

Immigration status, gender and school burnout
in Finnish lower secondary school students: A longitudinal study

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Abstract

The aim of this longitudinal study among 9,223 students from 7th to 9th grade (age 13-16) was to assess whether immigration status and gender are associated with the level and change (slope) in school burnout among lower secondary school students in the Helsinki metropolitan area. 97% of the variation in school burnout was attributable to individual factors. Both the intercept (2.3, $p < 0.001$) and slope (0.5, $p < 0.001$) of school burnout were statistically significant. The slope showed increasing school burnout from grades 7 to 9. School burnout increased more in girls than in boys. Initially apparent higher school burnout among students who had immigrated to Finland within the last five years compared to Finnish native students was largely accounted for by sociodemographic and school-related factors. However, there was a persistent gender by immigration status difference in the fully adjusted model: recently (<5 years ago) immigrated boys experienced a larger increase in school burnout, especially due to increased cynicism, than recently immigrated girls.

Key words: School burnout, lower secondary school, immigrant status, longitudinal, gender

Introduction

In Finland, as in many European countries, the number of immigrant students is increasing rapidly. School-related adjustment and academic achievement are highly important for these young people, both for their own futures and for society. However, recent PISA (Programme for International Student Assessment, OECD 2016) results revealed that in Finland the gap in academic achievement between native and immigrant students at the age of 15 is one of the largest in the OECD countries. Most research on immigrant youth has been conducted in the USA, with less in Europe, particularly in Finland. Studying the course and consequences of school burnout in a country like Finland—where students attain consistently high levels of academic achievement throughout secondary school, despite recent evidence showing that students may not enjoy school and immigrant students might struggle—could provide unique insights into the issue of immigrant student school burnout (OECD, 2016).

In 1970, the government of Finland decided to overhaul its traditional education system in favor of a “modern, publicly financed education system with widespread equity, good quality, and large participation—all at a reasonable cost” (Sahlberg, 2009, p. 324). After the reform, Finnish students were among the highest rated performers in the PISA assessments, consistently achieving top scores in mathematics, science, and reading. However, recent evidence shows that Finnish adolescents may not be emotionally engaged in school. The 2012 PISA results reveal that 15-year-old Finnish students ranked 60th out of 65 countries for how much they like school (OECD, 2015). The PISA research shows that many Finnish secondary school students report feeling academically inadequate in school, exhausted by school, and cynical about the value of school, phenomena which, combined, we term school burnout (Salmela-Aro, Kiuru, Pietikainen, & Jokela, 2008). While evidence of school burnout among Finnish youth is mounting,

researchers have yet to investigate whether school burnout is a process that unfolds over the course of the lower secondary school years and what role immigrant status and gender play in burnout. In this longitudinal study, we evaluated school burnout among students in all the lower secondary schools in the Helsinki Metropolitan area. We aimed to: (a) identify trajectories of school burnout from the 7th to 9th grade during lower secondary school, (b) examine both the role of immigrant status, gender and their interaction and (c) the role of key school-related variables (students speaking a foreign language, school type, percentage of students with special needs, positive motivation from teachers and classroom atmosphere) in school burnout. We hoped to shed light on whether trajectories of school burnout differ by immigrant status, gender and educational context, or whether they might be a developmentally normative response to the norms, structures, values, and goals common to formal education settings. Most importantly, we wanted to clarify the extent to which school burnout is predicted by different types of individual and school-related variables among native and immigrant lower secondary school students. While it is true that, since the overhaul of the Finnish education system, inequality within and across schools has been low, the recent increase in immigration may be challenging this situation.

As stated above, exhaustion, cynicism about the value of school, and feeling of academic inadequacy, all of which are also critical indicators of emotional school disengagement (Salmela-Aro, Kiuru, Leskinen & Nurmi, 2009), have been researched as a measure of school burnout. Feeling overwhelmed in school, not enjoying school and not valuing learning are also signs of burnout. In Finland school burnout has been studied as a continuous process that influences students' engagement with schoolwork, well-being, and adjustment (Salmela-Aro & Upadaya, 2012). School burnout has been found to be associated with poor academic and psychological

functioning, but also with thriving (Tuominen-Soini & Salmela-Aro, 2014) as high-achieving students might also be at great risk for experiencing adverse levels of stress and depression. Specifically, school burnout in Finnish students has been linked to performance orientation (Tuominen-Soini & Salmela-Aro, 2014), low academic achievement and depressive symptoms during the school years and beyond (Salmela-Aro, Savolainen & Holopainen, 2009).

Despite the well-known academic success of Finnish students in the PISA analyses, we know less about their trajectories of school burnout and the antecedents of burnout during lower secondary school. Stage-environment fit theorists posit that students' motivation and engagement are largely determined by the extent to which schools provide educational and social environments that meet adolescents' needs for relatedness, autonomy, and competence (Eccles et al., 1993; Ryan & Deci, 2000). Fulfilling adolescents' social and emotional needs can lead to an increase in their emotional engagement (Park, Holloway, Arendtsz, Bempachat, & Li, 2012) and positively influence their academic achievement and learning (Skinner, Furrer, Marchand & Kinermann, 2008), whereas misfit between school context and needs can lead to burnout. In the case of Finnish students, in line with the demands-resources model (Salmela-Aro & Upadyaya, 2014), research suggests that students' school burnout is also negatively linked to contextual resources like school climate, support from the school, and fairness and the ability to motivate on the part of teachers (Salmela-Aro et al., 2008). However, while some studies have reported that Finnish students enjoy school and find learning valuable, there is mounting evidence that students also have negative feelings about school, leading us expect that from the 7th to the 9th grades, students might experience a significant decline in looking forward to school and find school increasingly exhausting, culminating in an increase in school burnout (Salmela-Aro &

Tynkkynen, 2012). However, studies examining changes of school burnout during this phase are lacking.

Moreover, we assume that any such trend towards an increase in school burnout will differ by gender and immigrant status. In the USA and UK, being male predicted being more disengaged at the start of secondary school and throughout it (Li & Lerner, 2011; Ross, 2009). In Finland, in turn, more males have manifested a profile of high cynicism towards school (Tuominen-Soini & Salmela-Aro, 2014). These gender differences in emotional engagement with schooling in adolescence have been attributed to many factors, including male students' desire to obtain popularity through publically dismissing schoolwork and their lack of enjoyment of subjects that lack a practical component (Symonds et al., 2014), and thus we expect the burnout dimension of cynicism to be greater among boys (Salmela-Aro et al., in press). Increase in a cynical attitude towards school has been found to increase the risk of dropping fourfold (Bask & Salmela-Aro, 2013). In turn, we expect school burnout, particularly the components of exhaustion and inadequacy, to increase among girls, as motivational decline has been the most marked among students, in particular girls, on the academic track, i.e., after their transition to upper secondary education (Salmela-Aro & Tynkkynen, 2012). A previous study among Finnish upper secondary school students showed that, within a year and a half after entering to upper secondary school, girls were significantly more burned out than boys (Salmela-Aro & Tynkkynen, 2012). However, at the end of lower secondary school (9th grade), as part of their preparation for the upper secondary academic track, students might strive to be successful in schoolwork that is more challenging and strenuous in an educational environment which is oriented more towards social comparison and competition among peers than it was two years

earlier (7th grade) (Salmela-Aro & Tynkkynen, 2012). We expect this to increase burnout, exhaustion and inadequacy, in particular among girls.

In addition, immigrant status might play a role in school burnout. Immigrant students might feel a decline in motivation as their need to attain relatedness and competence in the educational context might not be met, leading them to feel that while increasing demands are being made on them, resources, such as support, are lacking. For example, with respect to ethnicity, African American students in the USA were more often classified into school disengagement trajectories (Li & Lerner, 2011, 2013), whereas in the UK white students more often showed profiles of disengagement with schooling (Ross, 2009). In the UK, more students of South Asian, Black African and Black Caribbean descent showed engagement in school, in line with the high aspirations for educational attainment transmitted to them by their first-generation immigrant parents (Strand, 2007). This finding is in line with a widely researched and discussed issue in the immigrant youth literature, the so-called immigrant paradox. This paradox refers to a phenomenon in which immigrant youth adaptation is positive, and in some cases, even more so than that of their non-immigrant peers (Berry, Phinney, Sam, & Vedder, 2006), and that first-generation immigrants are better adapted than later generation immigrants (Garcia Coll & Marks, 2012; Marks, Ejesi & Garcia Coll, 2014), whose adaptation converges with that of their non-immigrant peers (Sam, Vedder, Liebkind, Neto & Virta, 2008). In particular supportive relationships significantly mediate the academic engagement and positive outcomes of immigrant youth (Suarez-Orozco, Rhodes & Milburn, 2009).

Students develop their academic self-concept and subjective task values for the variety of activities to which they are exposed in school based on information regarding their competency to succeed, their relatedness to others in that setting, and their autonomy as learners (Eccles &

Roeser, 2009). When students' developmental needs for competency, relatedness, and autonomy are not met, they may become emotionally disaffected over time and withdraw from school (Eccles et al., 1993; Ryan & Deci, 2000). We expected this to be the case for immigrant students in Finland, particularly boys (Motti-Stefanidi, 2015). The recent increase in negative attitudes towards immigrants, including xenophobia and discrimination, might also decrease their feelings of belonging (Eurobarometer, 2015). School atmosphere and support from teachers as well as proportion of ethnic diversity and diversity in learning (special needs) in the school may play an important role in immigrant children's school motivation (Motti-Stefanidi, Masten & Asendorpf, 2015). Moreover, diversity has been recorded in the adaptive success of immigrant youth, revealing a mixture of risk and paradox, with immigrant girls and boys differing in their adjustment and achievements. Thus, we are asking, is immigrant status a risk factor for school burnout in Finland or, instead, does the immigrant paradox hold? We examine immigrant youth in comparison to the mainstream standard. Being engaged, not burning out and doing well in school translates into receiving good grades and academic achievement and not dropping out, and is a forerunner of future adaptation in society for both immigrant and non-immigrant youth (Motti-Stefanidi & Masten, 2013). Previous academic success and high school attendance also facilitates school engagement (Motti-Stefanidi et al., 2015) and lower school burnout (Salmela-Aro et al., 2008).

Moreover, socio-economic status (SES) can play a role; for example, lower SES predicted greater and increasing emotional disengagement in school in the USA (Li & Lerner, 2011) and in the UK (Ross, 2009). In addition, in Finland there has been found to be disadvantaged SES among immigrants (OECD, 2016). Studies in both countries have documented that growing up in families where parents have lower levels of formal education and

fewer economic resources, is negatively associated with the development of achievement and educational aspirations in young people (Ermisch, Jäntti & Smeeding, 2012; Schoon 2010, 2014), although less research exists on SES and young people's emotional attitudes to schoolwork as we have defined them here. In another UK study, Chowdry, Crawford and Goodman (2011) found a weak positive association between SES and students' enjoyment and value attributed to schooling and a stronger relationship between SES and students' educational aspirations. However, they did not test the associations between SES and school burnout.

This study extends our understanding of (1) whether the trajectories of students' school burnout change over time during Finnish lower secondary school, and (2) how trajectories of school burnout differ by gender and immigrant status and their interaction. The association between immigration status and school burnout may be affected by family characteristics and school related factors, such as frequency of changing schools, school attendance and school achievement of an individual student, and school characteristics, as stated above. Therefore we adjusted for these factors in the analysis. The study contributes to our understanding of adolescents' school burnout by studying the course and consequences of school burnout for both native and immigrant adolescents in Finland, a recent international achievement assessment program has indicated the presence of a gap between these groups in their academic achievement (OECD, 2016). Specifically, thus the study assesses whether immigration status and gender, and their interaction, are associated with the level and change in school burnout among lower secondary school students in the Helsinki Metropolitan area. In Finland, the number of immigrant students has recently been increasing rapidly. However, the overall number of immigrants continues to be rather small and thus we are not able to examine different immigrant groups.

Method

Sample and data collection

The present study was based on a school survey conducted in 2011 and 2014 in the Helsinki metropolitan region of Finland, which spans 14 municipalities. All 7th graders (13 years old) were invited to participate. Recruitment was implemented through the educational authorities of the municipalities, each of which gave permission for the study. The Ethical Committee of the National Institute of Health and Welfare approved the protocol. Because the study was part of normal school work, parental consent was not required. However, two of the municipalities required parental consent statements, which were collected. A letter informing parents about the study was sent to parents in the remaining 12 municipalities.

Of the recruited 7th graders ($n = 13,012$ from 123 schools), 9,497 students and 118 schools participated in the study, resulting in a response rate of 73% for the individuals and 96% for the schools. Special schools and classes were subsequently excluded from the sample (n of students = 163, 1.3%) owing to expected student difficulty answering the questions. In fact, most of these schools did not participate at all and answers were returned by only 30 students altogether. Special schools are for children who have serious learning difficulties, intellectual disability or are situated in pediatric hospital wards. Five Helsinki schools did not participate (n of students = 330; 2.5%). In two schools, computer classes were under renovation, one school did not receive the individual passwords in time, and two administratively independent schools declined to participate. The other non-respondents included those absent from school on the survey day (typically 10 to 15% of students each day) and those who refused to participate or whose parents' consent statement was negative or had not been received. Incomplete and

unreliable questionnaires (most answers left blank, answers to open-ended questions consisting of profanities, and answers where extreme choices were mostly selected, e.g., all the daily health complaints, daily smoking, highest school marks), were excluded ($n = 42$, 0.3%). In addition, nine respondents with missing gender information were not included in the study, leaving 9,446 respondents in 2011.

In 2014, a similar procedure was followed as in 2011. The school and the name of the student were used to link the answers of the 2011 and 2014 surveys. A total of 5,742 students participated in both surveys. Students who attended different schools in grade 7 and 9 were excluded ($n = 223$). All the information obtained from the remaining 9,223 individuals who participated at least at baseline was used. Of these, 5,286 provided information on school burnout in grade 9.

In both years, the data were gathered as part of the school routine. The participants completed the survey online in their computer classrooms using their personal user names and passwords created by the researchers and delivered by the supervising teachers. The survey consisted of questions on well-being, health, health behavior, school, and family background. School-level variables (percentage of students speaking a foreign language and with SEN status, and school type) were obtained from Statistics Finland and added to the survey data.

Variables

School burnout was measured with nine items (Salmela-Aro et al., 2009). Examples were “I feel overwhelmed by my schoolwork,” “I often sleep badly because of matters related to my schoolwork,” and “I brood over matters related to my schoolwork a lot during my free time.”

The response scale ranged between 1 (=totally disagree) and 5 (= totally agree). The mean of the

items was used on both occasions. The internal consistency of the scale was good (Cronbach's alpha = 0.89 on both measurement occasions). For a more detailed final analysis, we also used the school burnout subscales on both measurement occasions: Exhaustion (4 items, Cronbach's alpha = 0.81 and 0.84), Inadequacy (2 items, Cronbach's alpha = 0.66 and 0.67) and Cynicism (3 items, Cronbach's alpha = 0.85 and 0.83).

All the individual- and school-level variables were measured at baseline (grade 7th). Immigration status was divided into three categories: whether immigrated to Finland 5 or more years ago, less than 5 years ago or whether a native. A number of individual- and school-level variables were used as covariates, as they were known to be associated with school burnout and immigration status, as discussed previously. Gender was coded female or male. Home language was used as a dichotomous measure: Finnish or Swedish (official languages in Finland) vs. other languages (combined because of small numbers; the most frequently mentioned were Russian and Estonian which are also the largest ethnic groups having migrated to Finland). Family structure was a dichotomous measure: living with mother and father (intact family) or other (e.g. one-parent family, step-parent family, other guardian or institution). Highest parental level of education was coded into two categories: university degree vs. less than university degree. A dichotomous measure of employment was used: at least one parent vs. no parent currently unemployed.

Individual level variables also included the number of times the students had changed school (or class so that they encountered new classmates) since they started 1st grade (1 = none, 2 = 1 time, 3 = 2 times, 4 = 3 times, 5 = 4 or more times). Previous school achievement was measured by mean grade of three subjects (Finnish, Mathematics, First foreign language) in grade 6. The scale of school grades in Finland range between 4 (lowest) and 10 (highest). The

mean grade score had good internal consistency (Cronbach's alpha=0.87). The number of days during the last month when students were absent due to illness, truancy or other reasons were counted (1 = 0 days, 2 = a day, 3 = 2-3 days, 4 = 4 or more days). A dichotomous variable indicating whether the student reported receiving support for special educational needs (SEN) before the start of secondary school (grade 6) was used.

School level variables included the percentage of students speaking a foreign language (other than Finnish or Swedish) at home and the percentage of students with special educational needs. School type was coded into two categories: lower secondary school only (grades 7-9) or combined with primary (grades 0-6) and/or upper secondary school (grades 10-12). Positive motivation from teachers was measured as students' mean rating over three items ("Teachers encourage students to express their own view in the class, "Teachers are interested in how students are doing", "Teachers are fair toward the students"). The Cronbach's alpha reliability for this score was 0.74. Students' mean rating over three items was also used to assess positive classroom atmosphere ("Students in my class get on together well", "My class is calm when working", "Students' opinions are taken into account"). The Cronbach's alpha reliability for this score was 0.64. The items in both measures were rated on a 5-point scale ranging from 1= totally disagree to 5=totally agree.

Analysis

To model simultaneously the effect of individual- and school-level characteristics on school burnout, we used multi-level modeling in Mplus version 7.11. This approach makes it possible to model clustered data and assess the fixed and random effects. In addition to measuring the level of school burnout in each student and the effect of individual level

covariates, each school is allowed to have its own mean level of school burnout which can be affected by the school-level covariates. Having two repeated measurement occasions for the outcome makes it possible to model the initial level in grade 7 (intercept) and change over time (from grade 7 to grade 9).

First, we tested a ‘null’ model with a random intercept but no individual- or school-level covariates. This model estimates to what extent the total variability in the level and change in school burnout is due to individuals and schools, before accounting for the effects of individual- or school-level characteristics. Next, we added immigration status and gender in the model to see their association with level and change in school burnout. We added individual-level and then school-level characteristics to assess if the association between immigration status and school burnout is due to any of these covariates. Finally, we tested for gender differences in the effect of immigration status on school burnout by adding an interaction term to the final fully adjusted models. We also fitted the final model with interactions for each of the three school burnout subscales: exhaustion, inadequacy and cynicism.

We used full maximum likelihood so as to include all available data in the model. The incomplete cases contributed to the estimation of means, and the standard errors to stabilizing the results. Maximum likelihood estimation with robust standard errors (MLR) was used to take into account any non-normality in the sample.

Results

Descriptive results

Table 1 shows the distribution of the categorical variables and the associations with school burnout in grades 7 and 9. The proportion of students who had immigrated to Finland was

about 8%, reflecting the average in Helsinki area. School burnout in the 7th grade was slightly higher among the students who had immigrated less than 5 years ago. The proportions of girls and boys were about equal. School burnout was higher in boys than girls in grade 7 but higher in girls than boys in grade 9. About 7% spoke a language other than Finnish or Swedish at home. Students who lived with their mother and father (69%) had lower school burnout than students with other living arrangements. About 29% of students had at least one parent with a university degree. This group of students also had the lowest school burnout. Eight percent of the students reported SEN in grade 6. They also reported higher school burnout than the students with no SEN. Of the schools, 46% were lower secondary schools teaching only grades 7-9 whereas the rest included primary and/or upper secondary school.

Table 2 shows the distributions of the continuous variables and their associations with school burnout in grades 7 and 9. Mean school burnout, on a scale from 1 to 5, was 2.5 in grade 7 and 2.8 in grade 9. Grade 7 and 9 school burnout showed a correlation of $r = 0.33$. The students had changed school on average once since they started the first grade. Those who had changed school more frequently had higher school burnout. The mean grade of the three school subjects included in the data (Finnish, Mathematics, First foreign language) was 8.2. A higher mean grade was associated with lower school burnout. During the previous month, mean student absence due to illness was one day, and absence due to truancy or other reasons less than one day. A higher number of days of absence was associated with higher school burnout.

The school-level proportion of students speaking a foreign language (language other than Finnish or Swedish) at home was 8% and the proportion of students with SEN was 10%. A higher proportion of students with SEN was associated with higher school burnout in grade 7. Students' rating of receiving positive motivation from teachers and experiencing a positive

school atmosphere were on average neutral, falling between agreeing and disagreeing. A more positive rating of motivation received from teachers and the classroom atmosphere was associated with lower school burnout.

Multilevel growth curve models on school burnout

The null model showed that the proportion of school-level variance in the initial level (intercept) of school burnout (0.02, $p < 0.001$) was only 3% of the total variance for intercept (school level variance + the residual variance for school burnout (0.67, $p < 0.001$)). Thus, 97% of the variation in the level of school burnout was due to individual factors. For the linear slope in school burnout between grades 7 and 9, the school-level variance (0.02, $p < 0.001$) accounted for 2.2% of the total variance (school level variance + the residual variance for school burnout (0.90, $p < 0.001$)). The school level variance, residual variance and the proportion of the school level variance in the subsequent models are shown in Table 3, last three rows. In the null model, both the intercept (2.3, $p < 0.001$) and slope (0.5, $p < 0.001$) were significant. The slope showed an increase of a half a point from the baseline value of 2.3 which indicates a 22% increase in school burnout from grade 7 to 9. The null model also showed that a higher initial level of school burnout was associated with a decrease in school burnout between the measurement occasions (the correlation between intercept and slope for the individual level was -0.56, $p < 0.001$ and for the school level -0.65, $p < 0.001$).

The results of the subsequent models for the individual-level factors are shown in Table 3. Having immigrated to Finland less than 5 years ago was initially associated with higher school burnout. However, the effect disappeared when the association was adjusted with the other individual- and school-level factors (Table 3, Models 2-3). All individual-level factors had some

contribution in reducing the strength of the association between immigration less than five years ago and a higher level of school burnout (Supplementary Table 1). The largest reduction in the association was due to previous school grade and school absences. The models in Table 3 showed that female gender, intact family compared to other family systems and higher parental level of education were associated with a lower initial level of school burnout in the adjusted model. Gender and parental unemployment were associated with slope so that school burnout increased more in girls than in boys, and school burnout increased more among students whose parents were employed at baseline compared to those whose parents were unemployed. A higher number of changes of school, higher school grade, more absences and SEN in grade 6 were associated with higher initial school burnout. Moreover, truancy-related absences were associated with slope, such that school burnout increased, in particular, in students who had no absences due to truancy. Of the school level predictors (percentage of foreign speaking students, percentage of students with SEN, type of school, positive motivation from teachers and school atmosphere), only positive motivation from teachers was associated with lower school burnout (Table 3, Model 3).

The variance due to school-level was 1.6% for the intercept and 2.2% for the slope after being fully adjusted for the individual- and school-level factors (Table 3, Model 5, last row). Although the proportion of school level variance was very small, individual- and school-level factors explained 29% of the school-level intercept and 34% of the school-level slope. The proportion of individual-level effects explained by all factors in the model was small: 7% for intercept and 2% for slope. Fitting the random slope for immigration status showed that the effect of immigration status on school burnout was not different for different schools (the results

not shown). The result remained non-significant when the random slope analysis was carried out in gender groups.

Table 4 shows the interactions between gender (female vs. male) and immigration status (native vs. immigrated 5+ years ago, and native vs. immigrated < 5 years ago) on school burnout and its subscales (exhaustion, cynicism and inadequacy). The development of school burnout and its subscale of cynicism were affected by the interaction between gender and immigration status (Figures 1 and 2). Recently immigrated (<5 years ago) boys exhibited the biggest increase in overall school burnout, in particular in the component of cynicism (Figure 2) and to some extent that of inadequacy (Figure 3), as the interaction term for the slope was on the borderline significant $p = 0.08$ (not shown). Recently immigrated (<5 years ago) girls, in turn, showed the lowest level and smallest growth of school burnout and cynicism during secondary school. School burnout increased most in girls who had not experienced recent immigration than in boys in the same situation, mainly due to a larger increase in exhaustion (Figure 4). On average, boys expressed high levels of cynicism than girls (Figure 2).

Discussion

The present study examined the longitudinal trajectories of school burnout among adolescents from the 7th to 9th grade in Finnish lower secondary schools and how these trajectories differ by immigrant status, gender and their interaction. The results showed that students experienced an increase in overall school burnout during lower secondary school before the transition to upper secondary school. As they moved up from the 7th to 9th grade, students become more overwhelmed and stressed over school. Our findings contribute to the evidence on the importance of school transitions to adolescents' emotional disposition towards school.

When adolescents enter lower secondary school, they have often moved from a smaller and more personalized primary school classroom environment to a larger, impersonal, and more achievement-oriented environment. In primary school, children are mainly taught by the same teacher in the same classroom, whereas in lower secondary school each school subject is taught by a specialist teacher and classrooms tend to be characterized by an increase in teacher control and discipline. However, most of what we know about school transitions and emotional engagement comes from studies done in the USA, where adolescents become less emotionally engaged in school after transitioning to middle and high school (Eccles & Roeser, 2009, 2011). Middle and high school classrooms in the USA tend to be characterized by an increase in teacher control and discipline, with fewer opportunities for student decision-making and self-management (Eccles et al., 1993): Streaming of students is also not uncommon, a practice that can lead to increased social comparison, worries about evaluation, and competitiveness among students. It has been suggested that these features of lower secondary schools interact in numerous ways to thwart adolescents' efforts to meet their developmental needs for competence, relatedness, and autonomy. This, in turn, results in a process of emotional disaffection from school among young people. The reform of the educational system in Finland sought to exclude many of these developmentally misaligned features of classrooms and schools. Our evidence shows that this is no longer the case. Moreover, the educational and social environment has become similarly arduous and competitive for students already towards the end of lower secondary school, the results of which seems to be emotional decline over time and increased school burnout. However, school-related variance played only a very small role in the total variance of school burnout which reflects the generally high similarity between schools in Finland. Although the proportion of school-related variance out of the total variance was small,

about a third of the school-related variance was explained by the covariates in the model. This suggested that an individual student's level of school burnout would depend little on the school attended, but instead is largely determined by individual factors.

The results showed further that the initially apparent higher school burnout among students who had immigrated to Finland within the last five years compared to Finnish native students was largely accounted for by sociodemographic and school-related factors, especially by previously poorer school achievement and more absences from school. A recent longitudinal study by Motti-Stefanidi et al. (2015) shows that school achievement predicts less absences and higher school engagement among both immigrant and non-immigrant students. These findings suggest that school achievement may be an important target of change in young immigrants, as it may potentially facilitate their further motivation and lessen school burnout.

Over time, both immigrant and non-immigrant students showed parallel increasing patterns of school burnout. There was however a persistent gender difference by immigration status, showing that recently immigrated boys experienced a faster increase in school burnout than recently immigrated girls. Of all the gender by immigration groups, the increase was particularly high among immigrant boys and girls who had not experienced recent immigration. The results of our study do not support the immigrant paradox among immigrant boys, a finding which is in line with a previous report on lower school engagement among immigrants (Motti-Stefanidi et al., 2015). Burnout in immigrant boys could be explained by the fact that Finnish schools provide immigrants with little educational support to overcome their language barriers and thereby promote their learning (see also Suarez-Orozco et al., 2009). According to Suarez-Orozco et al., 2009 and a recent OECD (2015) report, the availability of such support is predictive of immigrant students' school adjustment. Social discrimination may also explain why

immigrant status is a risk factor for school adjustment over and above social adversity. However, immigrant girls had lower burnout compared to native girls, a finding which might reflect the immigrant paradox among girls (Motti-Stefanidi, 2015). Finally, concurrent or even cascading linkages between school burnout, in particular cynicism and academic achievement, may also explain these results.

In spite of the challenges immigrant youth face, there is significant diversity in immigrant youth academic adaptation, with some students, in particular girls, showing resilience and doing well academically in spite of adverse circumstances. Their resources for academic adaptation and resilience may stem from their personal and social resources. To explain academic adaptation, previous research has compared the first- with second-generation young people. In the present study, we used the number of years they have lived in Finland, with five as the cut point. The first generation and those who have lived in Finland for less than 5 years may experience feelings of stress more than the second generation, while those who have lived longer in Finland might place special emphasis on their children's education. It has been suggested, for example, that first- compared to second-generation immigrant youth have higher academic motivation (Marks et al, 2014). The results of the present study are also consistent with the stage-environment fit and demands-resources models (Salmela-Aro & Upadyaya, 2014). The results showed that cynicism, in particular, increased among recently immigrated boys. It has been shown among non-immigrant children that cynicism towards school is associated with a fourfold increase in the risk for dropout (Bask & Salmela-Aro, 2013). The present study is the first to study cynicism among immigrants. The finding that these young people are also prone to displaying an increasingly cynical attitude towards school, possibly leading to them drop out of

school, renders the process of integrating into Finnish society even more demanding. At worst, they disengage first from school and then from society.

The poorer adaptation among immigrants in the Finnish context reflects macro-level societal influences. Lack of institutionalized support, low expectations, the fairness of teachers towards students and low tolerance may filter into the school context. We need programs to support immigrant youth learning and engagement and programs against discrimination. How well immigrant youth do in school is an important test for a society and its educational system. It seems that Finland faces many challenges in this respect. Finnish success in the PISA ratings is eroding while inequality is increasing. The government needs to set explicit policy objectives for immigrant students within the broader education policy framework, allocate funding for support systems, and monitor and evaluate the outcomes. Diversity needs to be seen as a resource for, rather than an obstacle to, educational success.

Limitations

The study has its limitations. In Finland, as in many European countries, the number of immigrant students is increasing rapidly. However, the number of immigrants is still quite small in Finland and thus we were not able to examine different immigrant groups. It would be important to examine this issue, as there is considerable diversity among immigrants. Another limitation is the small number of school-level factors that were available. However, schools tend to be very similar in resources, teacher's qualifications and attitudes, so doing this may not add much to the analysis. The proportion of variance accounted for in the association between immigration status and school burnout in individual and school level was small. There may be some other unmeasured factors and interactions between the factors. For instance, we need to

examine acculturation processes and their role in predicting academic adaptation and school burnout. Are individuals who are more integrated into the Finnish culture, which involves a higher adoption of its values, attitudes and behaviors, better adapted to school and more engaged? It might be that the mastery of acculturation tasks is an important prerequisite for the mastery of academic adaptation. For example, mastery of acculturation tasks predicted change in mastery of developmental tasks, not vice versa, and this finding held for both time windows (Motti-Stefanidi, 2015). Thus, mastery of acculturative tasks might pave the way for academic adjustment among immigrant children.

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Table 1. Distributions of the categorical variables and their associations with school burnout.

Variable	%	Time 1 (Grade 7)			Time 2 (Grade 9)		
		School burnout Mean (SD)	Difference in means	Partial Eta squared	School burnout Mean (SD)	Difference in means	Partial Eta squared
<i>Individual level</i>		(max $n = 9223$)					
Immigration status	($n = 9129$)	($n = 9072$)			($n = 5286$)		
Finland native	91.6	2.4 (0.83)	ref		2.8 (0.84)	ref	
Immigrated to Finland 5+ years ago	6.5	2.5 (0.82)	0.04		2.7 (0.82)	-0.05	
Immigrated to Finland <5 years ago	1.9	2.6 (0.98)	0.20*	0.00	2.8 (1.05)	0.19	0.00
Gender	($n = 9223$)	($n = 9069$)			($n = 5286$)		
Female	50.7	2.4 (0.79)	ref		2.8 (0.81)	ref	
Male	49.3	2.5 (0.87)	0.09***	0.01	2.7 (0.87)	-0.06*	0.00
Home language	($n = 9143$)	($n = 9013$)			($n = 5255$)		
Finnish or Swedish	92.7	2.4 (0.82)	ref		2.7 (0.84)	ref	

Other	7.3	2.5 (0.90)	0.08	0.00	2.8 (0.92)	0.10	0.00
Living arrangements	(n = 9153)	(n = 9020)			(n = 5262)		
Live with mother and father	68.6	2.4 (0.81)	ref		2.7 (0.84)	ref	
Other living arrangement	31.4	2.6 (0.87)	0.17***	0.01	2.9 (0.83)	0.15***	0.01
Parents' highest educational level	(n = 9223)	(n = 9072)			(n = 5286)		
University degree	29.4	2.4 (0.81)	ref		2.6 (0.86)	ref	
Lower than university degree	70.6	2.5 (0.83)	0.13***	0.01	2.8 (0.83)	0.16***	0.01
One or both parents unemployed	(n = 8852)	(n = 9072)			(n = 5286)		
No	96.1	2.4 (0.82)	Ref		2.8 (0.84)	Ref	
Yes	3.9	2.5 (0.89)	0.10*	0.00	2.7 (0.83)	-0.05	0.00
SEN support in grade 6	(n = 8525)	(n = 8478)			(n = 4911)		
No	91.7	2.4 (0.82)	ref		2.7 (0.84)	ref	
Yes	8.3	2.7 (0.92)	0.32***	0.01	3.0 (0.81)	0.24***	0.01
<i>School level</i>	(max n = 118)						
School type	(n = 118)	(n = 118)			(n = 118)		
Secondary school only, grades 7-9	46.2	2.5 (0.18)	Ref		2.8 (0.19)	Ref	

Combined with junior school	53.8	2.5 (0.19)	0.04	0.00	2.8 (0.27)	-0.00	0.00
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and/or sixth form

Ref=reference group, SEN = Special educational needs. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2. Distributions of the continuous variables and their associations with school burnout.

Variable	<i>n</i>	Mean (sd)	Range	Correlation with School burnout Time 1	Correlation with School burnout Time 2
<i>Individual level</i>	(max <i>n</i> = 9223)			(n = 5223)	
School burnout Time 1 ^a	9072	2.5 (0.83)	1-5	-	0.33****
School burnout Time 2 ^a	5286	2.8 (0.84)	1-5	(n = 5223) 0.33****	-
Changed school ^b	9107	2.3 (1.06)	1-5	(n = 8980) 0.05****	(n = 5240) 0.04**
Mean grade ^c	9064	8.2 (0.92)	4-10	(n = 8933) -0.24****	(n = 5207) -0.20****
Absences due to illness ^d	8748	2.0 (1.12)	1-4	(n = 8716) 0.11****	(n = 5034) 0.06****
Absences due to truancy ^d	8093	1.1 (0.50)	1-4	(n = 8062) 0.21****	(n = 4667) 0.09****
Absences due to other reasons ^d	8281	1.5 (0.90)	1-4	(n = 8252) 0.09****	(n = 4779) 0.04**
<i>School level</i>	(max <i>n</i> = 118)				
% students speaking a foreign language	118	7.5 (0.85)	0-41	(n = 118) 0.04	(n = 118) 0.03

(other than Finnish or Swedish)

% students with SEN status	118	9.8 (9.65)	0-25	(<i>n</i> = 118)	(<i>n</i> = 118)
				0.35***	-0.02
Positive motivation from teachers ^e	118	3.4 (0.22)	2.8-4.1	(<i>n</i> = 118)	(<i>n</i> = 118)
				-0.30**	-0.21*
Positive school class atmosphere ^e	118	3.5 (0.20)	2.9-3.9	(<i>n</i> = 118)	(<i>n</i> = 118)
				-0.33***	-0.07

Time 1 = Grade 7, Time 2 = Grade 9, SEN = Special educational needs. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Mean of nine items

^b n of times: 1 = none, 2 = 1 time , 3 = 2 times, 4 = 3 times, 5= 4 or more times

^c Mean grade of three subjects (Finnish, Mathematics and First foreign language)

^d n of days last month: 1 = none, 2 = 1 day , 3 = 2-3 days, 4 = 3 or more days

^e Mean of three items: 1 = the lowest level of positive motivation from teachers/positive school class atmosphere, 5 = the highest level of positive motivation from teachers/positive school class atmosphere

Table 3. Individual and school level predictors in random effects model of the intercept and slope of school burnout (n of students = 9223, n of school=118).

	Model 1		Model 2		Model 3	
	Intercept	Slope	Intercept	Slope	Intercept	Slope
	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI
<i>Individual level fixed effects</i>						
Immigrated to Finland (ref = native)						
Immigrated 5+ years ago	0.05 [-0.02, 0.12]	-0.09 [-0.19, 0.02]	0.04 [-0.03, 0.11]	-0.08 [-0.19, 0.03]	0.05 [-0.02, 0.11]	-0.09 [-0.20, 0.02]
Immigrated <5 years ago	0.21* [0.04, 0.38]	-0.03 [-0.36, 0.30]	0.09 [-0.07, 0.25]	-0.03 [-0.35, 0.29]	0.10 [-0.06, 0.26]	-0.03 [-0.35, 0.28]
Male gender	0.09*** [0.05, 0.14]	-0.15*** [-0.21, -0.10]	0.05** [0.02, 0.10]	-0.15*** [-0.20, -0.09]	0.05** [0.01, 0.10]	-0.15*** [-0.20, -0.09]
Finnish or Swedish speaking	-	-	0.02 [-0.07, 0.10]	-0.06 [-0.19, 0.08]	0.01 [-0.07, 0.10]	-0.06 [-0.19, 0.07]

Intact family	-	-0.07***	-0.01	-0.07***	-0.01
		[-0.11, -0.03]	[-0.06, 0.05]	[-0.11, -0.03]	[-0.07, 0.05]
Parent(s) with university degree	-	-0.04*	-0.03	-0.04*	-0.04
		[-0.08, -0.01]	[-0.08, 0.02]	[-0.08, -0.00]	[-0.09, 0.01]
Parent(s) unemployed	-	0.01	-0.14*	0.01	-0.14*
		[-0.09, 0.10]	[-0.28, -0.00]	[-0.09, 0.10]	[-0.28, -0.00]
Changed school	-	0.03**	0.00	0.02**	0.00
		[0.01, 0.04]	[-0.02, 0.02]	[0.01, 0.04]	[-0.02, 0.02]
School grade	-	-0.16***	0.00	-0.16***	0.00
		[-0.19, -0.15]	[-0.03, 0.03]	[-0.18, -0.14]	[-0.03, 0.03]
Absences due to illness	-	0.04***	-0.02	0.04***	-0.02
		[0.02, 0.06]	[-0.04, 0.00]	[0.02, 0.06]	[-0.04, 0.00]
Absences due to truancy	-	0.25***	-0.14***	0.25***	-0.14***
		[0.20, 0.30]	[-0.22, -0.07]	[0.20, 0.30]	[-0.22, -0.07]
Absences due to other reasons	-	0.04**	-0.02	0.04**	-0.02
		[0.01, 0.06]	[-0.05, 0.01]	[0.01, 0.06]	[-0.05, 0.01]

SEN support	-		0.10**	-0.01	0.10**	-0.01
			[0.04, 0.19]	[-0.12, 0.10]	[0.03, 0.19]	[-0.12, 0.10]
<i>School level fixed effects</i>						
% students speaking foreign language (not Finnish or Swedish)					-0.20	-0.19
					[-0.48, 0.07]	[-0.62, 0.25]
Secondary school grades 7-9 only					-0.03	0.02
					[-0.07, 0.02]	[-0.04, 0.09]
% students with SEN status					0.00	-0.00
					[-0.00, 0.01]	[-0.01, 0.00]
Positive motivation from teachers					-0.20*	0.15
					[-0.37, -0.03]	[-0.09, 0.40]
Positive school class atmosphere					-0.14	0.20
					[-0.29, 0.02]	[-0.01, 0.42]
R ² (within)	0.01	0.01	0.07	0.01	0.07	0.01
R ² (between)	-	-	-	-	0.29	0.34

Random effects (within

school)

Variance for school burnout	0.02**	0.02**	0.01**	0.02**	0.01**	0.02**
	[0.01, 0.02]	[0.01, 0.03]	[0.01, 0.02]	[0.01, 0.03]	[0.00, 0.01]	[0.00, 0.02]
Residual variance for school burnout	0.67*	0.90*	0.61*	0.89*	0.61***	0.89***
	[0.64, 0.70]	[0.84, 0.95]	[0.59, 0.64]	[0.84, 0.95]	[0.59, 0.64]	[0.84, 0.95]
% school level variance	2.9%	2.2%	1.6%	2.2%	1.6%	2.2%

Est = Unstandardized estimate, 95%CI = 95% Confidence Interval, SEN = Special educational needs. * $p < 0.05$, ** $p < 0.01$, *** $p <$

0.001. Model 1: The association between immigration status and gender with school burnout intercept and slope. Model 2: Model 1

adjusted for individual-level factors. Model 3: Model 2 adjusted for school-level factors

Table 4. School level predictors in random effects model of the intercept and slope of school burnout and its subscales (*n* of students = 9223, *n* of school=118).

	School burnout		School burnout subscores					
	total score		Cynicism		Inadequacy		Exhaustion	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI	Est. 95%CI
Immigration status (ref = Finland native)								
Immigrated to Finland	-0.01	0.04	0.02	0.05	0.02	-0.03	0.06	-0.10
5+ years ago	[-0.25, 0.23]	[-0.39, 0.47]	[-0.27, 0.30]	[-0.47, 0.56]	[-0.06, 0.11]	[-0.17, 0.11]	[-0.01, 0.14]	[-0.23, 0.02]
Immigrated to Finland	0.41	-1.18*	0.61*	-1.12*	0.03	-0.04	0.13	-0.13
<5 years ago	[-0.07, 0.81]	[-2.22, -0.14]	[0.12, 1.09]	[-2.30, -0.01]	[-0.16, 0.22]	[-0.37, 0.30]	[-0.05, 0.30]	[-0.48, 0.22]
Male gender	0.06*	-0.15***	0.21***	-0.04	-0.02	-0.06	-0.03	-0.26***
	[0.01, 0.10]	[-0.21, -0.09]	[0.16, 0.27]	[-0.11, 0.03]	[-0.06, 0.03]	[-0.12, 0.01]	[-0.07, 0.02]	[-0.33, -0.20]
Interaction effect ^a								

Male gender	0.04	-0.09	0.01	-0.10	-	-	-	-
*Immigrated 5+ years ago	[-0.11, 0.19]	[-0.35, 0.17]	[-0.17, 0.18]	[-0.41, 0.22]				
Male gender	-0.21	0.78*	-0.34*	0.80*	-	-	-	-
*Immigrated <5 years ago	[-0.54, 0.13]	[0.08, 1.48]	[-0.67, -0.02]	[0.07, 1.57]				

Est = Unstandardized estimate, 95%CI = 95% Confidence Interval. ^a Interaction term included only if significant ($p < 0.05$). Models adjusted for level 1 fixed effects of immigration status, gender, home language, intact family, parents' highest education, one or both parents unemployed, changed school, school grade, school absences and special educational needs support in grade 6, and level 2 fixed effects of % of students speaking a foreign language, n of students in school, whether lower secondary school grades 7-9- only, % of students with special educational needs status, positive motivation from teachers and positive school class atmosphere. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

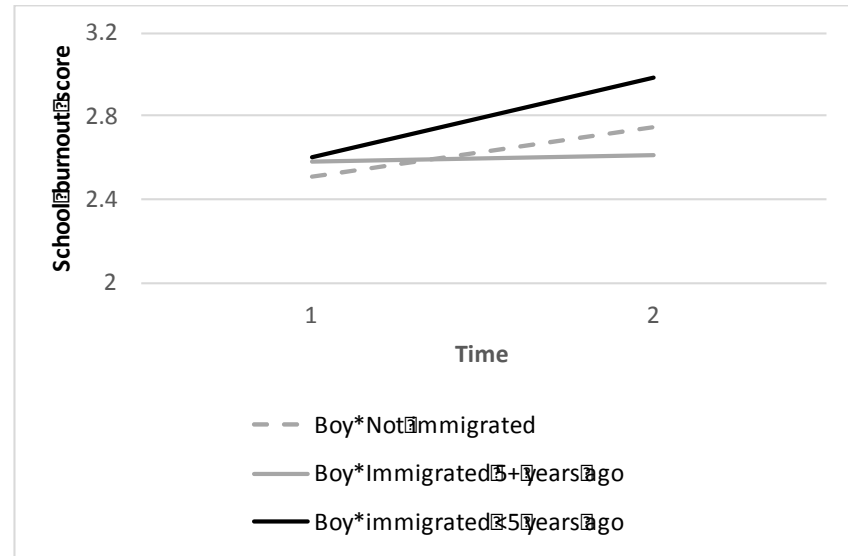
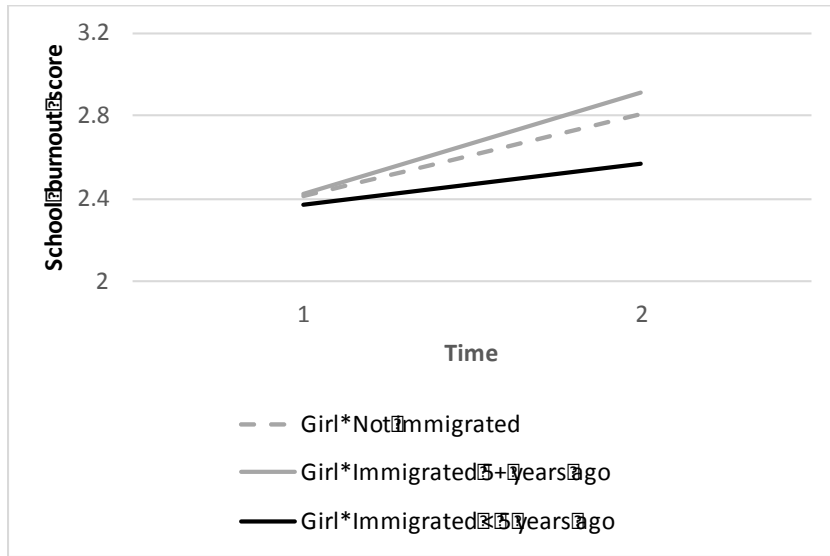
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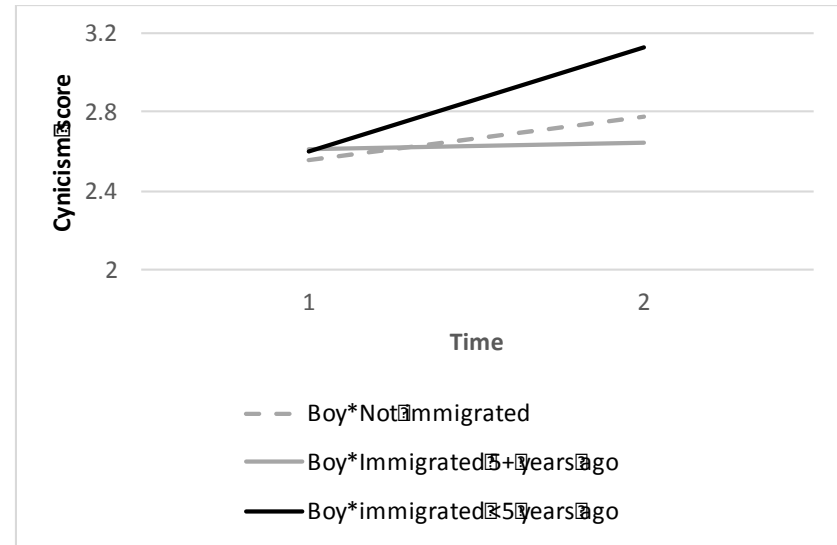
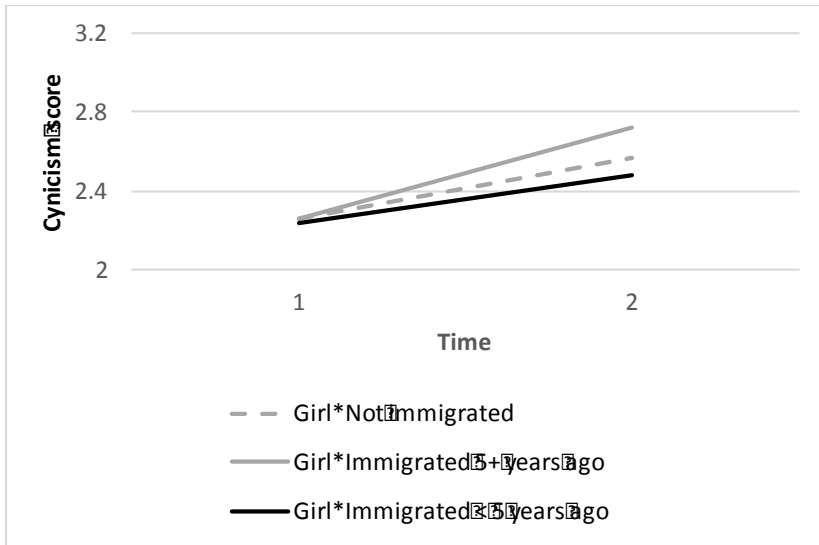
Figure 1. School burnout by gender and immigration status in lower secondary school (model shown in Table 4) (n of students = 9223, n of school=118). Time 1 = Grade 7, Time 2 = Grade 9.

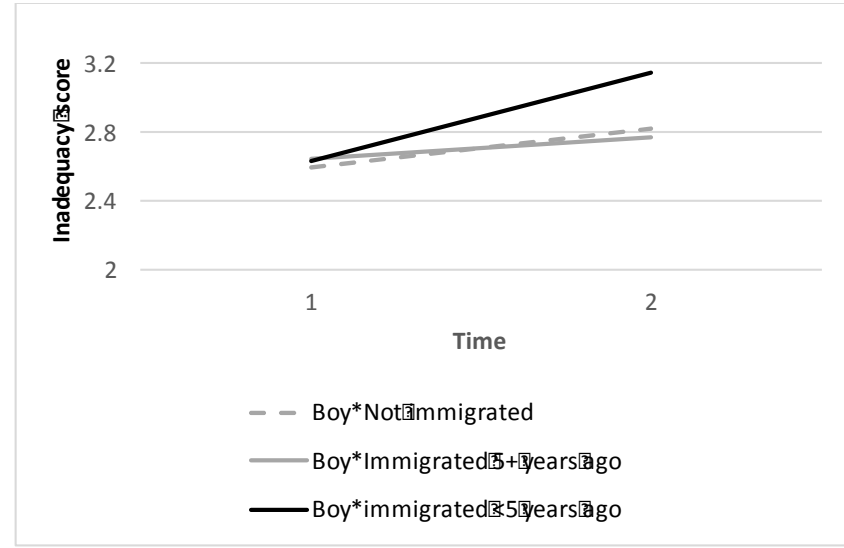
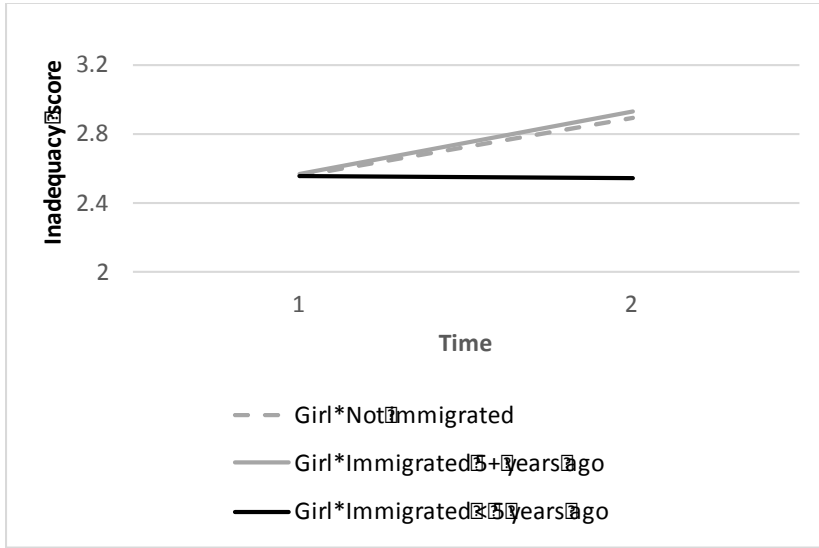
Figure 2. Cynicism by gender and immigrations status in lower secondary school (model shown in Table 4) (n of students = 9223, n of school=118). Time 1 = Grade 7, Time 2 = Grade 9.

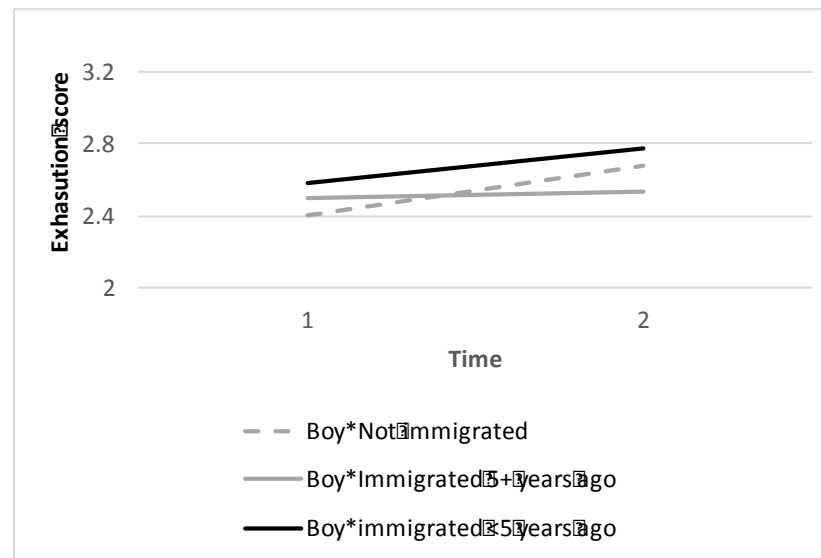
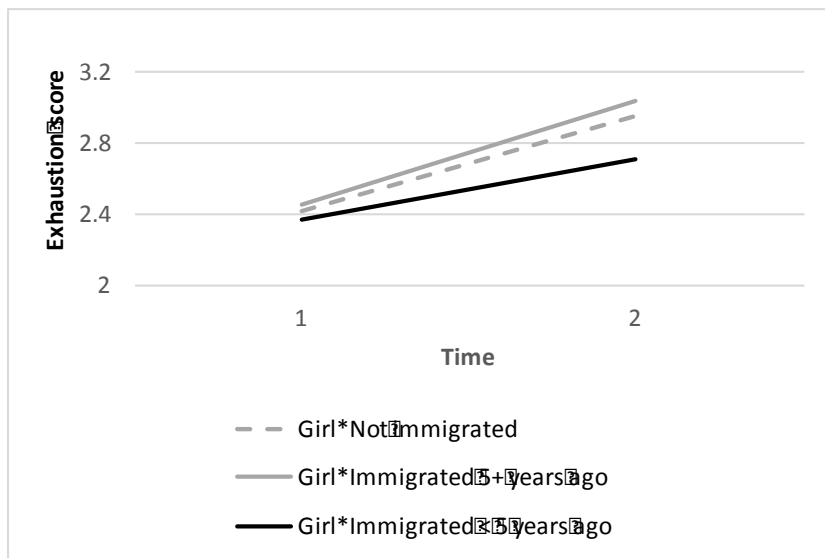
Figure 3. Inadequacy by gender and immigrations status in lower secondary school (model shown in Table 4) (n of students = 9223, n of school=118). Time 1 = Grade 7, Time 2 = Grade 9.

Figure 4. Exhaustion by gender and immigrations status in lower secondary school (model shown in Table 4) (n of students = 9223, n of school=118). Time 1 = Grade 7, Time 2 = Grade 9.









Supplementary Table 1. The effect of individual level predictors in the association between gender, immigration status and the intercept of school burnout (*n* of students = 9223, *n* of school=118).

	Adjusted for								
	1	2	3	4	5	6	7	8	
	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.
95%CI	95%CI	95%CI	95%CI	95%CI	95%CI	95%CI	95%CI	95%CI	95%CI
Immigrated to Finland (ref = native)									
Immigrated 5+ years ago	0.05	0.04	0.05	0.06	0.05	0.03	0.06	0.03	0.04
	[-0.02, 0.12]	[-0.04, 0.11]	[-0.02, 0.11]	[-0.00, 0.13]	[-0.02, 0.11]	[-0.04, 0.10]	[-0.00, 0.12]	[-0.03, 0.10]	[-0.03, 0.11]
Immigrated <5 years ago	0.21*	0.18	0.17	0.20*	0.20*	0.17*	0.15	0.15	0.20*
	[0.04, 0.38]	[-0.00, 0.35]	[-0.00, 0.34]	[0.04, 0.37]	[0.03, 0.37]	[0.01, 0.34]	[-0.00, 0.32]	[-0.01, 0.31]	[0.04, 0.36]
Male gender	0.09***	0.09***	0.09***	0.09***	0.09***	0.10***	0.05*	0.08***	0.09***

	[0.05,	[0.05,	[0.05,	[0.05,	[0.05,	[0.05,	[0.01,	[0.04,	[0.05,
	0.14]	0.14]	0.14]	0.14]	0.14]	0.14]	0.09]	0.13]	0.14]
1. Finnish or Swedish speaking	-	-0.05	-	-	-	-	-	-	-
		[-0.17,							
		0.09]							
2. Intact family	-	-	-0.16***	-	-	-	-	-	-
			[-0.20,						
			-0.12]						
3. Parent(s) with university degree	-	-	-	-0.13***	-	-	-	-	-
				[-0.17,					
				-0.09]					
4. Parent(s) unemployed	-	-	-	-	0.10	-	-	-	-
					[-0.02,				
					0.20]				
5. Changed school	-	-	-	-	-	0.04***	-	-	-

									[0.03,	
									0.06]	
6. School grade	-	-	-	-	-	-	-	-0.21***	-	-
									[-0.23,	
									-0.19]	
7. Absences due to illness	-	-	-	-	-	-	-	-	0.05***	-
									[0.04,	
									0.07]	
7. Absences due to truancy	-	-	-	-	-	-	-	-	0.31***	-
									[0.26,	
									0.36]	
7. Absences due to other reasons	-	-	-	-	-	-	-	-	0.04**	-
									[0.01,	
									0.06]	
8. SEN	-	-	-	-	-	-	-	-	-	0.32***

[0.25,
0.40]

Est = Unstandardized estimate, 95%CI = 95% Confidence Interval, SEN = Special educational needs. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Note the estimates are from the random effects model including both intercept and slope for school burnout. The table shows only the associations with the intercept of school burnout because 1) only this parameter was associated with immigration status, and 2) although male gender was associated with a slower increase in school burnout (slope), none of the covariates had effect on this association. Adding school level covariates did not affect the association between gender or immigration status with school burnout intercept, and therefore they are not shown.