

**Adolescent Mental Health in a Migrant Context: Evaluating the Moderating Roles of
SES and Family Support in the Netherlands**

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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

Amidst increasing global migration, the mental health of adolescents with a migration background has become a pressing concern. However, there is ambiguity in findings regarding the relation between having a migration background and adolescents' mental health. Differences in socioeconomic status and family support among adolescents with and without a migration background may contribute to these variety in findings. Therefore, this secondary data study seeks to clarify the relation between having a migration background and mental health of adolescents in the Netherlands and whether SES and/or family support moderate this relation. Cross-sectional data from the 2021 Health Behaviour in School-aged Children (HBSC) survey were used for this research. The sample consisted of 7,254 Dutch adolescents with an average age of 13.9 years. Adolescents with a migration background turned out to have more mental health problems ($B = 0.35, p = 0.01$) than their native counterparts. Additionally, SES is found to be a predictor of this relation for those without a migration background, indicating that higher SES leads to fewer mental health problems. However, this positive effect of SES is not present for adolescents with a migration background. Family support did not turn out to act as a buffer. These findings highlight the importance of considering contextual factors that act as a buffer on the relation between having a migration background and mental health. Additionally, it highlights the urge to act in a culturally sensitive manner so that the cultural differences among diverse types of migration backgrounds can be better addressed.

Keywords: migration background, mental health, adolescents, socioeconomic status, family support

Adolescent Mental Health in a Migrant Context: Evaluating the Moderating Roles of SES and Family Support in the Netherlands

Migration stands as a ubiquitous phenomenon, as approximately 30% of all adolescents living in the Netherlands have a migration background (NJI, 2023). Additionally, this group is growing due to the increasing flow of migrations (CBS, 2022). Alongside experiencing prejudice, discrimination and stigma that adolescents with a migration background encounter in their daily lives (De Lange & Braakhekke, n.d.), these adolescents also encounter other challenges that affect their mental health (Yang, 2009). Factors such as living in less affluent neighborhoods or the level of family support they receive contribute to their complex landscape (CBS, 2018). These circumstances underscore a pressing concern, as the lower levels of mental health among adolescents with a migration background can lead to long-term implications, especially because this demographic group is growing.

Migration is recognized as a risk factor for mental health issues, attributed to causes such as social isolation (Foo et al., 2018; Koelet & De Valk, 2016), limited healthcare access, exposure to traumatic events (Ventriglio & Bhugra, 2015) and unfamiliarity with alternative healthcare systems (Sundquist, 2001). Nevertheless, there is also evidence found for a phenomenon called the immigrant paradox (Angold et al., 2002; Marks et al., 2014; Şirin et al., 2013). This paradox suggests that having a migration background can act as a protective factor against mental health problems, which could be attributed to higher experienced levels of family support which provides emotional support, guidance and teaching societal norms and values (Schweiger & Graf, 2017; Suárez-Orozco et al., 2009). Adolescents with a migration background feeling alienated from society can express their feelings within their family which acts as a buffer against mental health problems (Harland et al., 2002). Besides family support, the socioeconomic status (SES) of adolescents with a migration background

might play a role in the immigrant paradox. Access to healthcare and resources can improve the adolescents' adjustment and thus improve mental health (Suárez-Orozco et al., 2009).

The current study will advance previous work in two ways. Firstly, it will address the ambiguity in findings regarding the relation between a migration background and mental health. The literature is inconclusive about whether a migration background is a risk factor for poor mental health or whether the immigration paradox holds. Secondly, the research aims to investigate contextual variation within this relation by focusing on SES and family support as potential buffers. Specifically, this research will seek to answer the following research question: To what extent is having a migration background related to the mental health of adolescents in the Netherlands? Additionally, it will investigate whether SES and/or family support moderate this relation.

Multiple reasons show that it is important to address mental health issues among adolescents with a migration background (Foo et al., 2018). Firstly, mental health issues are more prevalent among adolescents with than without a migration background (Yassine et al., 2023). Since more people are migrating to the Netherlands (CBS, 2022), this concern is becoming more prevalent. Secondly, aside from personal suffering, adolescents with mental health problems incur higher healthcare costs compared to those without such issues (Mörk et al., 2014; Sporinova et al., 2019). Thirdly, mental health problems in adolescents can lead to behavioral issues, school absenteeism and an increased risk of involvement in criminal activities and drug use (Golberstein et al., 2019; Lawrence et al., 2019). Finally, there is a loss of potential, as these children may struggle to reach their full potential (Layard, 2016). This could result in reduced opportunities for a successful career and less chance of economic growth in society. Investigating the buffering role of family support and SES is essential for stakeholders involved in community support services (e.g., education, healthcare) and practitioners working with adolescents with a migration background, because it can help them

identify vulnerable individuals and provide more targeted support to adolescents with a migration background.

Theory

Mental Health of Adolescents

Within existing literature, multiple terms are used to describe mental health among adolescents with a migration background, including life satisfaction (Delaruelle et al., 2021), mental disorders (Hjern et al., 2004), well-being (Tinghög et al., 2007), depression (Foo et al., 2018) and anxiety (Kouider et al., 2014). These terms are all related to mental health, though they all focus on different aspects of mental health. This variance in terminology complicates comparisons between studies. Moreover, the measurement of mental health varies across studies, further hindering the comparability of outcomes. This lack of consistency in terminology contributes to limiting our understanding of the mental health of adolescents with a migration background.

The Relation Between a Migration Background and Mental Health

Having a migration background refers to individuals who have a personal or familial history of migration (Delaruelle et al., 2021). This concept is often delineated based on generational status, with distinctions made between first-generation, second-generation and subsequent generations (Close et al., 2016; Delaruelle et al., 2021; Furnham & Shiekh, 1993). According to the minority stress theory (Meyer, 2003), stress arises from experiences of prejudice, discrimination and stigma that individuals from marginalized groups encounter in their daily lives. The theory emphasizes that adolescents with a migration background who are exposed to stressors have an increased risk of mental health problems. However, despite facing these challenges, those with a migration background may sometimes exhibit better

mental health outcomes than their native-born counterparts, known as the immigrant paradox (Marks et al., 2014).

The immigrant paradox suggests that there are protective factors within communities with a migration background that buffer against the negative effects of migration related stressors. Some research, particularly from the United States and Canada (Angold et al., 2002; Şirin et al., 2013), indicate this immigrant paradox. This paradox could be fuelled by factors as family support and SES. Families with a migration background often exhibit strong familial bonds and support networks, which can act as a buffer against the stressors associated with migration (Şirin et al., 2013). Furthermore, disparities in SES between adolescents with a migration background and native-born adolescents may act as a buffer. Families with a migration background may demonstrate higher levels of resilience due to their experiences navigating challenges associated with migration (Angold et al., 2002; Delaruelle et al., 2021; Şirin et al., 2013). However, contrasting results emerge from most European studies, which indicate that adolescents with a migration background report worse mental health than their native peers (Dimitrova et al., 2016; Stevens & Vollebergh, 2008). Thus, findings from previous studies have produced an ambiguous picture.

Moreover, existing studies within the Netherlands often target homogeneous populations with particular backgrounds, such as Turkish (Stevens et al., 2003) or Moroccan (Janssen et al., 2004), or are dated (Vollebergh et al., 2005), not enabling us to have a broad understanding of the population. In conclusion, the conflicting findings regarding the mental health outcomes of adolescents with a migration background and the lack of research on this group in the Netherlands highlight the need for research that encompasses a broader range of populations.

SES as a Buffer

SES encompasses various indicators of an individual's or family's economic and social position within society (Hobza et al., 2017). Commonly used indicators include income, education level, occupational status and access to resources such as healthcare (Fuligni, 1998; Hjern et al., 2004). The social support theory (Cullen, 1994) states that the availability of resources act as a buffer against stressors. Access to resources and opportunities is considered an important condition for the relation between migration background and mental health due to its ability to mitigate the effects of migration-related stressors (Tinghög et al., 2007). Adolescents with a migration background from higher SES backgrounds often have access to greater financial resources that can act as a buffer. This advantage can stem from parental education, stable employment and greater community resources available in more affluent neighborhoods (Cullen, 1994). Conversely, individuals from a lower SES background may have limited access to resources due to factors such as social isolation and financial struggles. As a result, they may experience greater vulnerability to the negative impacts of migration-related stressors on mental health, causing SES to potentially play a role in the relation between having a migration background and mental health.

The heightened risk of mental health issues among adolescents with a migration background appears to be linked, in part, to SES. Hjern et al. (2004) conducted a study focusing on Swedish children, revealing disparities in mental health between children with and without a migration. However, when SES was taken into account, it was found that children with a migration background from higher SES backgrounds exhibited better mental health outcomes than children from lower SES backgrounds. This suggests that the differences in mental health between children with and without a migration background were partially attributed to differences in SES. Similarly, Tinghög et al. (2007) observed a higher

prevalence of mental health issues among adolescents with a migration background, attributing this to a greater prevalence of economic disadvantage within this demographic group. Adolescents with a migration background may experience access to better education or healthcare due to a higher SES, thereby mitigating the negative impact of migration-related stressors (Fuligni, 1998). Additionally, Ríos-Salas and Larson (2015) found that SES moderates the association between perceived discrimination and mental health. Although this study concentrated on this association among families in the United States, it does suggest that SES can play a buffering role in mental health in the Netherlands. However, the applicability of findings from these studies to the Dutch context might be limited due to differences in healthcare systems, social support and immigration services (De Haas et al., 2018). So, there remains a lack of comprehensive research into how SES might act as a buffer between migration background and mental health of adolescents in the Netherlands, despite existing research.

Family Support as a Buffer

Family support refers to the presence of supportive family relationships, encompassing emotional, instrumental and informational assistance provided (Behere et al., 2017). Family support might be an important condition for the relation between having a migration background and mental health due to its influence on individuals' ability to cope with migration-related stressors. Adolescents with a migration background might experience more family support in comparison to their native peers, due to cultural differences across backgrounds (Delaruelle, 2021). Also, the relation between a migration background and mental health is expected to be different for those with lower or higher levels of family support (Arends-Tóth & Van De Vijver, 2009). According to the social support theory (Cullen, 1994), the availability of supportive social relationships with family members serves as a buffer against stressors. When individuals experience higher levels of family support, they

possess stronger coping mechanisms to navigate migration-related stressors, resulting in fewer negative effects on their mental health. This is because strong family support networks provide a source of family support, offering individuals a sense of security and belonging (Cullen, 1994). Conversely, individuals with lower levels of family support may face increased vulnerability to mental health issues when confronted with migration-related challenges. Without sufficient family support, individuals may lack the necessary resources to manage stressors. As a result, they may experience greater difficulty in adapting to new environments, coping with cultural adjustments or overcoming social isolation associated with migration experiences. Therefore, the social support theory suggests that the amount of family support can influence how individuals respond to migration-related stressors.

The study of Delaruelle et al. (2021) showed that a high level of family support mitigates the negative mental health consequences of having a migration background, as it compensates for the lack of support from peers and teachers. The research concentrated on 13-year-olds across 29 European countries and they found that experiencing more support made them feel more welcome which in turn could help them deal with specific stressors they face. This is in line with the social support theory and thus with the expectation that family support will also act as a buffer for the relation between a migration background and mental health. Additionally, Cariello et al. (2022) found that higher levels of social support weakened the effect of a migration background on mental health. However, this study focused on Latin Americans, limiting the generalizability to the Dutch context. In conclusion, existing research on this construct remains scarce and it underscores the need for understanding the interplay between migration background, family support and mental health among adolescents with a migration background.

Hypotheses

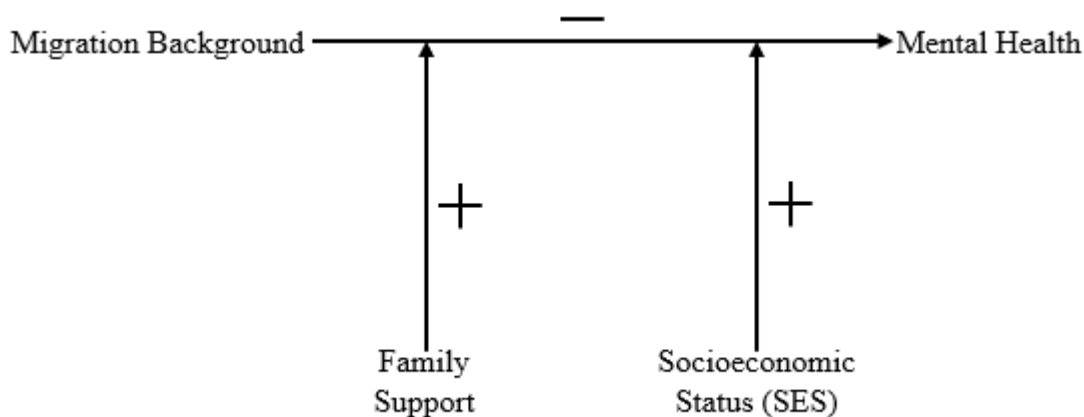
Based on the minority stress theory and the social support theory, several hypotheses can be formulated (Figure 1). Despite mixed evidence, it is expected that adolescents with a migration background in the Netherlands experience more mental health problems compared to their native counterparts.

Additionally, it is expected that higher SES will buffer the relation between migration background and mental health. Although some research suggests an influence of SES, further research in the Dutch context is wanted.

Furthermore, family support is hypothesized to act as a buffer against the negative effects of migration-related stressors on mental health. As empirical research specifically examining this construct is limited, this study aims to address this gap.

Figure 1

Conceptual Model of the Relation Between Migration Background and Mental Health, With Family Support and SES as Moderators



Methods

Participants and Design

Data for this study were taken from the 2021 Health Behaviour in School-aged Children (HBSC) study conducted in the Netherlands. This repeated cross-sectional research was conducted every four years with different respondents and focused on the mental and physical health of adolescents. In total, there were 7,254 respondents from primary and secondary education. The first step was to select schools, which were selected randomly by a stratified sample that was drawn from a database of Dienst Uitvoering Onderwijs (DUO) containing all primary and secondary schools, except for special education. To ensure a representative sample population, proportional representation of GGD-regions was ensured during school selection. Furthermore, it was verified whether the sample encompassed a fair ratio of schools in urban and rural areas. The second step was the selection of classes. In primary education, if there were multiple 8th grade groups, one group was selected randomly. In vertical or combination classes, only students from the 8th grade were included. For secondary education, a random selection of classes was made based on an overview provided by the school. The questionnaires were administered to students in their classrooms in the autumn of 2021 (Trimbos, 2022).

Procedure

The parents of the participants were informed about the research beforehand through an information letter provided by the researchers. The information letter described the purpose of the research, the nature of the collected data, the voluntary nature of participation, the confidentiality and anonymity of data and any potential risks or benefits associated with participation. Participants were actively asked for consent to participate in this research by checking a box before completing the questionnaire. Of 76 students that did not participate,

42 parents indicated that their child should not participate in the research and 34 children refused participating themselves.

The questionnaire was designed to ensure anonymity. In primary schools, all completed questionnaires were immediately collected and sealed in an envelope to confirm anonymous participation. In secondary education, students were given a card with a web address and login code, emphasizing that this code was not linked to anyone and that they could take the card with them or discard it after completion.

In primary schools, the questionnaires were filled out in writing, while in secondary education, they were administered digitally. If digital administration was not possible due to reasons such as a lack of computers, the questionnaire was administered in writing.

Participants were free to leave any question open and did not receive rewards for participating in this research. Participants were usually not informed about the research results immediately afterward because the focus was on collecting data at the population level rather than the individual level. However, the results of the research were often disseminated through publications and reports.

The HBSC research in the Netherlands was approved by the Ethical Review Board of the Trimbos Institute (file number 202109). This current study involved a vulnerable target group and sensitive topics. Despite, ethical approval has been given by the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University.

Measurements

Mental Health

The dependent variable in this research was mental health. Mental health was measured using the Strengths and Difficulties Questionnaire (SDQ). In this questionnaire,

adolescents reported on their behavior and feelings over the past six months. The SDQ consisted of twenty items (see Appendix 1 for all items). For each statement, adolescents could choose from three answers: (1) 'not true', (2) 'somewhat true' or (3) 'certainly true'. This research used the sum score of the SDQ as an indicator of someone's mental health, with a higher score meaning that they experienced more problems (Duijnhof et al., 2015). The SDQ has been used in multiple studies and proved to be useful for measuring mental health (Muris et al., 2003). In the current study, this scale has demonstrated moderate reliability ($\alpha = .68$).

Migration Background

The independent variable in this research was migration background. In the HBSC study, a distinction has been made between adolescents with and without a migration background. Adolescents without a migration background were born in the Netherlands, as well as both of their parents. For adolescents with a migration background, the child itself and/or at least one of both parents was not born in the Netherlands. Migration background was a dichotomous variable with 0 = no migration background and 1 = a migration background.

SES

SES was measured with the Family Affluence Scale (Torsheim et al., 2016), which consisted of six items (see Appendix 2 for all items). Due to travel restrictions during a significant period of 2021 because of the COVID-19 pandemic, the question about holidays could not be used to determine SES. Psychometric research showed that the validity of the family affluence scale was better without than with this item, hence the decision not to include this item in the total score (Boer et al., 2024). Based on the sum score (0-10) of the remaining questions about family affluence, this report distinguished between adolescents from families with low (0-5), average (6 and 7) and high (8-10) SES, corresponding with the categorization made in the HBSC report. The family affluence scale has been used in multiple

studies before COVID-19 and proved to be useful for measuring SES (Kehoe & O'Hare, 2010). Despite, in the current study, this scale has demonstrated poor reliability ($\alpha = .36$).

Family Support

Family support was measured using four items from the Multidimensional Scale of Perceived Social Support (Osman et al., 2013). Respondents were asked to rate their perception of support within the family using a 7-points Likert scale (1 = strongly disagree, 7 = strongly agree). They were asked to what extent they agree with statements regarding the support provided by the family, the provision of emotional support by the family, the ability to talk about problems with the family and the family's assistance in decision-making. This scale has been used in multiple studies (Zimet & Grodaon, 1998; Siddiq et al., 2010). In the current study, this scale has demonstrated good reliability ($\alpha = .92$).

Analysis

For all analyses, the statistical software program JASP (version 0.18.3) was used. Firstly, a reliability analysis has been executed for the SDQ, SES and family support scale. There has been checked for outliers and assumptions of normality, homoscedasticity, linearity and multicollinearity.

For outliers, standardized residuals and Cook's distance were examined. Outliers were removed if standardized residuals were higher than 3 or if Cook's distance was higher than 1. Respondents with missing data on the SDQ scale ($n = 274$), SES scale ($n = 400$) or family support scale ($n = 49$) were removed listwise. Adolescents that did not answer ($n = 4$) or filled in unknown/unclear ($n = 0$) on a question concerning migration background were also removed listwise.

For normality, histograms of residuals were examined to assess whether they were distributed normally. Homoscedasticity has been checked by looking for the variance of each predictor being constant across all values of that predictor. Linearity was assessed by

examining whether mental health was linearly related to migration background. Additionally, multicollinearity was addressed by examining correlation coefficients and variance inflation factors (VIF) to ensure that multicollinearity was not met ($r > .90$; $VIF > 10$) (Saunders et al., 2016).

To investigate whether a migration background was related to mental health, a linear regression analysis was conducted with migration background as the independent variable and mental health as the dependent variable. To investigate whether SES and/or family support moderate the relation between migration background and mental health, these variables have been mean-centered and the interaction effects between mental health and SES and between mental health and family support were added to the analysis. To determine if this interaction was significant, a threshold of $p < .05$ has been used. An interaction plot has been added if an interaction effect was significant, supported by a regression analysis with the moderator as independent and mental health as dependent variable to interpret the interaction.

Results

The final sample consisted of 6,668 adolescents with an equal distribution of boys (51.4%) and girls (48.6%). Respondents were on average 13.9 years old ($SD = 1.9$). Nearly a quarter (23.2%) of the respondents had a migration background, with Moroccan (3.5%), Turkish (2.5%) and Suriname (1.4%) being the most prevalent.

Adolescents with a migration background reported more mental health problems ($M = 35.22$, $SD = 5.30$) than adolescents without a migration background ($M = 34.88$, $SD = 4.86$). Additionally, adolescents with a migration background showed lower experienced family support and SES compared to their native counterparts. Table 1 shows the correlations among mental health problems, migration background, family support and SES. Mental health problems are significantly associated with migration background ($r = .03$), family support ($r =$

-.26) and SES ($r = -.04$), with adolescents with a migration background experiencing more mental health problems, less family support ($r = -.09$) and lower SES ($r = -.19$).

Table 1

Correlations Between Mental Health Problems, Migration Background, Family Support and SES

Variable	<i>M (SD)</i>	Min	Max	1.	2.	3.	4.
1. Mental health problems	34.96 (4.97)	20	60	-			
2. Migration background ^a	0.23 (0.42)	0	1	.03*	-		
3. Family support	5.87 (1.41)	1	7	-.26**	-.09**	-	
4. SES	2.49 (0.62)	1	3	-.04*	-.19**	.09**	-

^a 0 = no migration background. 1 = migration background.

* $p < .05$. ** $p < .001$.

The Relation Between Migration Background and Mental Health

Migration background turned out to be significantly related with mental health problems ($B = 0.35$, $SE(B) = 0.14$, $p = 0.01$), indicating that adolescents with a migration background have more mental health problems in comparison to those without a migration background. Migration background explains 0.1% of all variance in mental health ($R^2 = 0.001$). These findings support the hypothesis.

SES as a Moderator

A regression analysis (Table 2) revealed a significant relation between SES and mental health problems ($B = -0.57$), suggesting that higher SES is associated with less mental health problems. When SES is taken into account, the explained variance in mental health increases to 0.4% ($\Delta R^2 = .003$, $p < .001$). Additionally, the interaction effect between SES and migration

background was significant ($B = 0.90$). The interaction plot (Figure 2) reveals that for individuals without a migration background, higher SES is associated with a slight decrease in mental health problems, whereas for individuals with a migration background, higher SES is associated with a slight increase in mental health problems. A regression analysis reveals that SES is a significant predictor for mental health problems among adolescents without a migration background ($B = -0.57, p < .01$), but not for adolescents with a migration background ($B = 0.34, p = 0.1$). This is not in line with the hypothesis that SES would act as a buffer.

Table 2

Moderation Analysis With Mental Health Problems, Migration Background and SES

Variable	B	$SE (B)$	β	p	LLCI	ULCI
Mental health as dependent variable						
Intercept	36.32	0.31	-	<.001	35.72	36.92
Migration background ^a	-1.83	0.54	-0.15	<.001	-2.89	-0.76
SES	-0.57	0.12	-0.07	<.001	-0.79	-0.34
SES * migration background	0.90	0.22	0.18	<.001	0.47	1.34

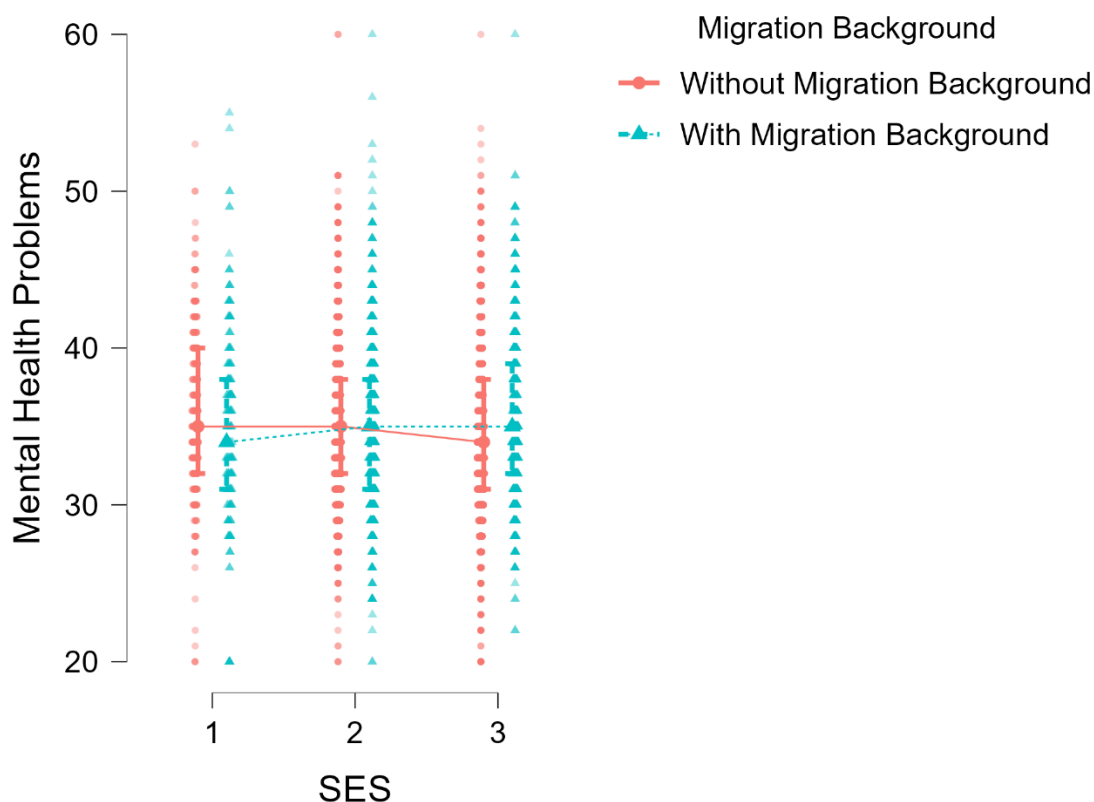
Note. B = unstandardized coefficient, SE = standard error, β = standardized coefficient,

LLCI = Lower Level Confidence Interval, ULCI = Upper Level Confidence Interval.

^a 0 = no migration background. 1 = migration background.

Figure 2

Interaction Plot With Mental Health Problems, Migration Background and SES



Family Support as a Moderator

A regression analysis (Table 3) revealed a significant relation between family support and mental health ($B = -0.89$), indicating that higher levels of family support are associated with less mental health problems. When family support was added to the model, the explained variance in mental health increased to 6.4% ($\Delta R^2 = .063$, $p < .001$). However, the interaction effect between migration background and family support was not found to be significant ($B = 0.01$). This suggests that the relation between migration background and mental health is not moderated by family support, leading to the rejection of the hypothesis.

Table 3

Moderation Analysis With Mental Health Problems, Migration Background and Family Support

Variable	<i>B</i>	<i>SE (B)</i>	β	<i>p</i>	LLCI	ULCI
Mental health problems as dependent variable						
Intercept	34.94	0.07	-	<.001	34.75	35.01
Migration background ^a	0.06	0.14	0.01	0.68	-0.21	0.33
Family support	-0.89	0.05	-0.26	<.001	-0.99	-0.80
Family support * migration background	0.01	0.09	0.02	.90	-0.17	0.19

Note. *B* = unstandardized coefficient, *SE* = standard error, β = standardized coefficient,

LLCI = Lower Level Confidence Interval, ULCI = Upper Level Confidence Interval.

^a 0 = no migration background. 1 = migration background.

Discussion

This study aimed to investigate the ambiguity in the relation between migration background and mental health among adolescents in the Netherlands (Angold et al., 2002; Dimitrova et al., 2016, Şirin et al., 2013; Stevens & Vollebergh, 2008). Additionally, it explored SES and family support that might act as a buffer on the relation between migration background and mental health. Adolescents with a migration background reported more mental health problems than their native counterparts. Family support and SES were both associated with mental health, with lower levels of SES and family support associated with poorer mental health outcomes. While family support did not act as a buffer, SES did.

However, higher SES only improved mental health for those without a migration background but slightly worsened it for those with a migration background.

As expected, having a migration background is associated with poorer mental health outcomes. This finding is consistent with previous research (Dimitrova et al., 2016; Stevens & Vollebergh, 2008) and with the minority stress theory (Meyer, 2003), as they highlight that adolescents with a migration background are more likely to experience mental health problems due to stressors related to prejudice, discrimination and stigma. However, some studies found evidence for the immigrant paradox (Angold et al., 2002; Marks et al., 2014; Şirin et al., 2013). Nevertheless, this current study did not find evidence supporting this paradox. The ambiguity in findings may be due to cultural differences, the specific context of the Netherlands or the different requirements for migration along different countries. The varying requirements and challenges of migration in different countries could result in different results between countries. Some countries are more selective with the asylum procedure resulting in only accepting specific people with a migration background where other countries might be more open to all people with a migration background (De Haas et al., 2018). This might explain why different studies have found varying results.

Not entirely in line with the expectation that SES would act as a buffer on the relation between migration background and mental health, is the finding that SES is a predictor of mental health for those without a migration background, but not for those with a migration background. The positive effect of SES is not present for adolescents with a migration background, which is not consistent with the social support theory. According to this theory, access to resources and opportunities, as influenced by SES, can mitigate the effects of migration-related stressors (Cullen, 1994; Tinghög et al., 2007). Previous research has indicated that higher SES provides access to better education, healthcare and community resources and can act as a buffer against the negative consequences of migration-related

stressors (Fuligni, 1998; Hjern et al., 2004; Ríos-Salas & Larson, 2015). However, the findings of this study do not support these studies. This might be because adolescents with a migration background, on average, report more mental health problems than adolescents without a migration background, indicating that other factors than in this study accounted for may play a role in their mental health.

Also against the expectation, is the finding that family support does not act as a buffer on the relation between migration background and mental health. According to the social support theory (Cullen, 1994), supportive relationships within the family can mitigate the effects of stressors and promote better mental health outcomes. Previous research suggested that more family support could act as a protective factor for adolescents with a migration background (Cariello et al., 2022; Delaruelle et al., 2021). However, the findings of this study did not support these findings. This might be due to methodological considerations. Family support is currently measured the same across the entire population without considering cultural differences among those with a migration background. This way, not all relevant aspects of family support that are critical in buffering migration-related stressors might have been captured, since diverse cultures have different views of family support (Hwang et al., 2008). Because this study included diverse cultural backgrounds, the buffering effect of family support can be distorted. More comprehensive and culturally sensitive measures might reveal different results.

Limitations

This research has several limitations that can affect the interpretation of the results. Firstly, it used a cross-sectional survey, where data is collected at a single point in time. This way, potentially causal relations between migration background and mental health cannot be identified. The lack of longitudinal data limits the ability to track changes over time, making it difficult to find a causal link (Savitz & Wellenius, 2022). Additionally, this study was

conducted during COVID-19, causing different economic conditions than usual. Economic conditions might have been different from what would be typical during non-pandemic periods (e.g., more unemployment, bankruptcies) (Wilson et al., 2020). This probably resulted in poor reliability for measuring SES. It is expected that in a follow-up study the reliability will be improved due to standard economic conditions.

Another limitation is that self-report was chosen for data collection. Self-reporting can lead to several types of bias, such as recall errors and social desirability (Walsh, 1967). Certain groups of respondents may be less likely to answer correctly or present a favourable image of themselves, which can affect the validity of the results. Adolescents, especially those who migrated to the Netherlands at an early age without (both of) their parents, may not always know the precise migration background of their parents, which could result in wrong responses. To improve data quality, researchers could consider mixed-method approaches, involve intercultural mediators or use experience sampling methods. Mixed-method approaches would allow researchers to triangulate findings from self-report data with objective measures or observations, improving the validity of results. Involving intercultural mediators can help facilitate communication and participation with participants from diverse background, ensuring better understanding and more accurate responses. Experience sampling methods is a research technique that involves collecting data on individuals' momentary experiences, thoughts and behaviours in real-world situations (Hurlburt & Akhter, 2006). By using this method, researchers could better track fluctuations in mood or stress levels in response to (migration-related) experiences among adolescents with a migration background.

Furthermore, using an existing study brings some limitations as well. The availability of data is limited to the variables originally included in the existing study. Factors such as the family's generation of migration or family income were not considered in this research. The duration of residence in the Netherlands can influence acculturation processes, social

integration and access to support networks, which all may independently influence mental health (Oppedal et al., 2010). Family income on its turn can affect access to healthcare and other social resources (Peters et a., 2008). Considering these factors as well would provide a more comprehensive understanding of how various aspects of SES might influence mental health outcomes among individuals with a migration background.

Future Research

In light of the findings of this study, several directions for future research emerge that can further improve our understanding of the relation between migration background and mental health among adolescents. Firstly, cultural sensitivity is important in future research. Mental health, SES and family support should be tailored to diverse migration backgrounds, accounting for cultural differences in family dynamics and perceptions of mental health (Pierce et al., 1996). They are currently measured the same across the entire population without considering cultural differences among those with a migration background. The cultural influences on mental health (CIMH) model states that cultural differences might influence the way mental health issues are perceived and addressed, with some cultures placing a stronger emphasis on mental health stigma, which could affect reporting rates (Hwang et al., 2008). Without cultural sensitivity, there is a risk of misinterpreting (factors related to) the mental health of adolescents with a migration background. By incorporating culturally sensitive measures, future research can ensure validity and reliability across diverse populations.

Additionally, future research should focus on the generational status of adolescents with a migration background. This study focused on mixed generations of migration, while understanding the different experiences of first-generation, second-generation and subsequent generations is essential. The first generation may face limited social support networks, language barriers and employment challenges, whereas the second generation may face higher

levels of psychological symptomatology (Close et al., 2016; Furnham & Shiekh, 1993). Subsequent generations may face challenges regarding unemployment and not being in the labour force (Lee, 2019). By taking the differences between generations into account, we would gain a more nuanced understanding of the unique needs and challenges faced by each group.

Finally, longitudinal studies are essential to capture the long-term effects of migration background on mental health outcomes. Longitudinal research can help to better understand the trajectories of mental health among adolescents with a migration background by tracking changes in mental health over time (Şirin et al., 2013). These longitudinal studies could start prior to the onset of migration, enabling the comparison of mental health trajectories between individuals who do not have a migration background and those who acquire one. Additionally, it is important that other research focusses on mental health trajectories of second-generation and subsequent adolescents with a migration background. A longitudinal approach where generations are being researched separately enables the exploration of how various migration-related factors (e.g., stigma, discrimination, access to resources) influence mental health trajectories over time.

Implications

This study advances our understanding by providing clarity on the relation between migration background and mental health. By exploring the potential buffering role of SES and family support, the research sheds light on factors that influence mental health in diverse populations. The findings of this study have implications for interventions, policies and practices aimed at promoting mental health among adolescents with a migration background. Firstly, there is a need to identify mental health issues at an early stage and to counter them preventively. Adolescents with a migration background experience difficulties accessing health care services, which makes it important to facilitate this access (Gutman et al., 2019).

Next to this, (mental) health care professionals should be trained to achieve transcultural competence for treating adolescents with a migration background effectively, since different ethnic backgrounds require diverse cultural insights regarding treatments (Klein et al., 2020). For instance, for those from lower socioeconomic backgrounds, initiatives could include providing access to low-cost mental health services, mentoring programs or community support services. Conversely, for adolescents from higher socioeconomic backgrounds, efforts may focus more on, for example, reducing academic pressure and fostering peer support networks.

Secondly, insights from the study can inform policy development and resource allocation in areas such as education, healthcare and societal services to address socioeconomic differences and improve access to mental health services for adolescents with a migration background. Specifically, by identifying the unique mental health challenges these adolescents face, policymakers can develop culturally sensitive interventions and programs that address these specific needs. This might lead to the creation of a training for healthcare providers, ensuring they are equipped to support the mental health of adolescents with a migration background. Additionally, the community can be provided with resources that enhance accessibility and visibility of mental health care for adolescents with a migration background, aiming to mitigate socioeconomic disadvantages faced by them.

Conclusion

This research aimed to investigate the relation between migration background and mental health among adolescents in the Netherlands, exploring potential moderators such as family support and SES. The main findings reveal that adolescents with a migration background report worse mental health outcomes than their native counterparts. Additionally, SES moderates this relation, although the positive effect of SES is only present among adolescents without a migration background. Family support is not a moderator. These

findings underscore the importance of considering contextual factors in understanding why this group experiences worse mental health. By recognizing the urge to act culturally sensitive in research, communities and healthcare settings, stakeholders can address the mental health needs of these adolescents. In a world where more and more people must leave their countries to live safely, addressing the mental health needs of adolescents with a migration background is not just a responsibility; it is an opportunity to foster resilience, empower communities and build a brighter future for all.

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Appendix 1: All SDQ Statements

- 1 SDQ: Rusteloos
- 2 SDQ: Vaak hoofdpijn
- 3 SDQ: Word boos/vaak driftig
- 4 SDQ: Ben op mijzelf
- 5 SDQ: Doe wat me wordt opgedragen
- 6 SDQ: Pieker veel
- 7 SDQ: Zit constant te wiebelen of friemelen
- 8 SDQ: Heb minstens 1 goede vriend
- 9 SDQ: Vecht vaak/Lukt mij mensen te laten doen wat ik wil
- 10 SDQ: Vaak ongelukkig
- 11 SDQ: Andere jongeren vinden mij aardig
- 12 SDQ: Snel afgeleid
- 13 SDQ: Zenuwachtig in nieuwe situaties
- 14 SDQ: Vaak beschuldigd van liegen/bedriegen
- 15 SDQ: Ik word gepest
- 16 SDQ: Ik denk na voor ik iets doe
- 17 SDQ: Ik pak dingen die niet van mij zijn
- 18 SDQ: Ik kan beter met volwassenen dan jongeren opschieten
- 19 SDQ: Ik ben snel angstig
- 20 SDQ: Ik maak af waar ik mee bezig ben

Appendix 2: All SES Statements

- 1 SES: Heeft jouw gezin een auto /(bestel)busje? 1 = nee, 2 = ja, 3 = ja, twee of meer
- 2 SES: Heb je een eigen slaapkamer (voor jou alleen)? 1 = nee, 2 = ja
- 3 SES: Hoeveel computers heeft jouw gezin? 1 = geen, 2 = één, 3 = twee, 4 = meer dan twee
- 4 SES: Hoeveel badkamers (met een douche/bad) heeft jullie huis? 1 = geen, 2 = één, 3 = twee, 4 = meer dan twee
- 5 SES: Hebben jullie thuis een vaatwasser/afwasmachine? 1 = nee, 2 = ja
- 6 SES: # keer buiten Nederland op vakantie met gezin in laatste 12 maanden 1 = helemaal niet, 2 = eenmaal, 3 = tweemaal, 4 = meer dan tweemaal

Appendix 3: Reflection on Interdisciplinarity

Theoretical insights from multiple scientific (sub)disciplines enhances the understanding of the mental health challenges faced by Dutch adolescents with a migration background. By examining how a migration background is related to mental health among adolescents, my study draws on insights from psychology (e.g., the minority stress theory) to understand the complexities of mental health disparities in this population. Additionally, sociological theories, such as the social support theory, are used to highlight the role of SES in moderating the association between migration background and mental health. Through an examination of how migration background influences mental health and whether SES and family support have a buffering effect on this relation, the research uses a sociological perspective to investigate the contextual factors shaping mental health disparities among adolescents with a migration background. Furthermore, migration theories are used to provide broader context and theoretical frameworks for understanding the diverse experiences of adolescents with a migration background. Using multiple disciplinary perspectives, my thesis offers a comprehensive understanding of the interplay between migration background, socioeconomic factors and mental health outcomes among adolescents.

The integration of perspectives from stakeholders outside academia helped me to understand the relation between migration background and mental health. Stakeholders such as mental health professionals, policymakers, educators but also my direct colleagues at Nidos offered valuable insights into the practical implications of my research. Especially my colleagues at Nidos helped me to understand the political and cultural sensitivity regarding this subject. Also, they offered me insights into to what extent my subject and thesis reflects real world situations by providing feedback. Due to my study, mental health professionals might collaborate with intercultural mediators to provide expertise in developing culturally sensitive support programs.

The use of multiple scientific research methods in investigating the mental health challenges faced by adolescents with a migration background can improve our understanding of the research problem. By using both quantitative and qualitative methods, researchers can gain a comprehensive understanding of the problem. Quantitative methods allow for the examination of statistical relations between variables, providing insights into the prevalence of variables. Qualitative methods, such as interviews and focus groups, offer a deeper understanding of individuals' experiences and perceptions. Focusing on the individual stories of adolescents with a migration background allows for not only a superficial examination of the numbers but also enables a better and more comprehensive understanding of the narratives behind these numbers. While numbers are useful for obtaining prevalence, they often reveal little about the individual experiences of adolescents with a migration background regarding discrimination, cultural adaptation and other challenges they face. It does not tell the entire story. The integration of these two methods enables us to get concrete, contextually found explanations of migration-related stressors. This will offer a more comprehensive and nuanced understanding of the research problem, leading to more effective interventions and policies to address problems.

The use of multiple analytical levels, such as individual, family and societal levels, in researching the mental health challenges of adolescents with a migration background can lead to a more comprehensive understanding of this research problem. Regarding the individual levels, factors as personal migration experiences and coping mechanisms shape adolescents' mental health. On the family level, family dynamics, support systems and integrated relationships will play a crucial role in either buffering or exacerbating migration-related stressors. Finally, the societal level, which includes socioeconomic status, societal attitudes and policies, will impact the wellbeing of adolescents with a migration background. During writing my thesis, I become more aware of the fact that at the societal level, different

migration backgrounds also entail a lot of diverse cultural characteristics. This made it more challenging to gain deep insights into the problem discussed in my thesis. If I had realized this at the beginning of my thesis, I might have focused more on specific migration backgrounds instead of all type of backgrounds to highlight cultural differences more effectively.

By analysing these different analytical levels and adding more nuance to all cultural differences between every migration background, we can explore different complex pathways and contextual influences that contribute to mental health disparities among adolescents with a migration background. This multi-level approach allows for a more holistic and comprehensive understanding of the research problem, enabling the development of targeted interventions and policies that address the challenges faced by adolescents with a migration background within their lives.