Perceived Ethnic Discrimination and Internalising Problems among Adolescents: Do Youth and Community Centres Work as a Buffer?

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This thesis has been written as a study assignment under the supervision of a Utrecht University teacher. Ethical permission has been granted for this thesis project by the ethics board of the Faculty of Social and Behavioural Sciences, Utrecht University, and the thesis has been assessed by two university teachers. However, the thesis has not undergone a thorough peer-review process so conclusions and findings should be read as such.

Abstract

Perceived ethnic discrimination (PED) has severe consequences for adolescents' wellbeing. Research has shown PED to positively relate to adolescents' internalising problems, and that this relation is weaker when adolescents receive parental or peer support. Adolescents may not always receive sufficient or effective social support from these social networks. This study aims to examine whether youth and community centre visits show a similar buffering effect on the relation between PED and internalising problems among Dutch adolescents with a migration background as has previously been shown for parental and peer support. To this end, cross-sectional data were used from 305 participants (M = 17.57, SD = 1.85) between 16 and 25 years old who filled out a self-report questionnaire administered by trained researchers. These participants were from three MBO schools (vocational educational track) in Utrecht, the Netherlands. The data originated from the first wave of the longitudinal YOUth Got Talent (YGT) project. A linear regression showed a significantly positive relation between PED and internalising problems. A moderated linear regression showed that no moderation effect was present for youth/community centre visits. Future research further explore the relation between PED and internalising problems among Dutch adolescents with a migration background by investigating unique relations between different sources of PED (e.g., teachers, adults outside of school, peers) and internalising problems. Furthermore, it is advised to examine the conditions for youth/community centres to enable the development of supportive relationships and social support.

Keywords: adolescents, perceived ethnic discrimination, internalising problems, social support, social network

Although discrimination based on ethnic origin is forbidden by law in the Netherlands, still many youngsters experience this on a daily basis. To illustrate, almost half of the children and youth (10 to 18 years old) in the Netherlands has seen peers being discriminated against based on their skin colour or ethnicity (United Nations International Children's Emergency Fund the Netherlands [UNICEF Nederland], 2023). Additionally, a study by Day and Badou (2019) shows that negative perceptions of youth with a migration background are prominent in the Dutch society, particularly of Muslim youth and youth with a Moroccan background. For example, a study by Andriessen et al. (2021) showed that ethnic discrimination at the internship market for vocational students (MBO) is evident in Utrecht, the Netherlands. Specifically, students with a last name indicating a migration background received a lower chance of a positive reply to their application (Andriessen et al., 2021).

Discrimination or perceived discrimination can be especially impactful during adolescence. At this life stage youth develop themselves, create a bigger distance from their parents and discover their boundaries, which challenges their resilience to discrimination (Kovaçs et al., 2021). Additionally, adolescents are often more vulnerable to social acceptance, which can be hindered by discrimination (McElhaney et al., 2008; Viner et al., 2015). This life stage furthermore entails increased encounters and noticing of discrimination which result from the broader and more diverse environmental contexts in which adolescents spend their time (Aroian, 2011; Leventhal & Brooks-Gunn, 2000; Ortega-Williams et al., 2022).

Therefore, perceived ethnic discrimination (PED) can have detrimental effects for adolescents. Both a systematic literature review and meta-analytic review comparing data from studies in the Netherlands, the broader European context, U.S and other countries show a positive relation between PED and internalising problems among youth (Benner et al., 2018; Metzner et al., 2022). Previous research has focused on how social support weakens (i.e.,

buffers) this relation. However, this focus has predominantly been on types of support such as parental and peer support (Sabatier & Berry, 2008; Wang et al., 2018; Wenzing et al., 2021) while little is known about which social networks may facilitate such social support, such as youth and community centres. Directing attention to this can be relevant as youth do not always receive sufficient or effective support from parents or pees (Juang et al., 2016). For example, in several studies parents indicated being unsure about how to deal with discrimination and internalising problems in their upbringing (Hamdi et al., 2018; Kalthoff, 2009; Pels et al., 2013; Pharos, 2019)**.** Meijer et al. (2018) therefore stress that similar social support can also be received from non-family adults and peers outside of the mainstream social networks (e.g., schools), for example at youth and community centres.

As little research has focused on the role of youth/community centres, the current study will look into the potentially buffering effect of visiting youth/community centre on the relation between PED and internalising problems among MBO students in the Netherlands. This knowledge can provide support to youth/community centres and municipalities for effectively shaping such centres with the aim of weakening the negative effect of PED on youth. The following research question aims to provide an answer to this:

Research question: To what extent does perceived ethnic discrimination of MBO students in the Netherlands relate to internalising problems and does this relation depend on youth/community centre visits?

Perceived ethnic discrimination

Many ethnic minorities in the Netherlands experience ethnic discrimination as a recurring or daily issue (Kros et al., 2022). According to Andriessen et al. (2020), minority youth (e.g., by ethnic identity) are more likely to experience discrimination than majority youth. Studies show that discrimination is apparent between individuals (i.e., interpersonal discrimination), as well as through policies and practices of organizations or institutions (i.e.,

institutional discrimination; Harris et al., 2006; Karlsen & Nazroo, 2002; Krieger, 1999; Kros et al., 2022). This study focuses on interpersonal ethnic discrimination. Ethnic discrimination can be defined as the 'unfair, differential treatment on the basis of race or ethnicity' of individuals and is often understood as the behavioural manifestation of racism (Crengle et al., 2012; Greene et al., 2006). Besides operating an interpersonal focus on ethnic discrimination, this study will focus on the subjective perception of ethnic discrimination, that is perceived ethnic discrimination (PED). As Paradies (2006) and Schmitt and Branscombe (2011) note, perceived discrimination implies something about an individual's place in society and can have unique consequences to one's psychological wellbeing apart from the consequences of negative treatment itself.

PED and internalising problems

Empirical studies have repeatedly demonstrated a positive association between PED and adolescents' internalising problems (Benner et al., 2018; Metzner et al., 2022). That is, studies showed higher levels of PED to be related to higher levels of internalising problems. Previous research studies have used a variety of overarching terms when discussing internalising problems, for example (psychological) wellbeing and mental health. Internalising problems indicate internalising symptoms, syndromes and disorders (e.g., sadness, loneliness) experienced by an individual (Francis et al., 2019; Levesque, 2011; Merrell, 2008). Such internalising problems find place within the individual and can result from exaggerated psychological stress responses of their internal emotional state (Hansen & Jordan, 2020; Merrell, 2008). These stress responses are also referred to as 'maladaptive regulations' or 'overcontrol' (Hansen & Jordan, 2020; Merrell, 2008). Merrell (2008) identifies four main types of internalising problems, specifically: depression, anxiety, social withdrawal and somatic problems.

The association between PED and adolescents' internalising problems has been explained by various theories. According to the biopsychosocial model for perceived racism (Clark et al., 1999), the perception that something is discriminating can lead to aforementioned exaggerated psychological stress responses which can subsequently lead to internalising problems (Bogart et al., 2013; Clark et al., 1999; Tobler et al., 2013). Similarly, the minority stress model (Meyer, 2003) holds that minority youth experience psychological distress as a result of discrimination and a corresponding unequal societal position. This 'minority stress' is additional to the stress that all people experience occasionally and increases the risk of internalising problems for minority youth (Andriessen et al., 2020; Noor, 2016). For example, a study among first and second generation adolescents of Moroccan descent in the Netherlands revealed higher levels of internalising problems for those reporting higher levels of PED (Stevens et al., 2005). Additionally, a longitudinal study by Brody et al. (2006) showed that increases in PED were associated with increases in depressive symptoms among African American adolescents. Following these theories and empirical evidence, the following hypothesis will be tested:

Hypothesis 1: Perceived ethnic discrimination of MBO student in the Netherlands positively relates to internalising problems among these students.

This study will focus on the relation between PED and internalising problems among Dutch adolescents with a variety of migration backgrounds. It therefore aims to add to the results of previous studies among Dutch adolescents by Stevens et al. (2005) and Dijk et al. (2011) which specifically concerned adolescents with a Moroccan or Turkish migration background.

Social support: networks and connectedness

Various research studies found a buffering effect of social support on the positive relation between adolescents' levels of PED and internalising problems (Brody et al., 2006;

Juang et al., 2016; Tran, 2018). In other words, social support has been shown to weaken the relation between PED and internalising problems. Social support can be defined as 'support accessible to an individual through social ties to other individuals, groups, and the larger community' (Lin et al., 1979, p. 109), and is considered a coping resource influencing an individual's adjustment to stress (Cooke et al., 1988). Studies have identified various types of social support, such as emotional, instrumental and financial support (Berkman, 1984; Langford et al., 1997) According to Langford et al. (1997) three conditions should be present to allow for social support: social network, social connectedness, and social climate. A social network (e.g., family, peers, neighbours) should be present which allows for relational ties or 'social connectedness' between two or more people (Barrera, 1986; Berkman, 1984; Kahn & Antonucci, 1980; Langford et al., 1997). The presence of a supportive social network and social connectedness allows for a social climate that holds an atmosphere of helpfulness and protection (Langford et al., 1997). This in turn fosters social support by an individual (e.g., parent, peer) of one's social network (Langford et al., 1997).

The relation between PED and internalising problems, and the buffering effect of social support can be explained by the risk and resilience framework (Stanley, 2003). The central idea of this framework is that each environment (e.g., familial, educational) an individual is engaged in, contains factors that can negatively or positively influence that individual's development and corresponding wellbeing (Masten & Powell, 2003; Stanley, 2003; Wong, 2003). Factors which negatively influence an individual, such as discrimination, are called 'risk factors' while factors such as social support influence the individual positively and are also called protective factors (Masten & Powell, 2003; Stanley, 2003; Szalacha et al., 2003). Such protective factors foster an individual's personal competence and ability to adapt to risks (Masten & Powell, 2003; Stanley, 2003; Szalacha et al., 2003). This subsequently heightens their resilience, therefore decreasing an individual's susceptibility to the influence

of the risk factor (Fergus & Zimmerman, 2005; Hurd & Zimmerman, 2010; Jessor et al., 1995; Juang et al., 2016; Masten & Powell, 2003; Stanley, 2003; Szalacha et al., 2003; Wenzing et al., 2021). The risk and resilience framework thus serves as an instrument to not solely examine an environment's risk factors, but also its protective factors when assessing the influence of risks on an individual's wellbeing (Masten & Powell, 2003; Stanley, 2003; Szalacha et al., 2003).

Regarding PED and internalising problems, research on the buffering effect of social support has mostly focused on the individuals with whom social connectedness is established, such as parents and peers. The attachment theory (Bowlby, 1958) has previously been applied to explain this effect. According to this theory, supportive parent-adolescent relationships characterized by secure attachments create a sense of competence in adolescents and help them cope with social rejection such as discrimination (Bowlby, 1958; Cassidy & Shaver, 1999; Tran, 2018; Wenzing et al., 2021). Supportive relationships with peers hold similar positive influences (Juang et al., 2016; Wenzing et al., 2021). Researchers explain this through the increased importance of peer relationships during adolescence (Correa-Velez et al., 2010; Ince & Kalthoff, 2020; National Research Council [NRC] & Insitute of Medicine [IOM], 2009; Wenzing et al., 2021). Empirical evidence shows support for a buffering role of both resources. For example, in their longitudinal study Brody et al. (2006) showed that both supportive parents and peers weakened the positive association between PED and depressive symptoms among African American adolescents. Other examples show similar effects for parental and peer support on the relation between PED and depressive symptoms and somatic complaints among adolescents (Juang et al., 2016; Noh & Kaspar, 2003; Tran, 2018).

As aforementioned, a supportive social network should be present to allow for the development of such social connectedness and ultimately social support (Barrera, 1986; Berkman, 1984; Kahn & Antonucci, 1980; Langford et al., 1997). Youth and community

centres aim to operate as such social networks **(**Faché, 2021; Gemeente Utrecht [Municipality of Utrecht], 2023; Huygen, 2014). That is, Dutch municipal policies and research institutes reports of youth and community centres, as well as a systematic review including Dutch, English, French and German youth centres analyses show that these centres aim to provide their visitors a social network (Faché, 2021; Gemeente Utrecht [Municipality of Utrecht], 2019; Tuteleers & Kerger, 2011; Valkestijn et al., 2015). Specifically, this social network aims to enable social support by fostering strong and trusting relationships to stimulate their visitors' self-competence, resilience, and their coping behaviour with personal or social challenges (Faché, 2021; Huygen, 2014; Valkestijn et al., 2015). Next to peer relationships, these centres enable supportive relationships between adolescents and non-family adults to emerge, which can have similar positive effects on adolescents' wellbeing as relationships with parents and peers (Faché, 2021; Gemeente Utrecht [Municipality of Utrecht], 2019; Tuteleers & Kerger, 2011; Valkestijn et al., 2015).

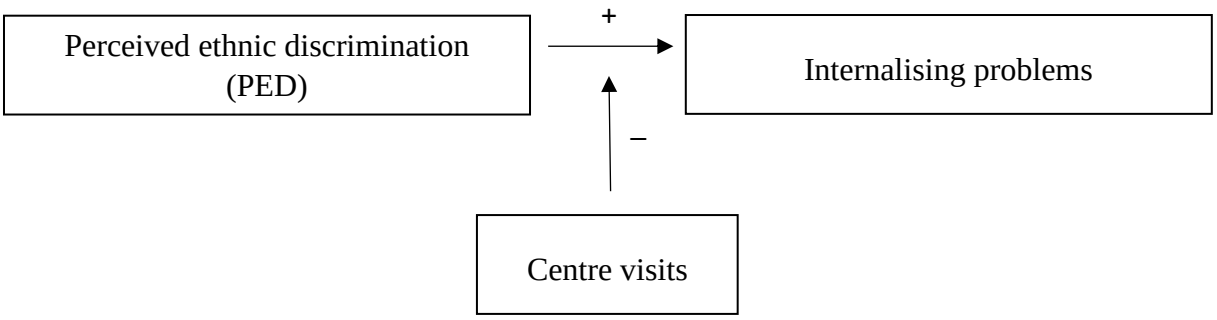
Considering the purpose of youth/community centres to operate as a social network and facilitate social connectedness and ultimately social support, one would expect that visiting these centres yields similar buffering effects on the relation between PED and internalising problems as has been shown for parental and peer support in specific. Based on these notions, the following hypothesis will be tested:

Hypothesis 2: The relation between perceived ethnic discrimination and internalising problems of MBO students in the Netherlands is less strong when students visit a youth/community centre.

The hypotheses are portrayed by the conceptual research model in Figure 1.

Figure 1

Research Model



Methods

Participants and design

This study was conducted using cross-sectional data from the first wave (September 2019 – February 2020) of the YOUth Got Talent (YGT) project. The YGT is a longitudinal study on the SES-health gradient among adolescents at three MBO schools (vocational educational track) in Utrecht, region of the Netherlands. Participants were recruited by using convenient sampling, which resulted in a total of 72 classes who filled out a questionnaire.

The initial sample contained 1,280 participants. Cases which were blank, tests, duplicates and those under the age of 16 were excluded. Additionally, reasons of exclusion were participants' refusal to participate, language difficulties, no serious participation, and cases reporting extreme/unusual repetitive answers on multiple scales. Furthermore, participants without a migration background and those above the age of 25 years were excluded, which resulted in a final sample of 305 participants between 16 and 25 years old (M = 17.57, SD = 1.85). Participants' migration background was based on whether the participant's own or at least one of their parents' country of birth was different from the Netherlands. Of this final sample, 41% or participants was male and 59% female. Most participants had a non-western migration background, specifically 232 (76.1%), and 73 (23.9%) participants had a western migration background. For this categorisation the definition of 'western' by the Centraal Bureau voor de Statistiek (Statistics Netherlands; CBS,

n.d.) was used (i.e., Western = Europe (excluding Turkey), North America, Oceania, Indonesia and Japan).

Procedure

Trained researchers visited the classes to administer a self-report questionnaire. This questionnaire took roughly 20-30 minutes to fill out and was done digitally. However, 3.5% of participants filled out the questionnaire by paper-and-pencil. Either the standard or a shortened questionnaire was distributed to students depending on their educational track, based on expected differences in attention level. At least one day in advance, participants were informed that consent could be withdrawn at any time, that their data would be anonymized, and that they could receive a summary of the research if requested. Ethical approval for the data collection was gained from the Ethics Assessment Committee of the Faculty of Social Sciences at Utrecht University (FETC18-070) in 2018. Additionally, ethical approval for the secondary use of the data for this research study was gained from the Ethics Committee of Utrecht University's Faculty of Social and Behavioural Sciences on the 11th of April 2024.

Measurements

Internalising problems

Internalising problems were measured with 10 items of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). These included the five items of the SDQ's emotional subscale and the five items of the peer subscale which combined serve as an 'internalising problems' scale. Previous research indicated good construct validity for the internalising scale (Goodman et al., 2010). Additionally, researchers found good concurrent validity of the Dutch self-report versions of the emotional and peer subscales when compared to other self-report measures of (components of) internalising problems (Muris et al., 2003; van Widenfelt et al., 2003).

Participants were asked to fill in a 3-point ordinal Likert scale (1 = 'Not true', 2 = 'Somewhat true', 3 = 'Certainly true') for each item. Examples are: 'I often have a headache, stomach ache, or am nauseous', and 'Other young people my age generally like me'. Items were phrased in the direction of their subscales, with higher scores indicating higher levels of internalising problems. The scale entailed two negatively worded items which were reversed to ensure that a high value would indicate the same type of response for every item. A Cronbach's alpha of .691 indicated questionable internal consistency of the scale. A peer subscale item was removed after further exploration showed that this would heighten the Cronbach's alpha to an acceptable .716. The sum and average of the remaining nine items served as a total score of internalising problems per case. This total score was calculated based on the condition that for both the emotional and peer subscale at least three items were answered. If this condition was not met, the case was excluded from the analysis. For one case mean imputation was used to fill in a missing value for one item.

Perceived ethnic discrimination

PED was measured with three items indicating discrimination by three different populations. Specifically, these entailed teachers at school, other adults outside of school, and youngsters at school. Participants were asked to fill out how often they experienced PED because of their country of origin, or the country of their parents or grandparents' origin for each item. This was done on a 5-point Likert scale (1 = 'Never', 2 = 'Rarely', 3 = 'Sometimes', 4 = 'Often', 5 = 'Very often'). Higher scores indicated higher frequency of PED by the specific population addressed by the item. Answers to the three items were summed and averaged to derive an overall score of PED across the populations for each case. This total score per case was calculated based on the condition that all three items were answered. The Cronbach's alpha of the scale was .800, indicating a good internal consistency.

Centre visits

Whether a participant visited youth/community centres was measured by a single item asking participants the question ‘Do you ever visit a youth centre or community centre’ (0 = ‘No’, 1 = ‘Yes’).

Control variables

Gender and age were controlled for as previous studies have shown these to significantly relate to PED and internalising problems (Pérez et al., 2008; Vollebergh et al., 2005). Gender was measured using a single item asking ‘Are you a boy or a girl?’ (0 = ‘Girl’, 1 = ‘Boy’). Age was measured by combining the information of the date of birth with the date of data collection.

Data-analysis

To analyse the data, *JASP 0.18.3.0* was used. As aforementioned, for internalising problems cases with less than three items filled out for each subscale were excluded. Additionally, for PED those cases with one or more items missing were excluded. Furthermore, cases which did not fill out the item measuring youth/community centre visits were removed. This resulted in the exclusion of 34 cases and a final sample of 201 participants.

Descriptive analyses and correlations were conducted among the main variables and control variables (Tables 1 & 2). Assumptions were checked to ensure the validity and reliability of the analyses. The assumption of normal distribution of residuals of the model was examined by means of histograms and scatterplots of standardized residuals. A histogram and scatterplot was made for each group of the moderator (i.e., centre visits) for PED and internalising problems together, as well as for the full model (i.e., also including the moderator and interaction effect). The graphs showed that the residuals were positively skewed, indicating non-normally distributed residuals and thus a violation of the assumption.

However, as this skewness was not strong, this was not considered a serious violation. Therefore, no techniques were applied to address this issue.

Plots of residuals versus predicted values were made to check the assumptions of linearity and homoscedasticity. Specifically, a plot was made for both groups of the moderator, and for the full model. The plots showed minor violations of the assumptions of linearity and homoscedasticity. That is, the mean for centre visits 'No' was to a certain degree positive on the left, for the full model this mean was somewhat positive in the middle. However, similarly to the assumption of normality of residuals, this violation was considered acceptable and thus not corrected for.

The absence of multicollinearity was checked by examining the VIF-value of PED, the moderator and the interaction between these variables. As all VIF-values were below 10, no multicollinearity was found. Lastly, no outliers were found using Cook's Distance with values above one.

A linear regression was conducted to assess the association between the control variables and internalising problems. Thereafter, PED was added to the analysis while maintaining the control variables to test the main effect of PED on internalising problems in a multiple linear regression. The third analysis concerned a moderated multiple regression (MMR) to test an interaction effect of PED and youth/community centre visits on internalising problems.

Results

Descriptive findings

Table 1 shows the descriptive statistics of PED and internalising problems for each group of the moderator, as well as for their total values. Correlation analyses of all study variables indicated various significant correlations between variables (Table 2). PED significantly and positively correlated with internalising problems, suggesting that

participants reporting higher levels of PED experience higher levels of internalising problems. Additionally, a significantly positive correlation was found between PED and centre visits, which indicates that those reporting higher levels of PED are more likely to visit youth/community centres. Furthermore, a significantly positive correlation was found between PED and gender, indicating that boys are more likely to report higher levels of PED. However, Dancey and Reidy's (2007) interpretation of Pearson's correlations coefficients suggested all three correlations to be relatively weak (i.e., $r < 0.3$ or -0.3). As gender showed a significant correlation with main variable PED, this variable was controlled for in further analyses. Contrarily, age was not included in further analyses as it did not show correlations with the main variables. No other correlations reached significance.

Table 1

Descriptive statistics of the main variables

Variables	Centre visits	*n*	*M*	*SD*	Min	Max
PED	No	237	1.54	0.69	1.00	4.00
	Yes	34	2.01	0.92	1.00	4.33
	Total	271	1.60	0.74	1.00	4.33
Internalising problems	No	237	1.50	0.36	1.00	2.78
	Yes	34	1.46	0.36	1.11	2.33
	Total	271	1.50	0.36	1.00	2.78

Table 2

Correlations across study variables

Variables	1	2	3
1. PED	-	-	-
2. Internalising problems	.13*	-	-
3. Centre visits [a]	.21**	-.04	-
4. Gender [b]	.13*	-.05	-.02
5. Age	.05	.12	-.05

* $p < .05$. ** $p < .01$.

[a] Centre visits 'No' was coded as 0, Centre visits 'Yes' was coded as 1

[b] Gender 'Girl' was coded as 0, Gender 'Boy' was coded as 1

PED and internalising problems and the buffering effect of centre visits

Table 3 shows the linear regression between the control variable and internalising problems (Model 1), the multiple linear regression between PED and internalising problems whilst controlling for gender (Model 2), and a moderated multiple regression testing an interaction effect (Model 3).

Model 1 showed that the control variable gender was not significantly associated with internalising problems. The R-squared value indicated that the model explained 0.3% of the variance in internalising problems ($F(1, 269) = 0.692$, $p = .406$).

Model 2 showed a significantly positive association between PED and internalising problems. This indicates that participants reporting higher levels of PED were more likely to also report higher levels of internalising problems. The adjusted R-squared value indicated that Model 2 explained 1.3% of the variance in internalising problems ($F(2, 268) = 2.754$, $p = .065$).

Model 3 also showed a significantly positive association between PED and internalising problems. However, no significant main effect of centre visits on internalising problems was found. Furthermore, contrarily to what was expected, the interaction between PED and centre visits was not significant. The adjusted R-squared value indicated 1% of the variance in internalising problems to be explained by Model 3 ($F(4, 266) = 1.682$, $p = .155$).

Table 3

Regression analyses for PED and internalising problems and the moderating role of youth/community centre visits.

	Model 1				Model 2				Model 3			
Variables	*B*	*SE*	β	Sig.	*B*	*SE*	β	Sig.	*B*	*SE*	β	Sig.
Gender [a]	-.04	.04	-.05	.406	-.05	.04	-.07	.269	-.05	.04	-.07	.252
PED					.07	.03	.13	.029	.07	.03	.14	.042
Centre visits [b]									-.10	.16	-.09	.532
PED*Centre visits									.01	.08	.03	.857

[a] Gender 'Girl' was coded as 0, Gender 'Boy' was coded as 1

[b] Centre visits 'No' was coded as 0, Centre visits 'Yes' was coded as 1

Discussion

The aim of this study was to examine the relation between PED and internalising problems among MBO students in the Netherlands, and a potential buffering (i.e. weakening) effect of youth/community centre visits on this relation. Results showed a positive relation between PED and internalising problems. However, no buffering effect was found for youth/community centre visits. These results imply that participants reporting higher levels of

PED also reported higher levels of internalising problems, and that this relation was not less strong when these participants visited youth/community centres.

PED and internalising problems

In line with the first hypothesis of this study, adolescents who reported higher levels of PED also reported higher levels of internalising problems. This finding is consistent with previous research studies indicating a positive relation between PED and (components of) internalising problems among adolescents (Benner et al., 2018; Metzner et al., 2022). Therefore, this study adds to findings about this relation among Dutch adolescents by Stevens et al. (2005) and Dijk et al. (2011) as it replicates their results using a more diverse sample in terms of Dutch adolescents' migration background. The finding furthermore aligns with the biopsychosocial model for perceived racism (Clark et al., 1999) and the minority stress model (Meyer, 2003). In other words, the results of this study suggest that PED leads to maladaptive psychological stress responses which subsequently result in internalising problems (Andriessen et al., 2020; Bogart et al., 2013; Clark et al., 1999; Noor, 2016; Tobler et al., 2013).

Future research should expand this research by examining unique relations between different sources of PED (e.g., teachers, adults outside of school, peers) and internalising problems among Dutch adolescents with a migration background. Such different influences of sources of PED were found in a longitudinal study by Benner and Graham (2013) among American adolescents of diverse migration backgrounds. Specifically, PED by school personnel resulted in poorer academic performance, while PED by peers resulted in higher levels of internalising problems. Results of a cross-sectional study by Yan et al. (2024) however, indicated no differences in sources of PED and internalising problems among American early adolescents. Research examining multiple PED sources and their potentially different influences on internalising problems has not been conducted among Dutch

adolescents with a migration background yet. Such research is needed as current results are ambivalent and scarce, whilst insights may improve interventions by targeting specific PED sources.

Youth/community centre visits

In contrast with the second hypothesis, youth/community centre visits did not buffer the positive relation between PED and internalising problems. In other words, this relation was not weaker for adolescents who visit youth/community centres. This result is inconsistent with the theoretical concept of social support and the attachment theory. That is, as youth/community centres operate as social networks aiming to foster social support between peers, and between adolescents and non-family adults (Faché, 2021; Gemeente Utrecht, 2019 [Municipality of Utrecht]; Tuteleers & Kerger, 2011; Valkestijn et al., 2015), a buffering effect for youth/community centre visits was expected.

An explanation may be that the relationships (i.e., social connectedness) which adolescents developed at youth/community centres did not reach sufficient quality to allow for social support. Relationship quality depends amongst others on the frequency and duration of individuals' interactions (Berkman, 1984; Kahn & Antonucci, 1980; Langford et al., 1997). Indeed, in a study about relationship quality, Whitney et al. (2011) showed that long-term relationships and frequent contact as opposed to short-term relationships and less frequent contact were related to less depressive symptoms. That is, a lack of relationship quality could be due to infrequent visits. Another explanation may be that, despite frequent visits, this study's centres did not sufficiently allow for social connectedness and social support to develop. As the present study did not measure the presence of relationship and their relationship quality, no inferences can be made about this. Following these possible explanations, the absence of a buffering effect of centre visits may be due to a lack of (high quality) relationships which should allow for social support.

Future research should critically examine what should be present in youth/community centres to enable social connectedness and ultimately social support. Furthermore, the presence and quality of relationships should be measured (e.g., frequency, duration of interactions, period of time). To this extent, more clarity can be obtained regarding possibilities for developing high quality relationships at youth/community centres to enable social support.

Strengths and limitations

This study has various strengths. As aforementioned, this study adds to previous empirical evidence on the relation between PED and internalising problems among Dutch adolescents by showing that this relation remains significant when researching a more diverse sample in terms of migration background (Dijk et al., 2011; Stevens et al., 2005). Additionally, this study provided a basis to examine the role of social networks in buffering this relation between PED and internalising problems among Dutch adolescents with a migration background.

Several study limitations should also be mentioned. Firstly, the small total sample size of 271 participants and small percentage visiting youth/community centres (12.5% of participants) may have resulted in low statistical power. Following the statistical ground rules by Faul et al. (2007), the sample size should have included approximately 311 participants to ensure sufficient statistical power to detect an expected buffering effect. This small sample and low statistical power means that a buffering effect of youth/community centres may in fact be present, however a larger sample is required to enable detecting such an effect. To this end, future research should use a large enough sample to ensure sufficient statistical power to draw valid conclusions from.

Secondly, minor violations of the assumptions of normality of residuals, linearity, and homoscedasticity were found. This suggests that the models may not entirely have captured

the true relationships between variables. This brings into question whether accurate conclusions were drawn from the analyses. For example, non-normality of residuals may mean that no relation between PED and internalising problems exists, although analyses suggested otherwise. This is particularly likely given the small sample (Knief & Forstmeier, 2021). However, (multiple) linear regressions are considered robust to this violation, meaning that approximate normality is generally considered sufficient (Knief & Forstmeier, 2021; Wood & Saville, 2013). Therefore, as solely minor violations were found, the analyses and conclusions are expected to be accurate. Furthermore, the violation of linearity may indicate non-linear relations of PED and centre visits with internalising problems. This could have resulted in not detecting a relation between PED and internalising problems whilst this is present (Knief & Forstmeier, 2021). However, the study's results did detect this. Regarding the buffering effect, the violation could have resulted in falsely detecting a relation between centre visits and internalising problems (Knief & Forstmeier, 2021). However, no main or buffering effect of centre visits was detected. Following these notions and it being a minor violation, considerable impact on the study's results is not expected. Additionally, the violation of the assumption of homoscedasticity suggests that non-existing relations may have been falsely detected (Knief & Forstmeier, 2021). However, minor violations of homoscedasticity are generally considered to have little effect on significance tests (Osborne & Waters, 2002; Tabachnick & Fidell, 1996). Applying strategies to account for these violations (e.g., log transformation) was not possible as the variables' measurement levels did not allow for this. However, if possible, future research should apply these strategies and use a sufficiently large sample to ensure accurate results.

A third limitation concerns the measures PED and centre visits. Explicit validity of the PED measure could not be ensured as the specific format had not previously been used as far as known. Regarding centre visits, studies measuring (frequency) of visits use similar

measures (e.g., Mahoney et al., 2001), yet do not report validity. Nevertheless, for both PED and centre visits the items' wording was considered unambiguous and thus expected to accurately measure the intended concepts. For future research it is recommended to apply validated scales to measure PED, such as the Adolescent Discrimination Distress Index (ADDI; Fisher et al., 2000). Using pre-tests for centre visits measures is recommended to ensure its validity.

One more notion concerns the use of a cross-sectional design. This means that a causal direction of the relation between PED and internalising problems could not be proven. In other words, higher levels of internalising problems may lead to higher levels of PED. However, as previous longitudinal studies have shown this relation to be causal with PED preceding (components of) internalising problems among adolescents (Brody et al., 2006; Stein et al., 2016), this study expects a similar causal relation and direction.

Recommendations and conclusion

This study showed that adolescents reporting higher levels of PED are more likely to report higher levels of internalising problems, and showed that this relation is not different for adolescents visiting youth/community centres. The relation between PED and internalising problems emphasizes the importance of developing interventions which prevent or lower levels of PED and internalising problems among adolescents. Such interventions could focus on the school environment as both teachers and peers have been shown to contribute to PED here (Brown & Tam, 2019; D'hondt et al., 2021). An intervention could be for teachers or other mentors to help adolescents practice with reacting and potentially intervening in situations in which discrimination is exerted (directed at themselves or at others; Felten & Vijlbrief, 2019).

Other interventions could focus on helping adolescents cope with stress induced by PED to prevent internalising problems. Such interventions should focus on developing high

quality relationships with parents and peers to enable social support. For example, by offering social opportunities within sports associations and schools, such as collaborative group activities and peer mentoring (Demaray et al., 2005; Doll et al., 2004; Ellis et al., 2009). Unfortunately, a similar buffering effect of youth/community centres was not found. However, youth/community centres are advised to focus on how to facilitate the development of such supportive relationships, this way paving the way for social support. In other words, attention should go to how youth/community centres can fulfil their role of supportive social networks. Therefore, similarly to the suggested interventions for sports associations and schools, youth/community centres should encourage collaboration among visitors and facilitate one on one mentoring activities (Demaray et al., 2005; Doll et al., 2004; Ellis et al., 2009). Additionally, centres should facilitate frequency and duration of visits. This way, these centres may offer social opportunities and strengthen relationship quality, operating as social networks which enables social support.

This study demonstrates the multifaceted character of the issue of perceived ethnic discrimination. This is evident from the diverse range of research studies providing insights into causes and consequences of, and solutions to PED. That is, these include adolescents' psychological stress, sources of PED, social networks, relationships, and ultimately social support. This variety of insights can all contribute to the development of effective policies to buffer effects of PED on adolescents' wellbeing. Not surprisingly, this entails a complex path of research, interventions, and policy evaluations, but as Albert Einstein once said "everything should be as simple as possible, but not simpler".

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Appendix

Interdisciplinarity of the research study

The alarming positive relation between perceived ethnic discrimination (PED) and internalising problems among Dutch adolescents, and the question of how this relation may be buffered were central to this study. Insights from a variety of disciplines can contribute to understanding these relations as they themselves concern an interplay of biological, psychological, and social factors. By means of the unified theory of development, Sameroff (2010) explains how biological, psychological, and social factors "foster and transform each other to explain both adaptive and maladaptive functioning across the life course" (p. 20). Indeed, each one of the proposed theories and models in this research study show how risk and/or protective environmental factors influence an individual's wellbeing. That is, the risk and resilience framework (Stanley, 2003), biopsychosocial model for perceived racism (Clark et al., 1999), minority stress model (Meyer, 2003), and attachment theory (Bowlby, 1958) each illustrate how such negative or positive factors of an individual's socio-ecological context (e.g., home environment, school environment) influence their psychological and biological processes. This for example happens by inducing (i.e., discrimination) exaggerated stress responses (i.e., maladaptive functioning) or protecting an individual from it (i.e., social support).

The variety of influencing factors on an individual's wellbeing naturally stresses the relevance of using insights from different scientific disciplines to derive at conclusions. Disciplines drawn from were (developmental) biology, (health) psychology, and sociology. For example, following the biopsychosocial model for perceived racism (Clark et al., 1999), this study combined these disciplines by showing how the psychological concept of internalising problems, is influenced by the biological process 'stress', which in turn is affected by the social and psychological process of PED. Subsequently, a sociological view is

again applied (i.e. = through social support and attachment theory) to understand how this relation is buffered by other social processes that foster competence and coping mechanisms in an individual.

In addition to scientific literature, grey literature were applied to examine the relation between PED and internalising problems, and explore a buffering effect. For example, research institute reports such as Movisie and the Verwey-Jonker Instituut, as well as Dutch municipality documents were used to arrive at an overview of (evaluations of) existing societal interventions, public opinions and sentiment regarding PED, social support, networks and youth/community centres in particular (Gemeente Utrecht [Municipality of Utrecht], 2019; Huygen, 2014; Kros, 2022; Tuteleers & Kerger, 2011; Valkestijn et al., 2015). A critical examination of this grey literature is essential when aiming to cross boundaries between science and practice as these show how research-based interventions have previously been implemented and what are best practices. For example, this grey literature showed that family and peer relationships are not always sufficient or effective, and that supportive relationships with non-family adults can play a buffering role for risks to adolescents' wellbeing which is similar to parental and peers support (Pharos, 2019; Kovács, 2021). Additionally, various grey literature documents concluded that youth/community centres play an important role in operating as social networks to foster social support (Gemeente Utrecht [Municipality of Utrecht], 2019; Huygen, 2014; Kros, 2022; Tuteleers & Kerger, 2011; Valkestijn et al., 2015). More detailed insights into working operations at youth/community centres may thus be relevant to draw conclusions about their potentially facilitating role and explore how improvements can be made.

Besides the currently applied quantitative research method which concerned self-report questionnaires, qualitative research methods could also be used to arrive at an enhanced comprehension of potential buffering effects for PED and internalising problems among

Dutch adolescents with a migration background. That is, semi-structured interviews by themselves or combined with focus groups may be applied to explore the meaning and sentiment of working operations at youth/community centres. This way, more insights could be derived to understand how these centres work, and how they could improve at social networks fostering social connectedness and social support.

As is previously mentioned, the relation between PED and internalising problems, and potential roles of social networks and supportive relationships can be explained by a variety of disciplines, by means of a variety of theories and models. This shows the relevance of taking an interdisciplinary approach to find answers and explore solutions to the problem which, naturally, have to be interdisciplinary to ensure they reach their goal. To this end, cheers to crossing more and more boundaries!

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