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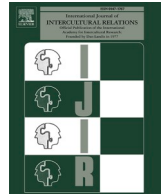
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Anxiety and depression symptoms and their association with discrimination and a lack of social support among first- and second-generation immigrant adolescents

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ABSTRACT

The focus in the present study is on how experienced discrimination, being able to discuss personal matters with parents, and having someone to discuss personal worries with relate to symptoms of depression and generalized anxiety among first- and second-generation immigrant-background adolescents (aged 14–15) living in Finland. The data used was collected for the National School Health Promotion Study (2017) conducted by The Finnish Institute for Health and Welfare (N = 73,690). Mental health was assessed on the PHQ-2 (depression) and GAD-7 (generalized anxiety disorder) scales. The findings indicated that first-generation adolescents from immigrant families were significantly more likely than their second-generation counterparts to report mental-health symptoms, and they also provided worse scores on all measures examined. It was alarming that 42 per cent of the first-generation immigrant group reported that they could not discuss their personal worries with anyone, and more than one-fifth of these youth hardly ever talked about personal matters with their parents. Experienced discrimination was a slightly stronger predictor of generalized anxiety than depressive symptoms and it predicted both symptoms of depression and anxiety more prominently among first-generation immigrant adolescents compared with their second-generation counterparts. Being able to discuss personal matters with parents functioned as a protective factor with similar predictor values in both groups, whereas the possibility of having someone with whom to discuss personal worries was significantly associated to lower levels of anxiety only among first-generation immigrant adolescents.

Introduction

The proportion of immigrants remains low in Finland relative to other Nordic countries and by international standards (OECD, 2017). However, the number of people of immigrant origin has doubled during the last ten years, and by the end of 2016, 7.5 per cent of children and adolescents under the age of 18 were from immigrant families (Statistics Finland, 2017). Hence, the student body in

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schools has diversified, and the need to understand and promote the well-being of culturally diverse children and adolescents has increased. Furthermore, current research on the cultural competence and culturally sensitive pedagogy of teachers has revealed a lack of knowledge and insufficient teacher training among those encountering culturally diverse student bodies in Finland (Räsänen et al., 2018).

It is acknowledged that migration and adjusting to a new culture are stressful. This experience has been conceptualized as acculturative stress (e.g., Berry, Phinney, Sam & Vedder, 2006; Sam & Berry, 2010). Such stress may cause psychological problems, namely symptoms of depression and anxiety (Berry et al., 2006), especially among those whose background is traumatic or who are vulnerable because of insufficient coping strategies and inadequate psychological resilience. Models of acculturative stress are frequently used to explain emerging mental health symptoms among children and adolescents from immigrant families (Rogers-Sirin et al., 2014). The cultural distance between the destination country and the country of origin appears to be associated with acculturative stress, in other words the more distinctive the cultures are, the harder is the adjustment to the new one (Ward, 2001; see also Benet-Martinez, 2012). According to Berry and Sabatier (2011), the process of acculturation continues if cultural differences are present and interaction between the groups continues. Therefore, acculturative stress should be considered a major factor in research on second-generation immigrant children and adolescents. Some acculturative stressors may differ among first- and second-generation immigrants, but many experiences of discrimination and otherness may be shared.

Acculturative outcomes among immigrant-background children and adolescents

Research on the acculturation and well-being among second-generation children and adolescents from immigrant families has increased on the international level, but in Finland it remains relatively scarce (e.g., Sam, Vedder, Ward & Horenczyk, 2006; Sam, Vedder, Liebkind, Neto & Virta, 2008; Strohmeier et al., 2011). Several studies refer to a phenomenon known as the *immigrant paradox*, meaning that contrary to the expectations of acculturation theory, first-generation adolescents from immigrant families in some countries achieve better scores on psychological and sociocultural adjustment than their second-generation counterparts, and the second generation fare better than host nationals (Sam et al., 2006). In Norway, for instance, immigrant-background girls fare better than boys (Oppedal et al., 2005), and the immigrant paradox for psychological and sociocultural adaptation is evident among boys but not girls. However, studies conducted in Finland have revealed an acculturative pattern in line with the expectations of acculturation theory (see Sam et al., 2006, 2008), such that both psychological and sociocultural adaptation improve between generations. Furthermore, according to a meta-analysis of 51 European samples, adjustment outcomes among immigrant-descent children and adolescents, regardless of generation, indicate that *migration morbidity* (i.e., more internalizing, and externalizing symptoms, as well as worse academic outcomes) describes immigrant adjustment in Europe more accurately than the immigrant paradox does (Dimitrova et al., 2016). The immigrant paradox has been observed primarily in samples from the US and Canada (see García Coll et al., 2005; Georgiades et al., 2007; Salas-Wright, Vaughn, Schwartz & Cordova, 2016). The reasons behind the disparities of the findings are not clear, however, given the complexity of the phenomenon, some suggestions point to contextual and policy differences (Marks, Ejesi, & García Coll, 2014) as well as to the phenomenon of selective migration and status loss (Engzell & Ichou, 2020).

The focus in the present study is on the expectations of acculturation theory concerning mental health among first- and second-generation adolescents from immigrant families, compared to host nationals as well as 2.5 generation adolescents with one foreign-born parent. We also assessed the differences between these groups in potential protective factors such as the possibility to discuss personal matters with parents and having someone with whom to discuss personal worries. The focus is further to examine the differences between first- and second-generation immigrants in their experiences of discrimination, omitting host nationals and 2.5 generation adolescents from the analyses. Only first- and second-generation immigrant adolescents were included in further analyses, because interpreting the results among these groups is feasible within the acculturation theory framework. As the 2.5 generation youth are born in the host nation, and have one host-national parent, we found that applying the acculturation framework for explaining the lives of these youth is somewhat misleading. Further, we analyzed the association of experienced discrimination with mental health symptoms and explored potential protective factors, such as the possibility of discussing personal matters with parents and having someone with whom to discuss personal worries, specifically within the subgroup of first- and second-generation immigrants. It is known that experiences of discrimination are associated with mental ill-being (Brown et al., 2000; Liebkind & Jasinskaja-Lahti, 2000; Rask et al., 2018; Straiton et al., 2019). Furthermore, facing discrimination may also adversely affect acculturation strategies (see Berry & Sabatier, 2011; Kalin & Berry, 1996; see also Berry et al., 2006). However, it is not clear whether experiences of discrimination have the same degree of impact on the mental well-being of first- versus second-generation migrant youth.

Acculturation and parent-offspring relations

Exploring the associations between mental health and being able to discuss personal matters with and to confide in parents or other people would help to clarify the role of social support. Sirin et al. (2013) found that social support was related to diminished mental health symptoms over time attributed with acculturative stress. In turn, parental support was negatively related to experiences of discrimination and positively to self-esteem (Jasinskaja-Lahti & Liebkind, 2010). However, the offspring of immigrant parents may not be able or willing to discuss personal matters with their parents. This section considers some of the possible reasons for this.

In contrast to countries in which socio-economic status (SES) may determine access to good education and fair social and health services, acculturation processes in a country such as Finland, with its established welfare-state characteristics (e.g., universal social and healthcare services and public schooling), focus on other structural and interactional issues (e.g., discrimination and othering) that may arguably represent key factors in explaining well-being among immigrant-background children and adolescents. Mental distress

among immigrant adults in Finland has been reported in multiple studies (Castaneda, Rask, Koponen, Mölsä & Koskinen, 2012; Castaneda et al., 2015; Castaneda, Cilenti, Mäki-Opas, Abdulhamed & Garoff, 2020). Thus, there is a clear need to investigate how mental distress among parents may prevent them from supporting their own offspring and listening to their concerns (Cummings & Davies, 1994; Joyner & Beaver, 2021).

Further, it may be necessary to develop novel theoretical frameworks that shed light on developmental pathways to enhance understanding of immigrants' offspring (i.e., second-generation immigrants) and their lives. Titzmann (2012), for example, observed a phenomenon labeled *parentification* (i.e., role reversal between children and parents in certain domains), which adds to the burden experienced by second-generation immigrant adolescents. Parentification refers to the problem that adolescents in immigrant families may need to support their parents both emotionally and instrumentally. This may lead to problems in maintaining functional relations that enable these youth to discuss their concerns with their parents and obtain their support. At the same time, they are constructing their own identities with a view toward fitting into society and being accepted, both by host nationals and by their parents, whereas their parents may hold tightly on to their own cultural heritage (Phinney et al., 2000). Moreover, the offspring of depressed parents may deliberately conceal their worries from them (Van Parys & Rober, 2013), which may be detrimental to youth's own mental health.

Second, the offspring of immigrant parents may adapt and adjust to the dominant culture more swiftly than their parents do, and thus may sometimes find themselves living in between cultures. This *acculturative gap* (Telzer, 2010, see also Schwartz et al., 2016) is believed to cause psychological adjustment issues among children and youth. Bouakaz (2007) studied the lives of immigrant youth in Malmö, Sweden, and found that they were living in so-called *double-loneliness*, wherein they quickly changed their roles in different contexts to comply with the expectations of that setting: they felt that they were not understood either at school or at home. Living in between cultural and normative expectations and continuously adjusting one's behavior is not sustainable for mental health. Sam (2006) describes the acculturative process of children and adolescents as a learning process. However, the question remains as to whether these young people receive sufficient support in this process of navigating between cultures, which in some extreme cases may be unbecoming if they are being constrained by familial norms of honor and chastity or the threat of honor-based violence, for example (Björktomta, 2019). Experiences of being foreign vary widely, of course, and depend on many factors even within a given ethnic group.

Acculturative orientations, discrimination, and the Finnish context

Research has shown that discrimination may hamper the well-being of young people from immigrant families, as well as their adjustment to school (Liebkind et al., 2004). Racist discrimination exists and is often traumatizing, at worst leading to post-traumatic stress disorder (PTSD; Carter et al., 2017). Visible minorities face more discrimination than other immigrants, including in Finland (Matikka, Luopa, Kivimäki, Jokela & Paananen, 2014; Matikka et al., 2015).

National immigration policies, as well as the acculturation orientations of receiving countries, appear to have an effect on differences in well-being among first- and second-generation immigrants (Berry, 1990; Bourhis, Moïse, Perreault & Senécal, 1997), and there may be an association linking assimilative policies and orientations with mental ill-being. Ethnic identity and pride in one's cultural background may enhance self-esteem and act as a buffer against the detrimental effects of racist discrimination (Ikram et al., 2016; Mossakowski, 2003), although research on this buffering effect among children and adolescents remains scarce. Whereas first-generation immigrants were able to enculturate in their country of origin, the second generation might face racist discrimination based on their ethnic background even if they do not have a solid ethnic identity or even experience of their family's country of origin.

Experiences of first- and second-generation immigrants may differ between countries. The Finnish constitution, for instance, guarantees minorities the right to preserve and develop their culture and language, and Finland has also introduced relatively favorable integration policies (Huddleston, Niessen, Chaoimh & White, 2011). Nevertheless, there are some issues that are worth exploring more closely. The aim in the present study is to shed some light on the experience of immigrant youth in Finland. Acculturation processes may be quite similar in other countries. As a result, it would be useful to identify factors that could protect these young people or put them at risk of anxiety and depression. Such research is important to inform intervention efforts.

Aims and research questions

The aim of the present study was to explore the differences in social well-being as well as the prevalence of generalized anxiety and depressive symptoms among first- and second-generation adolescents from immigrant families and compare the results with their 2.5 generation (i.e., adolescents who have both host national and an immigrant parent), and host-national counterparts. The main rationale is to:

- a) Assess the prevalence of anxiety and depressive symptoms among first- and second-generation immigrant adolescents, 2.5 generation adolescents, and host national youth
 - b) Examine whether first- and second-generation immigrant adolescents differ from 2.5 generation and host-national youth in being able to discuss personal matters with parents and in having someone to discuss personal worries with
 - c) Assess the differences among first- and second-generation immigrant adolescents in experienced discrimination, and finally
 - d) Examine how strongly discrimination, being able to discuss personal matters with parents, and having someone to discuss personal worries with predict anxiety and depressive symptoms among first- and second-generation adolescents from immigrant families.
- We addressed the following four research questions (RQs).

RQ1. “Is immigrant generation associated with the prevalence of depressive symptoms and generalized anxiety and how do first- and second-generation adolescents from immigrant families compare to adolescents of 2.5 generation and host nationals?” Previous research findings on acculturation indicate that well-being among adolescents from immigrant families improves in future generations. As a result, we expect that depressive as well as anxiety symptoms would be more prominent among first-generation compared to second-generation immigrants.

RQ2. “Is there an immigrant-generation-based association in the reporting of discussing personal worries with someone or personal matters with parents, and how do first- and second-generation immigrant adolescents compare to 2.5 generation adolescents and host national youth?” Previous findings suggest that there may be barriers between parents and their immigrant-background offspring due to factors such as the acculturation gap (Telzer, 2010). Parents of second-generation as opposed to first-generation immigrants have had more time to adjust to the new culture, suggesting that the acculturation gap may be narrower. We therefore expect that those in the second generation, compared to the first generation, will be more likely to report being able to discuss personal matters with parents. Moreover, we expect that adolescents from immigrant families will be less likely to do so than will host nationals. However, we have no assumptions to draw from previous research concerning being able to discuss personal worries with someone, as we did not find relevant studies examining differences between immigrant generations related to this question.

RQ3. “Are there differences in terms of experiences of discrimination between first- and second-generation immigrants?” To our knowledge, no previous research has examined such differences in other Nordic countries.

RQ4. “How strongly are experiences of discrimination, being able to discuss personal matters with parents, and having someone to discuss personal worries with related to symptoms of depression and generalized anxiety among first- and second-generation immigrant adolescents?” We examine the differences in predictor values among immigrant generations, i.e., the moderation effect of the generational status by means of interaction terms. Given the indications in previous research that ethnic identity and pride in one’s cultural background may function as a buffer against the detrimental effects of discrimination (Ikram et al., 2016; Mossakowski, 2003), and that first-generation offspring may have had a chance to enculturate in their heritage culture (i.e., if migrated after early childhood), we expect experienced discrimination to be more detrimental to second-generation immigrant adolescents. We expect similar across-generations predictor values for being able to discuss personal matters with parents and personal worries with someone, and that they function as protective factors.

Methods

Participants

We obtained the data for this study from a population-based survey (School Health Promotion Study) conducted by the Finnish Institute for Health and Welfare, carried out in 2017. In total, 64 per cent of all students attending the 8th and 9th grades of comprehensive school participated ($N = 73,690$, 50.1% female). Students completed the survey in class during the school day, either electronically or using paper and pencil. They were asked to state their own and both of their parents’ country of birth. This provided the data required for classifying the participants as Finnish host nationals ($N = 60,210$, 51.9% female), 2.5 generation (adolescents with one parent who was an immigrant, and the other being a host national, $N = 5107$, 53.2% female), second-generation (national born, both parents born abroad, $N = 1375$, 53.2% female) and first-generation (respondent and both parents born abroad, $N = 2691$, 40.9% female). In terms of residency, 18.7 per cent of the first-generation immigrants had lived in Finland for less than a year, 15.3 per cent for 1–4 years, 30.2 per cent for 5–10 years and 19.1 per cent for more than 10 years.

Materials and procedures

Depressive symptoms

The Patient Health Questionnaire (PHQ-2) we used to screen for depressive symptoms is a validated (Kroenke et al., 2003) shorter version of the Patient Health Questionnaire 9 (PHQ-9), which was developed to replace the previous depressive-symptom screening tool to reduce the time taken to complete the survey (Spitzer et al., 1999). It is a screening tool used for clinical screening and research purposes, but it is not a diagnostic test. This scale has yielded valid scores in culturally diverse settings, and therefore is a culturally sensitive tool for measuring depressive symptoms (Richardson et al., 2010). As Kroenke et al. (2003) demonstrated, the cut-off point for the PHQ-2 in screening depressive disorder is three. The scale ranges from zero to six points.

Anxiety symptoms

The Generalized Anxiety Disorder scale (GAD-7) we used in this study to screen for anxiety symptoms has been developed for use as a brief self-rated measure of generalized anxiety disorder. It comprises seven items and can be used in clinical settings as well as in research (Spitzer, Kroenke, Williams & Löwe, 2006). The scale ranges from 0 to 21, where 10–15 points indicate moderate anxiety, and 16–21 points indicate severe anxiety (Spitzer et al., 2006).

Being able to talk to someone

Being able to discuss personal matters or worries with someone was measured using two items. The first was a dummy variable requiring a yes/no response: “Do you have someone with whom to discuss matters that worry you?” The full survey has follow-up questions, which we did not use in this study. The second item was measured on a four-point Likert-scale: “Are you able to discuss personal matters with your parents?”, the response options being “almost never”, “sometimes”, “quite often” and “often”. The possibility to discuss personal worries with someone and personal matters with parents was assessed by means of cross-tabulation. We acknowledge the possible collinearity issue with these two items; however, the correlation was moderately low ($r = 0.208$), and it was therefore feasible to use them both in the regression analysis. We were also interested in exploring the association of these items separately with depressive and generalized anxiety symptoms, given that pertinent implications could focus on either the child-parent relation (i.e., social services) or the school culture, its pedagogical approaches, and society at large. Whereas one item explores parental relations, the other could indicate loneliness in coping with personal worries: the relations concerned could be with friends, school personnel, or other professionals working with adolescents.

Experienced discrimination

Experienced discrimination has been operationalized in various ways in previous studies. In the current study, the discrimination sum-variable comprised the following (dichotomic yes/no) questions: *Have you been bullied during this semester, whether at school or in leisure time: 1. because of your color, language, ethnicity, roma- or sami¹ heritage? 2. for family reasons such as parents, poverty, place of residence? 3. on religious grounds?* The score of the sum-variable ranges from zero to three, with zero meaning no experiences of discrimination during current semester. The reliability level (Cronbach’s alpha) was highest among first-generation immigrant adolescents (0.826) and lower among second-generation adolescents (0.612). We compared the association of immigrant generation with experiences of discrimination using Welch’s t-test.

Test procedures

In addressing RQ1 and RQ2, we used cross-tabulation and the χ^2 -test of independence and examined group differences (i.e., 1. first- and 2. second generation immigrant adolescents, 3. adolescents with one parent born abroad and 4. host nationals) in depression and anxiety symptoms (RQ1) and in the possibilities to discuss personal matters with parents and having someone to discuss personal worries with (RQ2) by means of Pearson standardized residuals. Further, to address the effect of generation in predictions of depression (PHQ-2) and generalized anxiety (GAD-7) symptoms among first- and second-generation immigrant adolescents (RQ1) we specified ordinary least squares (OLS) regression models, with depressive symptoms, and anxiety symptoms, respectively, as the dependent variables, and immigrant status (first-generation and second-generation) as dummy-coded independent variable with second generation as the reference group.

Further, Welch’s t-test was used to analyze the group differences between first- and second-generation adolescents immigrant adolescents in experienced discrimination (RQ3), which is an applicable procedure in normally distributed albeit uneven group sizes. We then calculated the effect size (d_{Cohen}) of the mean difference.

We tested RQ4 by means of OLS regression analysis with the variables of depressive and anxiety symptoms, respectively, as the dependent variables, and discrimination, being able to discuss personal matters with parents, and having someone to discuss personal worries with as the independent variables. Indicator dummy variable for immigrant-generation, with second generation as a reference, was included in the model to control for group differences in predictor estimates. Further, we examined the moderation effect of immigrant generation with the assessed independent variables by means of interaction terms with second generation as the reference group.

First, we estimated the models with main effects only. Second, the moderating effects of immigrant-generation on each independent variable were assessed by means of interaction terms to identify significant interactions to be included in the final models. These models are available in the Appendices.

Statistical analyses and figures were calculated in R statistical software (version 4.1.0, RStudio version 1.4.1717, R Core Team, 2021), with complementary packages (“Tidyverse”, Wickham et al., 2019; ‘rstatix’, Kassambara, 2021; ‘sjPlot’, Lüdtke, 2021; ‘ggeffects’, Lüdtke, 2018; ‘psych’, Revelle, 2021; ‘lm.beta’, Behrendt, 2014).

Results

Is there an association between immigration generation and depressive and anxiety symptoms?

To address RQ1, we examined distributions by group in exceeding the clinical cut-off-point for depressive disorder and moderate anxiety respectively, and then compared differences between first- and second-generation adolescents from immigrant families by means of OLS regression. Students from immigrant families were more likely to exceed the cut-off points for depressive disorder (PHQ-

¹ Sámi are indigenous Finno-Ugric people, who have a long history of discrimination and experience of assimilative policies.

2-scale, cut-off 3: $\chi^2 = 415.903$, $df = 3$, $p < 0.001$) and moderate generalized anxiety (GAD-7-scale, cut-off 10: $\chi^2 = 416.666$, $df = 3$, $p < 0.001$), compared to their host national counterparts, the highest incidence being among first-generation immigrants. Table 1 gives the descriptive results and Pearson standardized residuals of the PHQ-2 and GAD-7 scales by group.

Further, the results of main effects OLS regression analyses indicated a higher probability among first-generation compared to second-generation immigrant students of reporting both depressive (CI 95% for B = 0.37–0.67) and anxiety (CI 95% for B = 0.94–1.82) symptoms.

Is there a generation-based association in being able to discuss personal matters with someone or with parents?

To address RQ2 we cross-tabulated (Table 2) data for immigrant generation with experienced possibilities of discussing personal worries with someone and discussing personal matters with parents, respectively, and examined group differences using chi-square tests and Pearson standardized residuals. First-generation immigrants were less likely to have someone whom to discuss personal worries with than second-generation immigrants, who were less likely to have someone than 2.5 generation youth, who again were less likely to have someone than Finnish nationals (Table 2, $\chi^2 = 1735.447$, $df = 3$, $p < .001$). Students from immigrant families were less likely than would have been expected by chance to have someone with whom to discuss their personal worries.

We further examined the between-group distribution concerning the possibility to discuss personal matters with parents, which was associated with having an immigrant-background: more first-generation than second-generation immigrants reported discussing personal matters ‘almost never’ (Table 2, $\chi^2 = 968.002$, $df = 9$, $p < .001$).

Is there a difference between first- and second-generation immigrants in their experiences of discrimination?

To address RQ3, we analyzed mean differences between first- and second-generation immigrant adolescents by means of Welch’s t-test. First-generation adolescents from immigrant families faced more discrimination than second-generation adolescents did (Table 3). The mean between-group difference was statistically significant but small (Welch = 69.502, $df_1 = 1$, $df_2 = 3311.429$, $p < 0.001$; $d_{Cohen} = 0.27$, CI = 95%: 0.21 – 0.35).

Associations between social factors and both depressive and generalized anxiety symptoms among immigrant-background adolescents

To address RQ4, we modeled the prediction estimates of discrimination, discussing personal matters with parents, and the possibility to discuss personal worries with someone using OLS regressions predicting symptoms of depression (PHQ-2) and generalized anxiety (GAD-7), respectively, presented in Table 4. Discrimination predicted generalized anxiety slightly more strongly than it predicted symptoms of depression. Further, discrimination was a significantly stronger predictor for both symptoms of depression ($\beta = 0.097$, $p = .003$) and symptoms of anxiety ($\beta = 0.08$, $p = .01$) among first-generation compared to their second-generation counterparts. Good relations with parents, in other words being able to discuss personal matters with them, was the strongest protective factor in the model, and was slightly stronger as a negative predictor of depressive symptoms. Being able to discuss personal worries with someone was statistically significant ($\beta = -0.068$, $p < .001$) only in relation to symptoms of depression for both groups. However, discussing personal worries was significantly ($\beta = -0.078$, $p = .02$) moderated by first generation in relation to anxiety symptoms, predicting lower levels of anxiety among this group. The model-adjusted prediction slopes (marginal effects) presented in Figs. 1 and 2 suggest that experienced discrimination did not predict exceeding the cut-off point for depressive disorder. However, at the value of three, experienced discrimination predicted moderate anxiety, but only among first-generation immigrant-adolescents. The models for depression and generalized anxiety symptoms were statistically significant ($F(5, 3494) = 242.02$, $p < .001$ and $F(6, 3430) = 194.37$, $p < .001$ respectively), and explained 26 and 25 per cent of the variance, respectively (adjusted R^2).

Discussion

Primary results

The wellbeing of second-generation adolescents from immigrant families, compared to their first-generation counterparts, was more favorable all-around on all measures assessed in the present study. Furthermore, the group means of second-generation youth

Table 1
Proportions of participants exceeding the clinical cut-off for depression (PHQ-2) and moderate to severe anxiety (GAD-7).

% of group demonstrating	1 st generation	2 nd generation	2.5 generation	Finnish host nationals	Total
Depressive symptoms (PHQ-2)	26.1%	17.9%	17.7%	13.2%	
	$r_i = 16.2$	$r_i = 3.7$	$r_i = 6.8$	$r_i = -5.9$	
N	2 596	1 339	5 005	59 329	68 269
Moderate or severe anxiety (GAD-7)	23.5%	16.5%	15.2%	11.3%	
	$r_i = 16.5$	$r_i = 4.6$	$r_i = 6.2$	$r_i = -5.9$	
N	2 530	1 328	4 946	58 772	67 576

Note: r_i = Pearson standardized residual

Table 2

Being able to discuss with someone and with parents, as reported by youth in the SHP Study.

		1st generation	2nd generation	2.5 generation	Finnish host nationals	Total
Being able to discuss personal concerns with someone	Yes	57.9%	76.1%	83.8%	86.9%	
	No	42.1%	23.9%	16.2%	13.1%	
		$r_i = -14.9$	$r_i = -3.7$	$r_i = -1.2$	$r_i = 4.0$	
		$r_i = 36.1$	$r_i = 8.8$	$r_i = 2.9$	$r_i = -9.6$	
N		2527	1328	5007	59 145	68 007
Being able to discuss personal matters with parents	Often	34.1%	38.8%	36.3%	40.1%	
	Quite often	20.4%	23.0%	26.7%	28.4%	
	Every now and then	22.9%	26.3%	27.7%	24.6%	
	Almost never	22.6%	11.9%	9.4%	6.9%	
		$r_i = -4.4$	$r_i = -0.4$	$r_i = -3.7$	$r_i = 2.0$	
		$r_i = -7.2$	$r_i = -3.4$	$r_i = -1.6$	$r_i = 2.5$	
		$r_i = -1.9$	$r_i = 1.1$	$r_i = 4.0$	$r_i = -0.9$	
		$r_i = -27.1$	$r_i = 5.4$	$r_i = 4.0$	$r_i = -7.6$	
N		2574	1344	5035	59,621	68 574

Note: r_i = Pearson standardized residual

Table 3

Experienced discrimination among youth in the SHP Study conducted in 2017 in Finland, Welch's t-test of group means.

	1 st generation		2 nd generation		t	df	p	d _{Cohen}
	M	SD	M	SD				
Experiences of Discrimination	.735	1.137	.461	.854	8.337	3311.429	< 0.001	.273
N	2490	1294						

Table 4

OLS regression of associations of predictors with depressive symptoms and symptoms of generalized anxiety among immigrant-background adolescents.

Predictor	Symptoms of depression (PHQ-2) N = 3500 (2289 1 st gen)					Symptoms of generalized anxiety (GAD-7) N = 3437 (2233 1 st gen)				
	B	SE	p	β	95% CI for B	B	SE	p	β	95% CI for B
Discrim.	.49	.06	< 0.001	.25	.37 – 0.61	1.79	.20	< 0.001	.28	1.41 – 2.18
D.P	-.46	.03	< 0.001	-0.255	-0.51 – - 0.40	-1.44	.09	< 0.001	-0.24	-1.62 – - 1.26
D.S	-0.29	.07	< 0.001	-0.068	-0.42 – - 0.16	.15	.39	.70	.01	-0.62 – 0.92
Gen. (ref. 2nd)	.06	.07	< 0.001	.013	-0.08 – 0.20	.82	.42	.052	.059	-0.01 – 1.65
Gen * Discrim	.20	.07	.003	.097	.07 – 0.33	.56	.22	.01	.08	.12 – 1.00
Gen * D.S						-1.07	.47	.02	-0.078	-1.98 – - 0.15
Intercept	2.46	.10	< 0.001			7.74	.44	< 0.001		6.89 – 8.60
R ² Adjusted	.26					.25				

Note: 'Discrim' stands for experienced discrimination, 'D.P' stands for being able to discuss personal matters with parents, 'D.S' stands for being able to discuss personal worries with someone, and Gen. (cat) is the categorical indicator variable for 1st- and 2nd-generation immigrant background, where 2nd generation is the reference group.

were quite similar compared to the 2.5 generation youth with one foreign-born parent. However, all the groups with a migration heritage included in this study achieved lower scores on all measures compared to host nationals. An association between immigrant background and mental-health symptoms emerged here: there were higher proportions of subjects with depressive and generalized anxiety symptoms in groups with an immigrant background, where these values were highest among first-generation immigrants. More than a quarter of first-generation immigrant adolescents exceeded the cut-off point of three for depressive disorder, and almost as many exceeded the cut-off point for moderate levels of generalized anxiety disorder.

First-generation immigrants reported experiencing discrimination more often than their second-generation counterparts did. It was also of concern that first-generation immigrant adolescents reported rarely being able to discuss their personal worries with someone: as many as 42 per cent had no possibility of doing so, compared with 24 per cent of the second-generation group. In both cases, the numbers were higher than among the adolescents of Finnish origin, of whom only 13 per cent had no one they could talk to. Moreover, many first-generation immigrant adolescents were not able to discuss personal matters with their parents: more than one-fifth reported that they practically never did. Their second-generation counterparts were better able to discuss such matters, and adolescents of Finnish origin were the most likely to do so. Thus, there appeared to be a larger cultural gap (Telzer, 2010; see also Schwartz et al., 2016) between young people and their parents in the immigrant groups.

The predictor values of experienced discrimination were significantly moderated by generational status in relation to depression ($\beta = 0.097, p = .003$) and generalized anxiety symptoms ($\beta = 0.08, p = .01$), with higher values among the first generation. Further, we found a moderation effect in relation to the possibility of discussing personal worries: it significantly predicted lower levels of

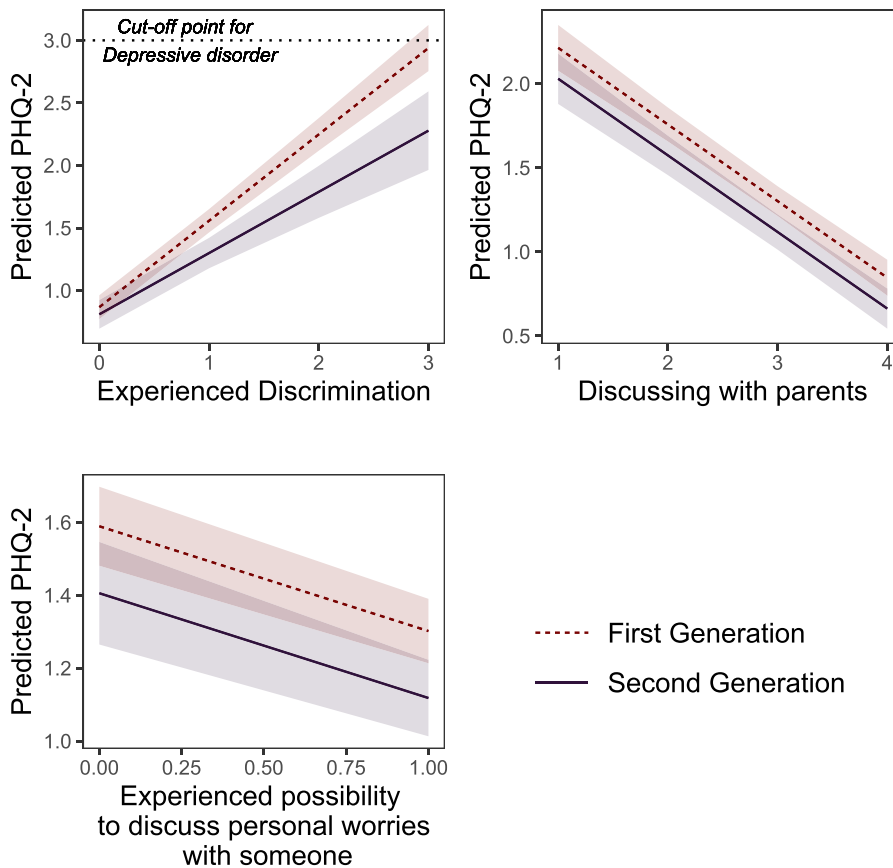


Fig. 1. Marginal effects of independent variables to depressive symptoms by immigrant generation (PHQ-2).

anxiety among first generation ($\beta = 0.078, p = .02$), but not among second-generation youth. Experiences of discrimination were detrimental to both generations, but in our model, only the first generation exceeded the cut-off point of moderate anxiety at high rates of experienced discrimination (see Fig. 2). Hence, second generation youth appeared to be more resilient to experiences of discrimination. We expected experiences of discrimination to be more detrimental to the second generation than the first, for whom ethnic identity may have been a protective latent factor (Ikram et al., 2016; Mossakowski, 2003), but our data did not support this assumption. However, the possible moderating effect of ethnic identity in the current study is speculative as we did not have data on this variable, but further research should examine ethnic identity as a potential moderator.

As expected, protective factors were equally important for both generations in relation to depressive symptoms. However, the possibility of discussing personal worries with someone predicted lower levels of anxiety only among first generation youth. Functional relations with parents, in other words being able to discuss personal matters with them, emerged as the most protective factor in our models. It is notable that quite a few first-generation immigrant adolescents reported not having access to this resource. Furthermore, the high frequency among the first generation of not being able to discuss personal matters with their parents and not having anyone with whom to discuss their concerns may help to explain the high proportion of mental-health issues, because it may reflect the absence of parental support and feelings of loneliness due to undisclosed worries. We assume from our data and the previous literature that the high frequency of not being able to discuss problems with parents reflects, to some extent, the phenomenon known as the acculturation gap (Telzer, 2010; see also Schwartz et al., 2016). However, this possibility calls for further research. Parents of the second-generation immigrant adolescents in our data had a longer period in which to acculturate (at least 14 years) and therefore should have a better understanding of the social environment in which their offspring live, whereas the wider acculturation gap between first-generation adolescents and their parents may complicate mutual understanding. Furthermore, parents of first-generation adolescents may experience more acculturative stress attributable to the shorter time since their migration relative to second-generation parents, and therefore may not be able (Cummings & Davies, 1994; Joyner & Beaver, 2021) to support their offspring emotionally to the same extent.

According to all the measures used in this study, the well-being of immigrant-background adolescents in Finland is better among the next generations (i.e., the second and 2.5 generation) compared to the first generation. This finding may be partly attributable to the favorable integration policies and integrative acculturative orientation maintained within Finland, which promotes the development of bicultural identities: favorable integrative policies are considered beneficial to the well-being of immigrant populations (Berry, 1990; Bourhis et al., 1997). Despite these favorable national policies, however, the normalization of hate speech and racist

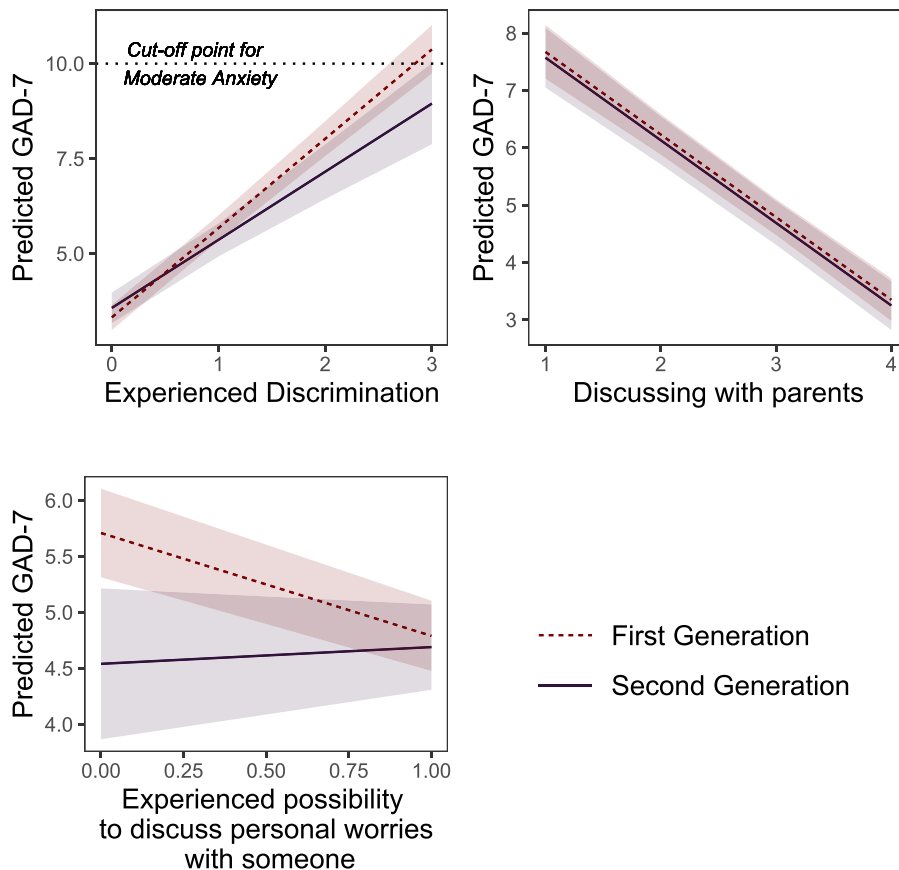


Fig. 2. Marginal effects of independent variables to anxiety symptoms by immigrant generation (GAD-7).

discourse against immigrants in political rhetoric and on social media, where immigrants are positioned as a threat to the host nationals (Mäkinen, 2019; Pettersson, 2019; see also Nshom, Khalimzoda, Sadaf & Shaymardanov, 2022) may place these propitious integration structures at risk. There is thus a need for studies assessing the association of other social factors with mental well-being among first- and second-generation adolescents. Furthermore, more fine-grained analysis can shed light on generational differences, such as by controlling for the reasons behind migration.

Limitations

A major limitation of this study is that we did not classify countries of origin by cultural distance, for instance, nor was information about the reasons for immigration collected in the SHP-survey. An enhanced understanding of the rationales behind the migration (e. g., refugee or asylum-seeking, relocation due to parental employment) could sharpen the analysis as well as focusing implicative actions at both the administrative and the pedagogical (i.e., grassroots) level. Even though the models explained a considerable amount of the variance in the outcome variables, we acknowledge the absence of several key control variables, which unfortunately were not available in the data.

A second limitation is that our analyses included adolescents from various immigrant backgrounds, and our results reveal the worrisome state of mental well-being among them. It should be borne in mind, as well, that if the analysis had examined only refugees and asylum seekers, the results may have been even more alarming. Furthermore, the data were collected from adolescents in the Finnish school system (Lonka, 2018), which immigrants typically enter either directly or after one-year preparatory training. The participants were offered five language alternatives to Finnish (Swedish, English, Russian, Sámi, and Simplified Finnish).

Third, the GAD-7 scale is potentially problematic in terms of grasping state-of-anxiety symptoms in culturally diverse populations. Although it has a strong record of validity and reliability, it has not yet been validated from a culturally sensitive perspective (Parkerson, Thibodeau, Brandt, Zvolensky & Asmundson, 2015), which may have caused bias in the results. Parkerson et al. (2015) demonstrated that participants self-identifying as black or Afro-American rated their anxiety levels lower than anticipated based on their latent GAD-profile expectations. It is therefore possible that the anxiety symptoms of some minorities were underestimated.

Implications for school settings

As we have shown in this study, discrimination experienced by adolescents may be a strong factor associated with impaired mental well-being. Previous studies in Finland suggest that teachers have inadequate tools for working with culturally diverse youth (Räsänen et al., 2018). Therefore, it is essential to provide sufficient training for the personnel interacting with culturally diverse children and youth, including teachers and students in teacher education, psychologists, and social workers. There is also a need to enhance understanding of culturally sensitive pedagogy, othering, racism and structural racism, as well as of the acculturation process among immigrant-background families. Furthermore, it would be highly beneficial to explore ways of supporting immigrant-background families in their acculturative process, and to develop fruitful interactional relationships between parents and offspring, the importance of which was the prominent protective factor for mental well-being.

Previous research indicates that feelings of belongingness to school and relatedness with teachers predict school achievement among culturally diverse students (Close & Solberg, 2008). However, Chiu, Chow, McBride, and Mol (2016) observed that a first-generation immigrant background is frequently associated with lower levels of school belongingness in OECD countries. In the future, there is an urgent need to advance understanding of what inhibits school belongingness and relatedness to teachers among immigrant-background student bodies, and to build practices to facilitate relatedness with teachers along with belongingness to school. Furthermore, teachers and other school personnel should be aware of and understand that immigrant-background students might not discuss and share their personal matters and worries as often as host nationals do.

Cobb et al. (2019) discuss the fact that migration studies focus to a great extent on negative health outcomes, and they express the need to broaden the scope of research to include positive outcomes. It is also worth noting that research focusing on negative health outcomes may not offer implications that could be applied in school settings. Therefore, focusing research on factors that predict both well-being and the absence of ill-being may be a fruitful approach in the future.

Finally, during the rise of the populist era, structuring supportive practices may be more practical for educators than trying to resist the racism and discrimination that children and youth may encounter in social media and society at large – even if antiracist actions (Arneback & Jämte, 2021) are an essential aspect of inclusive school environments. Supportive practices fostering well-being among immigrant-background adolescents may include, for example character strength training (see Park et al., 2004). The implications of such training have been studied in Finland in the context of special education needs (Vuorinen et al. 2019). Moreover, a resilience-building intervention rooted in positive psychology has yielded promising results among refugee children (Foka, Hadfield, Pluess & Mareschal, 2021). It would be of great interest in further studies to explore the extent to which methods derived from positive psychology, such as character strength training, could support and enhance resilience, coping, and well-being among immigrant-background students in school contexts. Nonetheless, due consideration should be given to critiques of positive psychology in its application among marginalized groups (see Yakushko & Blodgett, 2021).

Conclusions

The results of this study suggest that, among adolescents from immigrant families in the 8th and 9th grades of Finnish comprehensive school, first-generation immigrant adolescents reported more experiences of discrimination, and were less able to discuss their personal worries with someone and personal matters with their parents, than those in the second generation. Furthermore, first-generation youth reported more symptoms of both anxiety and depression. This finding is in line with the expectations of acculturation theory, whereby first-generation immigrants are assumed to experience more acculturative stressors, which could be associated with both mental and sociocultural difficulties. There was an association between experienced discrimination and both reported depression and anxiety symptoms. However, more extensive and broader analyses are needed to shed light on the dynamics of social interaction in the school setting, discrimination, experiences of othering, acculturation gaps with parents, parentification, and mental well-being among immigrant-background adolescents. The fruitful data collected every other year (The School Health Promotion Study, SHP) applied in this study has the potential to shed further light on the above-mentioned research issues in the future. Including specific acculturative measures in the SHP addressed to those who report having an immigrant background would facilitate more fine-grained analysis. There is a need for further research into what predicts and promotes well-being among immigrant-background adolescents to guide policy, pedagogy and interventions.

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Declarations of interest

None.

Appendix A. Tested OLS regressions to PHQ-2 as DV and moderation effects of generation by means of interaction

Dependent	Symptoms of depression (PHQ-2) N = 3500 (2289 1 st gen)									
	M1, main effects		M2, interaction 1 (selected for final model)				M3, interaction 2		M4, interaction 3	
	Predictor	B	p	B	p	B	p	B	p	
Discrim.	.64	< 0.001	.49	< 0.001	.64	< 0.001	.64	< 0.001	.64	< 0.001
D.P	-.46	< 0.001	-.46	< 0.001	-.45	< 0.001	-.46	< 0.001	-.46	< 0.001
D.S	-0.30	< 0.001	-0.29	< 0.001	-0.30	< 0.001	-0.23	.057	-0.23	.057
Gen. (ref. 2nd)	.16	.011			.20	.254	.23	.05	.23	.05
Gen * Discrim			.20	.003						
Gen * D.P					-.01	.817				
Gen * D.S									-0.10	.477
Intercept	2.40	< 0.001	2.46	< 0.001	2.37	< 0.001	2.35	< 0.001	2.35	< 0.001
R ² Adjusted	.25		.26		.25		.25		.25	

Note: 'Discrim' stands for experienced discrimination, 'D.P' stands for being able to discuss personal matters with parents, 'D.S' stands for being able to discuss personal worries with someone, and Gen. (cat) is the categorical indicator variable for 1st- and 2nd-generation immigrant background, where 2nd generation is the reference group.

Appendix B. Tested OLS regressions to GAD-7 as DV and moderation effects of generation by means of interaction

Dependent	Symptoms of depression (GAD-7) N = 3437 (2233 1st gen)											
	M1, main effects		M2, interaction 1		M3, interaction 2		M4, interaction 3		M5, cumulative interaction (selected for final model)			
	Predictor	B	p	B	p	B	p	B	p	B	p	
Discrim.	2.23	< 0.001	1.75	< 0.001	2.23	< 0.001	2.22	< 0.001	1.79	< 0.001		
D.P	-1.44	< 0.001	-1.44	< 0.001	-1.30	< 0.001	-1.44	< 0.001	-1.44	< 0.001		
D.S	-0.63	.004	-0.60	.006	-0.62	.004	.24	.542	.15	.704		
Gen. (ref. 2nd)	.34	.103	.02	.928	.20	.113	1.22	.002	.82	.052		
Gen * Discrim			.63	.005					.56	.013		
Gen * D.P					-.20	.288						
Gen * D.S							-1.23	.008	-1.07	.022		
Intercept	8.14	< 0.001	8.34	< 0.001	7.74	< 0.001	7.48	< 0.001	7.74	< 0.001		
R ² Adjusted	.25		.25		.25		.25		.25			

Note: 'Discrim' stands for experienced discrimination, 'D.P' stands for being able to discuss personal matters with parents, 'D.S' stands for being able to discuss personal worries with someone, and Gen. (cat) is the categorical indicator variable for 1st- and 2nd-generation immigrant background, where 2nd generation is the reference group.

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