can feel the character's emotions.

Cognitive Empathy:

3. I can see the character's point of view.
4. I recognize the character's situation.
5. I can understand what the character was going through in the video.
6. The character's reactions to the situation are understandable.

Associative Empathy:

7. I can relate to what the character was going through in the video.
8. I can identify with the situation described in the video.
9. I can identify with the characters in the video.