

Immigrant Integration and Youth Mental Health in Four European Countries

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Abstract

The mental health of children of immigrant background compared to their majority peers is an important indicator of integration. We analyse internalizing and externalizing problems in 14–15-year-olds from England, Germany, the Netherlands, and Sweden ($n = 18,716$), using new comparative data (*Children of Immigrants Longitudinal Survey in Four European Countries*). Studying more than 30 different origin countries, we find that despite potential problems with acculturation and social stress, children of immigrants—particularly from geographically and culturally distant countries—report systematically fewer internalizing and externalizing problems than the majority population, thus supporting the ‘immigrant health paradox’ found in some studies. However, surprisingly, we do not find that this minority advantage changes with time in the destination country. Externalizing problems are most prevalent in our English sample, and overall Swedish adolescents show the least mental health problems. A plausible account of our results is that there is a positive selection of immigrants on some persistent and intergenerationally transferable characteristic that invokes resilience in children.

Introduction

Following increased immigration, many Western countries have seen segregation and economic cleavages between the immigrant and the native population, making the integration of immigrants a central concern for both research and policy. One highly relevant indicator of immigrants’ integration is the mental health gap to the majority population, which, as pointed out by Vega and Rumbaut (1991), is an indicator of great sociological relevance because it reflects how micro-level subjective experiences are embedded in societal structures.

Children of immigrant background are a group of particular interest, as they rarely made the choice to move but may suffer from their families’ experience of unemployment, poverty, and discrimination. In addition, they may face stress over adaptation to the host society, including cross-pressure from parents’ and peers’ norms, values, and expectations (Berry, 1997). However, mechanisms such as ‘positive’ immigrant selection (Jasso *et al.*, 2004), family relations (Fuligni, 1998), and social comparison may work in the other direction, rendering the net outcome of immigrant-

majority difference in youth mental health difficult to predict. In fact, some have found support for what has been termed ‘the immigrant health paradox’, namely that youth of immigrant background have better health than the majority population, despite many worries to the contrary (e.g., Harker, 2001; Beiser *et al.*, 2002). The literature has however produced mixed results, often relying on data sets that are small, restricted to single host countries, and including few sending countries.

Theoretically, the observed cross-sectional differences in health between immigrants and the majority are likely to result from the composition of the migrant population (in terms of, e.g., economic and cultural ‘distance’ from the host society), the time they have spent in the receiving country, and characteristics of this society. The ideal set-up for addressing this issue—as emphasized by Vega and Rumbaut (1991)—is therefore a study that takes the diversity in origins, destinations, and time since immigration into account, using common design and instruments across destination countries.

Our contribution is to take a major step in this direction. We model adolescents’ mental health, in terms of internalizing and externalizing problems, using a large ($n = 18,716$) dataset from England, Germany, Sweden, and the Netherlands (*Children of Immigrants Longitudinal Survey in Four European Countries*, CILS4EU). These data are nationally representative; purposefully designed for studying integration; contain majority and immigrant respondents representing a large set of origin countries; and includes information on immigrant generation and time in the destination country. Together, this gives exceptional opportunities to address heterogeneity and adjudicate between different theoretical scenarios, and data from four destination countries give us a chance of uncovering general mechanisms as well as host-country differences.

Our empirical test aims, first, at discerning whether children of native or immigrant origin have better mental health, distinguishing seven immigrant origin groups based on geographical region. Secondly, we address the issue of the dynamics of these group differences by analysing how they vary with the time spent in the destination country. Thirdly, we address heterogeneity among immigrants by scrutinizing the gaps to the majority across 36 single-origin countries. Finally, we explore host-country differences in youth mental health both by studying host-country main effects and by comparing as-similar-as-possible groups of immigrants across our four destination countries. Our multiple-destination, multiple-origin, and multiple-generation design overcomes problems that characterize much previous research, and allows us to draw unusually robust conclusions about differences

in mental health between youth of immigrant and majority background in a European setting.

Theories and Previous Research

Immigrant Background and Generation

There are several reasons to expect immigrants to have poorer mental health than the majority. *Acculturation theory* (e.g., Berry *et al.*, 1987) emphasizes the mental stress of leaving familiar customs and lifestyles and having to adapt to a new society with another language and a different culture. Theories about *social stress* point to destination country experiences often shared by immigrants, such as of economic deprivation, social exclusion, and discrimination, which can lead to worse mental health in youth (e.g., Mossakowski, 2008), for example, because parents provide less social support in stressful situations (Conger *et al.*, 1994). Immigrant families who are economically successful may still pursue an assimilation strategy that aims to combine economic integration with cultural preservation (Portes and Zhou, 1993), something that may lead children to experience conflicting demands and generational tension (Foner and Dreby, 2011).

Furthermore, there may be a mechanism of *negative selection*: if immigrants are refugees from conflict-ridden or poverty-struck countries, they may suffer from pre-migration traumatic and stressful experiences, leading to health problems (cf. Montgomery, 2011). Relatedly, emigration typically means leaving family and friends behind, which can evoke feelings of loss and concern over their well-being.

Despite sound reasons for expecting a health disadvantage among immigrants, there is in fact some evidence showing the opposite, sometimes labelled the ‘immigrant health paradox’ (Markides and Rote, 2015). Explanations for this are commonly sought in a *positive selection* of immigrants. Because migration is demanding, many immigrants will possess advantageous personal characteristics (such as drive and ambition), human capital, economic resources, and even good health (e.g., Jasso *et al.*, 2004; Feliciano, 2005; Ichou, 2014). Another reason might be *social comparison*: migrants may feel better because they evaluate their situation in relation to their previous conditions, assuming they have improved; or to those (presumably worse off) who did not migrate, rather than to the majority population, partly because people under stress in general may favour downward social comparisons (Wills, 1981). Finally, some immigrant groups differ from the majority in terms of tighter family bonds (Fuligni, 1998), which may be conducive to mental health and bolster against the negative effects of different stressors.

Most theories predicting minority disadvantage as well as advantage have central dynamic features: they suggest a gradual decline of ethnic differences from immigration and onwards. On the one hand, theories pointing to a *bad start* predict *positive acclimatization*: stress related to the migration experience is likely to decrease over time, as is the experience of problems related to acculturation and deprivation, because over time most immigrants become more—though not necessarily fully—economically and culturally integrated into host societies (cf. Alba and Nee, 2003). Similarly, mental health problems caused by traumatic events in the origin country are likely to become less severe over time (e.g., Montgomery, 2011).

On the other hand, most theories that suggest *better* mental health for immigrants suggest a *good start but negative acclimatization*. Social comparisons will increasingly be made with reference to the destination country population, suggesting that initial advantages dissipate with time in the destination country, and may be totally absent for the second generation. Positive selection mechanisms hold primarily for the adults in the first generation, although some characteristics of parents can be transmitted to children, genetically or through socialization. Likewise, immigrant characteristics that buffer against stressors—including strong family ties—probably become less pronounced as families integrate into host societies.

It Matters Where You Come From—and Where You End Up

Although there is a general element to the theories discussed, they are likely to be especially valid for the case where immigrants from geographically and culturally distant and less economically developed countries migrate to richer, mostly Western, countries. Theories based on acculturation, discrimination, and social stress would predict that immigrants from more distant origins fare the worst. However, if one believes in the buffering effects of positive selection or in social comparison mechanisms, the opposite process can be expected—an assumption that has received support in a recent Canadian study (Montazer and Wheaton, 2011).

Mental health can also differ across destination countries. Welfare provision directed to families and children, the organization of schools and labour markets, and the level of inequality of both condition and opportunity may play a role for youth mental health, both in general and for immigrants in particular (cf. Crul and Schneider, 2010). Previous research on the overall living conditions for young people shows the Netherlands and Sweden to

be the most ‘child-friendly’ countries in Europe, summarizing a large number of domains (Bradshaw and Richardson, 2009). Germany takes a position somewhat closer to the European average, while systematically lower values for the separate domains as well as for the overall index are reported for England.

While some would conclude that such results support the idea of a positive welfare state effect, others see welfare state adversity. Lindgren and Lindblad (2010) argue that the welfare state promotes an obsession with health, ‘stress panic’, increased sensitivity to even trivial ailments, and an excessive fear of risks, so that paradoxically the well-being of children would develop inversely to the expansion of the welfare state.

Characteristics of the destination country may also affect immigrants more than the majority. For example, attitudes towards immigrants among the majority population are likely to matter (Portes and Rumbaut, 1990). Survey data show that among the countries we study, Sweden stands out as the most ‘immigrant-friendly’ society (Coenders, Lubbers, and Scheepers, 2005; Malchow-Møller *et al.*, 2009), while people in the other three countries tend to be far more sceptical to immigration, with no clear ranking. Also when it comes to policies Sweden stands out, being ranked as the most multicultural of the 38 European and OECD countries covered by the Migrant Integration Policy Index, both in 2010 and 2014.¹ Our other three countries are close to the EU15 average.

Insofar as immigrant selectivity impacts on mental health (in any direction) we can expect England, among our countries, to stick out: It has the most favourably selected immigrant body, with on average higher education than the majority population, and a relatively large proportion coming for work or higher education. In Germany, the Netherlands, and (in particular) Sweden, refugee/humanitarian-type migration is more common, and immigrants tend to have lower education than the majority (OECD, 2012). In terms of labour market integration, the Netherlands and Sweden have the largest relative disadvantage for immigrants, while England has the smallest, and Germany falls in between (Eurostat, 2016).

Mixed Findings in Previous Studies

Just as theories of majority-minority mental health differences point in opposite directions, so do previous empirical findings. Several studies on US and Canadian data show that immigrant children have better mental health than the majority population (e.g., Harker, 2001; Beiser *et al.*, 2002; Montazer and Wheaton, 2011; cf. Rumbaut, 1997), but a recent systematic review

(Belhadj Kouider *et al.*, 2015) demonstrates a tendency of more internalizing symptoms among those with a migration background, while differences in externalizing problems are less consistent.

Findings are mixed also in European studies (e.g., Stevens and Vollebergh, 2008). In their review, Belhadj Kouider *et al.* (2014) find higher prevalence of internalizing problems in migrant children, but several studies also show the opposite result, or no difference. For externalizing problems, the findings are even more mixed with an equal representation of no difference, immigrant advantage, and immigrant disadvantage. A few multi-country studies underline these inconsistent results: Sam *et al.* (2008) report immigrant advantage and convergence across generations for externalizing but not internalizing symptoms; Molcho *et al.* (2010) show mixed results across externalizing indicators; Stevens *et al.* (2015) find very weak first but no second-generation disadvantage in psychosomatic problems and overall disadvantage in externalizing behaviour.

For our four countries, a review of studies for the *United Kingdom* shows that adolescents of some ethnic minority groups have better mental health than the majority, while others do not (Goodman *et al.*, 2008). For *Germany*, a review concludes that young migrants have more emotional and behavioural problems than their native peers in several age groups, but that differences are less evident among adolescents (Frankenberg *et al.*, 2013). A recent German study reports more mental health problems among Turkish-background youth, accounted for by differences in socio-economic status (Brettschneider *et al.*, 2015). For *the Netherlands*, a recent large-scale study shows more conduct problems but less hyperactivity among those with non-Western background, but only very small or negligible differences in emotional problems (Duinhof *et al.*, 2015). Another study finds first-, but not second-, generation immigrants to have fewer psychological problems than native Dutch (van Geel and Vedder, 2010). For *Sweden*, Hjern *et al.* (2013) demonstrate that among 15-year-olds with African or Asian background, first-generation immigrants have lower and second-generation higher well-being than the majority.

Very few studies have compared the immigrant situation across destination countries. Sam *et al.* (2008) show children of immigrant origin to do better than the majority in Finland, Norway, and Sweden, but not in Portugal and the Netherlands; Molcho *et al.* (2010) find no pattern across nine countries and three regions; Stevens *et al.* (2015) fail to find any differences in a test across 10 countries (England and Sweden not included).

In sum, there is a conspicuous lack of systematic patterns in previous research. This may depend on which aspect of mental health is studied (e.g., internalizing or externalizing problems), on which origin and destination countries are included, age of the respondents, or immigrant generation. It is striking that no study, to our knowledge, has been able to address heterogeneity in sending and destination countries simultaneously. The main contribution of our study is to do precisely that.

Research Questions

Based on theories and previous research, the hypotheses derived are mostly contradictory, and are more aptly formulated as research questions:

- Q1. Do children of immigrant background have worse or better mental health than children of the majority?
- Q2. Do those from culturally and socio-economically more distant origin countries fare worst, or, alternatively, best?
- Q3. Do differences in mental health between immigrant-background and majority youth vary with time spent in the host country?
- Q4. Do we find different average levels of mental health problems, and different gaps between minority and majority youth, across our four destination countries?

Data

The data are derived from the first wave of a harmonized longitudinal survey of adolescents in England, Germany, the Netherlands, and Sweden carried out within the project CILS4EU, funded by several European research councils (NORFACE). The study is cross-national and longitudinal with a focus on integration, and uses a two-step cluster design: first, schools were selected, over-sampling schools with a high proportion of immigrant youth; then two randomly drawn classes within each school were sampled. In wave 1, conducted in 2010–2011, 18,716 pupils, 14–15 years of age, in 952 classes in 480 schools filled out questionnaires and took tests during two school hours. The school participation rate ranged between 66 (England) and 99 per cent (Germany), and the student participation rate between 81 (England) and 92 per cent (the Netherlands) (see further the [Supplementary Appendix A](#) and [Table A1](#)). We exclude students missing on the relevant dependent variable, and 28 respondents judged to be unreliable due to implausible response patterns, resulting in analysis samples of 18,370 (internalizing) and 15,859 (externalizing).² The study design and technical

details are described in [Kalter et al. \(2013\)](#) and at www.cils4.eu, and the survey data are available at the GESIS data archive (www.gesis.org; ZA5353 data file).

The students answered the first wave's questionnaires in school in late 2010 and spring 2011, at age 14–15 years. Parents also filled out a questionnaire, and in Sweden additional information was collected from registers. Both students and parents were informed that participation was voluntary and that their responses were anonymous.

Variables

Poor mental health tends to be expressed differently among boys and girls, with girls more frequently exhibiting depression, anxiety, and somatic complaints (e.g., [Torsheim et al., 2006](#)), whereas boys more often exhibit negative externalizing behaviours, such as aggressiveness, impulsivity, or delinquency ([Leadbeater et al., 1999](#)). To ensure a picture relevant for both boys and girls, we therefore (as normal in the literature) use both internalizing and externalizing problems as dependent variables.

Internalizing problems are measured by six questions on frequency of feeling worried, depressed, anxious, and having a headache, stomach ache, or difficulties falling asleep. Similar indicators have been extensively used in previous research on youth health, showing good reliability and validity ([Haugland and Wold, 2001](#)), and forming a unidimensional scale ([Ravens-Sieberer et al., 2008](#)). We report the mean score from a summated index (i.e., the respondent's sum divided by his/her number of valid items; range = 0–3). The included items and values are listed in [Supplementary Table A2](#), and [Supplementary Table A3](#) reports descriptives for this and other variables in our analyses. In a factor analysis, the six items fall into one single dimension (eigenvalue = 1.94 [immigrants 1.97, majority 1.90]; Cronbach's α = 0.74 [immigrants 0.73, majority 0.75]).

Externalizing problems are measured by a summated index of 12 indicators of aggressiveness and delinquent and rowdy behaviour (cf. [Achenbach, 1991](#)). The index is expressed as a mean score (eigenvalue = 2.58 [immigrants 2.53, majority 2.62], Cronbach's α = 0.74 [immigrants 0.73, majority 0.75]). Its correlation with the index of internalizing problems is moderate, at $r = 0.32$.

Immigrant origin is based on students' responses about own as well as parents' country of birth. The *majority* includes those born in the country of destination (or adopted at young age), who have at least one parent who was also born in this country (in cases where we have information on only one parent, background is

defined from this).³ Adolescents who were born abroad, and/or whose two parents (or the only parent) were born abroad, are defined as having *immigrant background*. Adolescents with immigrant parents from different countries are assigned their mother's country of birth.

For identifying immigrant origins that are culturally closer or more distant to the host country, we constructed two indicators. First, we use an eight-category 'regional origin' variable with an approximate ranking of geographical as well as cultural distance, where we view the four non-Western, non-European groups as most distant, suggesting that problems of acculturation and discrimination may be more badly felt for respondents of these origins (or, conversely, that social comparisons may be more advantageous). Second, drawing a line at $n = 30$, we distinguish 36 immigrant origin countries in our most detailed analyses.

Time in the destination country, indicating exposure to the destination country, is measured in years (meaning that the second generation get the value of their age).

Gender (boy/girl) is based on self-reports.

Age is measured as date of interview–date of birth and effect estimates are expressed in years.

Family type is based on information from the students' questionnaire, reporting whether the child lives with two biological/adoptive parents or not (a more detailed family type variable did not affect the majority/immigrant differences).

Parents' education is coded into the six-category version of the CASMIN educational schema ([Müller and Shavit, 1998](#)). To maximize reliability, we use information primarily from parents (in the case of Sweden also register information), and when no such information is available, from the student's questionnaire (e.g., [Engzell and Jonsson, 2015](#)).

Parents' occupational status is based on survey reports from parents and children, coded to the 2008 International Standard Classification of Occupations (ISCO-08), and converted into the interval-scale ISEI-08 occupational status ([Ganzeboom, de Graaf and Treiman, 1992](#); [Ganzeboom, 2010](#)). Values range from 11 to 89, with higher values representing a higher status. The higher of two cohabiting biological/adoptive parents' ISEI scores, or a single parent's ISEI score, indicates family occupational status. If one of two cohabiting parents is unemployed or has missing information, the value of the employed/non-missing parent is assigned. If both parents (or the single parent) are unemployed, a value of 0 is assigned.

Parents' unemployment is a dichotomy indicating whether both parents (or the single parent) were unemployed at the time of interview.

Table 1. Multivariate OLS regression estimates and robust standard errors for internalizing and externalizing problems (mean score units) in 14–15-year olds according to origin region, destination country, sex, and age. $n = 18,370$ (internalizing); 15,859 (externalizing)

	Internalizing problems		Externalizing problems	
	Model 1	Model 2	Model 1	Model 2
Origin region				
Majority (ref.)	0.000	0.000	0.000	0.000
Western Europe	−0.010 (0.049)	−0.014 (0.048)	0.059 (0.040)	0.059 (0.039)
Southern Europe	−0.067*** (0.022)	−0.049** (0.022)	−0.062*** (0.019)	−0.053*** (0.018)
Eastern Europe	0.012 (0.023)	0.015 (0.023)	0.017 (0.022)	0.021 (0.022)
Latin America	−0.048 (0.031)	−0.071** (0.032)	−0.007 (0.027)	−0.033 (0.026)
Asia (other)	−0.034 (0.024)	−0.015 (0.024)	−0.126*** (0.018)	−0.110*** (0.018)
Middle East	−0.045*** (0.014)	−0.028* (0.015)	−0.072*** (0.013)	−0.055*** (0.013)
Africa	−0.134*** (0.020)	−0.133*** (0.021)	−0.101*** (0.015)	−0.099*** (0.015)
Destination country				
England (ref.)	0.000	0.000	0.000	0.000
Germany	−0.072*** (0.014)	−0.075*** (0.015)	−0.154*** (0.015)	−0.165*** (0.015)
Netherlands	−0.153*** (0.014)	−0.135*** (0.015)	−0.189*** (0.014)	−0.176*** (0.014)
Sweden	−0.275*** (0.015)	−0.275*** (0.016)	−0.177*** (0.014)	−0.176*** (0.014)
Sex				
Boy (ref.)	0.000	0.000	0.000	0.000
Girl	0.374*** (0.009)	0.370*** (0.008)	−0.036*** (0.007)	−0.041*** (0.007)
Age	0.013 (0.010)	0.006 (0.010)	0.107*** (0.009)	0.097*** (0.009)
Girl \times age	0.057*** (0.014)	0.056*** (0.014)	−0.052*** (0.012)	−0.054*** (0.012)

*** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$.

Note: Model 1 controls for destination country, sex, age (means-centred), sex \times age and stratum. Model 2 adds family type, parental education, parents' ISEI, and parental unemployment.

Stratum refers to the proportion of pupils with non-European, non-Western background in the school, used for stratifying the sample into four groups.

Methods

In the multivariate analyses, linear (OLS) regression is used.⁴ Because school classes are the sampling unit, standard errors are clustered at this level. To compensate for the oversampling of immigrant dense schools, we control in all analyses for the sampling criterion, stratum (entered as dummies).⁵ We show conventional

tests for statistical significance, but because immigrant categories differ strongly in size, statistical significances are rather uninformative (and multiple comparisons put further limits on traditional tests). We therefore emphasize systematic patterns rather than statistical significances of single coefficients.

We use multiple imputation (Stata's MI module with chained imputations, 20 datasets) to deal with item non-response. Cases missing on the dependent variables are used in the imputation model but excluded from the regression (cf. von Hippel, 2007). In addition to the variables in our models, we include test results (vocabulary

and cognitive ability) in the imputation model, as these are correlated to the risk of item nonresponse. The imputation model converged without problems, and results are very similar when using the non-imputed data, full information maximum likelihood estimation, or alternative imputation models.

The Overall Picture: Support for the Immigrant Health Paradox

Table 1 shows the differences between majority youth and youth of immigrant origin, adjusted for destination country, sex, age, sex*age interaction, and sample stratum (Model 1); then also for family characteristics (Model 2). While the estimated differences in the first model incorporate any effects mediated by differences in family types and socio-economic situation across different groups, the second model estimates the health differences net of these factors.

The results convincingly support the immigrant health paradox—children of non-European and South European origins score more favourably (i.e., have fewer problems) on both the internalizing and the externalizing indices, whether we control for family characteristics or not.⁶ The small changes that occur across models 1 and 2 are due to differences in family separation rates across groups—parental education, socio-economic status, and unemployment also vary across origin groups, but have no impact on the immigrant/majority difference as they are very weakly associated to mental health.⁷ This result, suggesting that parental socio-economic variables neither suppress nor mediate the immigrant/majority differences, holds in all subsequent analyses as well.

In line with the selection and social comparison theories, those of African background have the best situation, but advantages are sizeable also for those with origins in Asia, Latin America, Middle East, and Southern Europe. Youth of Asian origin stick out by having fewer externalizing problems than majority youth, while their advantage in internalizing problems is more modest. The size of the immigrant advantage is up to 0.13 (on a 0–3 scale), which corresponds to about a third (externalizing) and a fourth (internalizing) of a standard deviation for our two outcomes. Though not dramatic, this difference is substantial and slightly larger than the conditional mental health difference between youth in two-parent and single-parent families.

The direction of the effect estimates for the origin groups is generally consistent across the four destination countries (Supplementary Table A4) but the large coefficients for internalizing symptoms in the pooled model

primarily reflect the situation in the Netherlands and in Sweden.

Further in Table 1, we report destination country differences. Here, the results are also clear: both for internalizing and externalizing problems, children in England fare the worst, and those in Sweden the best, with Germany and the Netherlands in between (though differences in externalizing symptoms do not differ significantly among the three latter countries).⁸ The average differences between England and Sweden are up to half a standard deviation, or almost 0.3 (0.2) mean score units for internalizing (externalizing).

Table 1 also corroborates the common finding that girls have many more internalizing symptoms than boys,⁹ with a mean score difference of almost 0.4—corresponding to two thirds of a standard deviation and increasing with age. It is perhaps less expected that the disadvantage for boys on the externalizing index is relatively modest, although it also increases somewhat with age. Of the other control variables (not shown) only family type has any substantive association with the outcomes: adolescents who do not live with two biological (or adoptive) parents have 0.11 mean score units more problems in both outcomes, corresponding to between a fifth (internalizing) and a fourth (externalizing) of a standard deviation.

The Importance of Exposure to Host Countries: No or Little Convergence

The origin country results in Table 1 do not tell us anything about the underlying dynamic processes. Yet, knowing whether gaps between the majority and minority groups vary with time spent in the destination country is crucial for understanding how point-in-time group differences emerge; such differences could, for example, be due to different average exposure to host countries.

We address this issue by comparing youth from a given origin but with different exposure to the destination country measured as time since immigration. Theories about immigrant-majority health differences generally suggest *convergence*, meaning that initial minority advantages should shrink over time in the host country. This thesis is tested in the analysis in Table 2, where we interact each minority group with a continuous measure of years spent in the host country. The results show, for internalizing and externalizing problems, respectively, the estimated difference to the majority for an extra year in the destination country, as well as the predicted difference for newcomers (0 years in the destination country) and for those who have spent all or

Table 2. Multivariate OLS regression estimates and robust standard errors for internalizing and externalizing problems (mean score units) in 14–15-year olds according to origin region and time in the destination country. $n = 18,370$ (internalizing); 15,859 (externalizing)

	Internalizing problems			Externalizing problems		
	Difference from majority at 0 years	Difference from majority at 14 years	Coefficient, years in destination	Difference from majority at 0 years	Difference from majority at 14 years	Coefficient, years in destination
Western Europe	–0.003 (0.095)	–0.013 (0.060)	–0.001 (0.009)	0.039 (0.097)	0.065 (0.048)	0.002 (0.008)
Southern Europe	–0.069 (0.091)	–0.045* (0.024)	0.002 (0.007)	–0.186** (0.075)	–0.040** (0.020)	0.010* (0.006)
Eastern Europe	0.007 (0.050)	0.020 (0.031)	0.001 (0.005)	0.002 (0.056)	0.028 (0.025)	0.002 (0.005)
Latin America	0.050 (0.102)	–0.098*** (0.034)	–0.011 (0.008)	–0.085 (0.060)	–0.020 (0.030)	0.005 (0.005)
Asia (other)	0.008 (0.062)	–0.017 (0.028)	–0.002 (0.005)	–0.127*** (0.040)	–0.107*** (0.021)	0.001 (0.003)
Middle East	–0.047 (0.058)	–0.023 (0.016)	0.002 (0.004)	–0.087* (0.047)	–0.051*** (0.014)	0.003 (0.004)
Africa	–0.006 (0.064)	–0.153*** (0.021)	–0.010** (0.005)	–0.113** (0.050)	–0.097*** (0.016)	0.001 (0.004)

*** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$.

Note: Models control for destination country, sex, age (means-centred), sex \times age, stratum, family type, parental education, parents' ISEI and parental unemployment.

almost all of their lives (14 years) in the destination country (including second-generation immigrants).

We find almost no support for the convergence thesis. The results suggest no or only slight convergence, and in the case of internalizing problems we find a rather strong *divergence* for African and Latin American youth, the advantage to the majority becoming sizeable after some time in the destination country. In the main, however, [Table 2](#) reflects stability in minority advantage.¹⁰

The finding of no convergence is surprising. We have conducted several robustness tests: first, we divided the time in the destination country into the more commonly used measure of immigrant generations (born in the host country; arrived 0–6 years of age; 7 years or older). Second, we used also the second wave of the data set and analysed individual change across two consecutive years, eliminating any differences due to the composition of time-invariant variables (measured or unmeasured). Both these tests (not shown but available on request) returned a similar pattern, suggesting no or little convergence.

In sum, the mental health advantage for adolescents of remote immigrant origin is largely constant over time in the destination country. This suggests that the mechanisms behind this advantage are stable and do not change, or change only slowly, with more exposure to

host country influences—at least for the time span we can study, that is, up to 14–15 years of age.

Origin Country Effects: It Matters Where You Come From

[Tables 1](#) and [2](#) took origin region into account, but although our models controlled for family characteristics, heterogeneity may remain within these origin categories. For a more detailed and systematic test of the immigrant health paradox we therefore conduct a comprehensive analysis based on 36 origin countries.

To avoid confounding origin country effects with destination country effects, we now express the dependent variable as a deviation from the destination country majority. [Figure 1](#) shows the results of the OLS regression, displaying the average deviations of each country of origin from the destination country majority, both for the internalizing (black) and the externalizing index (grey), controlling for demographics and family characteristics. Countries are ordered according to their value on internalizing symptoms. Thus, the uppermost country of origin, Eritrea, has negative values (fewer problems) on both the internalizing and the externalizing index compared to the majority group (which, as a reference group along the main vertical axis, has values of zero). Emphasis should not be put on single-country

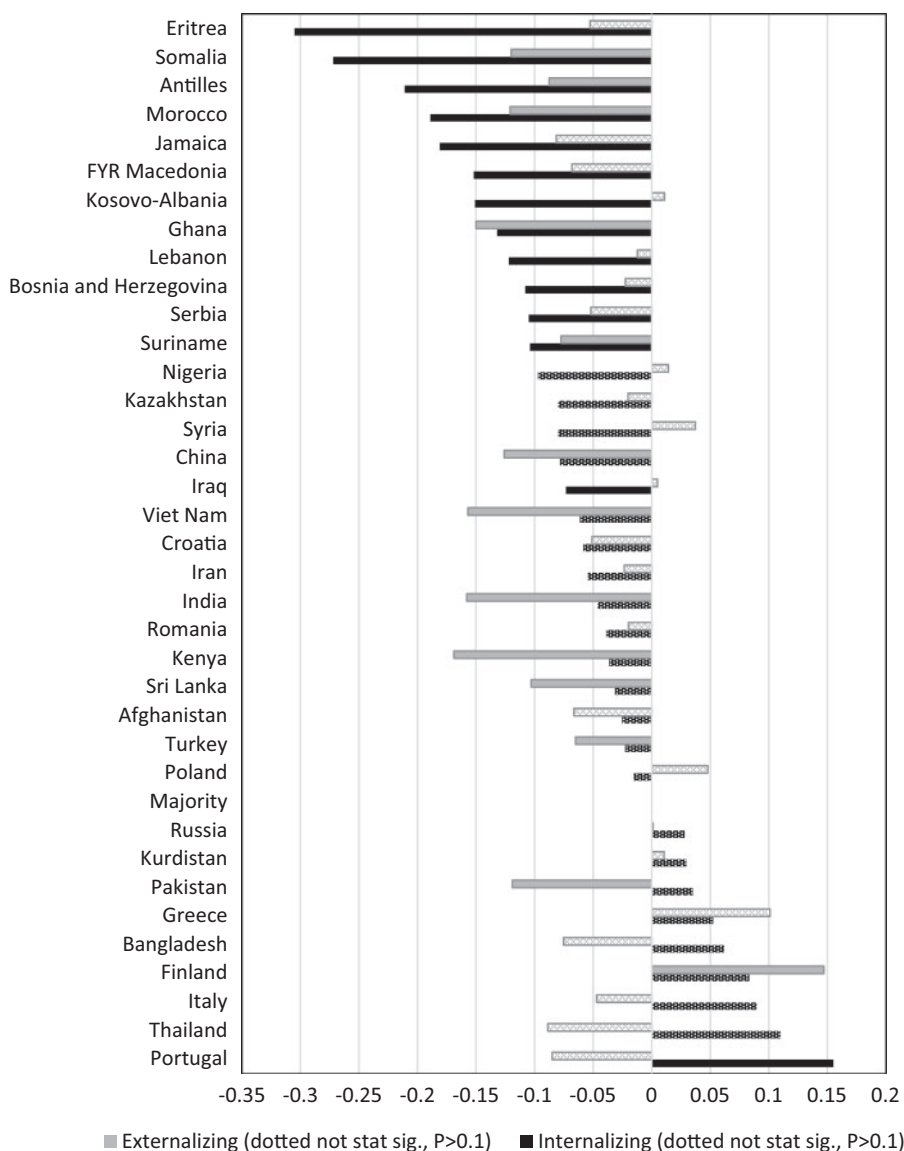


Figure 1. Internalizing and externalizing problems across origin countries. Net effects in mean score units from an OLS regression, controlling for sex, age, sex*age, stratum, family type, parents' education, parents' ISEI, parents' unemployment, and time in destination country. Deviations from majority in each destination country. Germany deleted (has $n = 33$ as origin in the other destination countries). *Note:* Filled bars represent statistically significant deviations ($P < 0.1$) from majority.

estimates as their certainty depends heavily on group size: we are rather interested in systematic patterns in the results.

The main conclusion from Figure 1 is that the mental health of children of almost all origin countries is better than that of the majority; this goes both for internalizing and externalizing problems. The correspondence between the two dimensions is not perfect (as anticipated from the correlation of 0.32 between the indices), but of

all 72 origin-country estimates, only a handful show a substantial disadvantage for an immigrant group.

The results in Figure 1 vindicate our conclusions on the immigrant-majority gap in mental health. The pattern is consistent indeed: Almost all non-Western, non-European-origin countries have negative estimates on either one or both of the indices (i.e., fewer problems), irrespective of being typical refugee or labour migration countries.¹¹ Correspondingly, the few origin countries

that have a worse situation than the majority are almost all European. The few European origin countries that have a favourable position resemble more remote regions when it comes to war experiences and refugee emigration (e.g., countries in the former Yugoslavia).

Destination Country Effects: It Matters Where You Go

Table 1 revealed large differences in mental health across destination countries, with youth in Sweden faring the best and youth in England the worst. Do these host country differences hold for the majority as well as minority groups? To address this question we now study single-origin countries and interact them with the destination country, reducing the risk that differences in the composition of origin groups across host countries drive the result.¹² Such a model is lacking in previous research, but presents a daunting task as few origin groups can be compared across destination countries. Figure 2 (internalizing) and Figure 3 (externalizing) report the comparisons that we are able to make, using eight origin countries with at least 30 respondents in at least two destination countries. The predicted means are from regression models that control for socio-demographic and family variables as in previous analyses.

The figures verify that the ranking of destination countries, with Sweden showing the least problems and

England the most, holds not only for the majority but also across almost all origin categories. For example, compare internalizing problems in Sweden and Germany: not only are majority children in Sweden better off than those in Germany, but Turkish children in Sweden are better off than Turkish children in Germany, and the same holds for all other comparable origin countries (Bosnia, Serbia, Iraq, Lebanon, and Poland). Thus, where children of immigrant origin end up appears to matter, although studies with larger samples would be needed to corroborate this. However, while we register destination country main effects in our data, we do not find any noteworthy or systematic interaction effects with origin country (results not shown).

Conclusions and Discussion

We used a new comparative study (CILS4EU) of 14–15-year-old students in England, Germany, the Netherlands, and Sweden ($n=18,716$) to address the question whether youth of immigrant origin face worse mental health than their majority peers. Such a disadvantage could be anticipated on the basis of immigrants' generally higher vulnerability with regards to socioeconomic resources, discrimination, and opportunities (e.g., Heath and Cheung, 2007; Crul and Schneider, 2010). But we find that children of immigrants in fact report better mental health, particularly those of non-European, non-Western background. This result is most

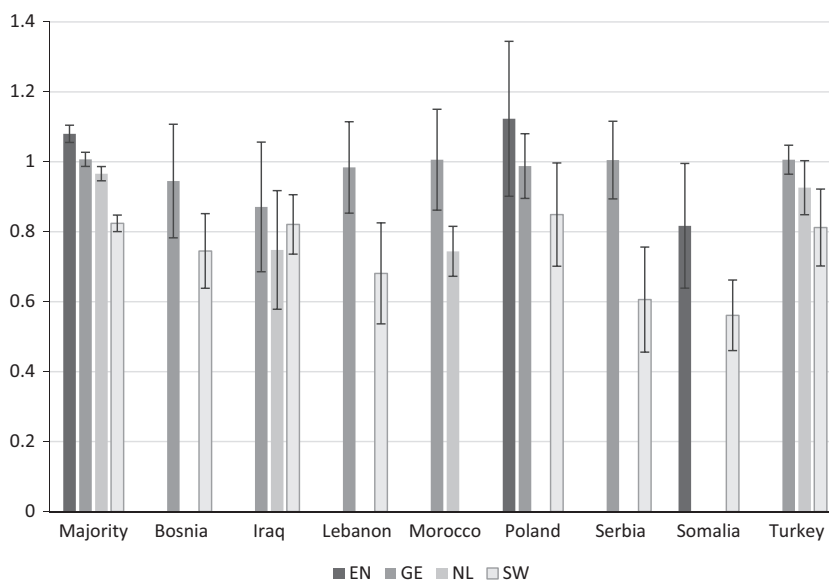


Figure 2. Internalizing problems across nine origin countries and four destination countries. Mean scores based on estimates from OLS regression analyses controlling for sex, age, sex*age, stratum, family type, parents' education, parents' ISEI, parental unemployment, and time in destination country

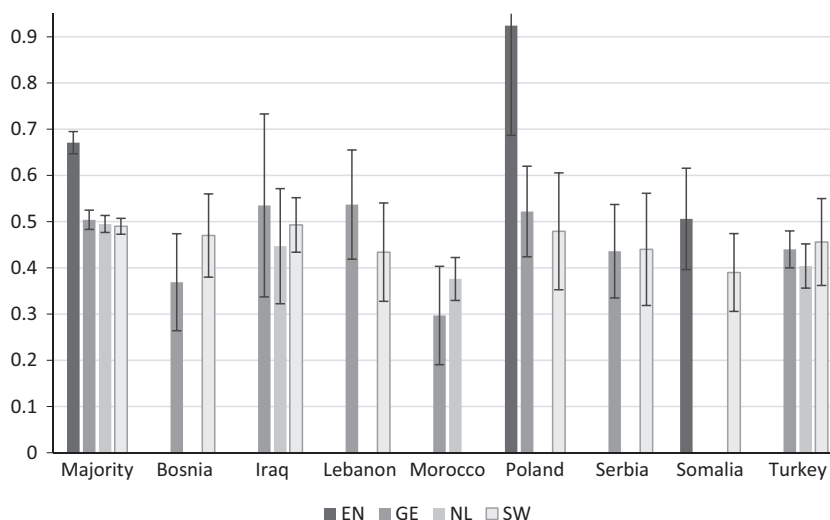


Figure 3. Externalizing problems across nine origin countries and four destination countries. Mean scores based on estimates from OLS regression analyses controlling for sex, age, sex*age, stratum, family type, parents' education, parents' ISEI, parental unemployment, and time in destination country. *Note:* The error bar for Poland/EN extends to 1.16 but is cropped to enhance readability

convincing for externalizing problems where it holds for all destination countries, while for internalizing problems this is the case for two out of four (while, for the other two, the differences are smaller and less systematic). The largest coefficients indicate non-trivial effects, up to a third of a standard deviation.

The main result also held when we took the heterogeneity of origins into account by distinguishing 36 individual origin countries, such unusually detailed disaggregation made possible by our large sample. The resulting pattern is systematic and clear, indicating advantages in particular for youth from countries geographically, culturally, and economically most distant from the host country—irrespective of whether the group is dominated by refugees or labour market migrants. Our findings thus support the 'immigrant health paradox', claiming that contrary to expectations youth of immigrant origin fare better than majority youth in a number of health-related outcomes (e.g., [Harker, 2001](#); [Beiser et al., 2002](#)).

Our further analyses suggested that it also matters where immigrant children end up—with those living in Sweden and the Netherlands, majority and minority children alike, having better mental health, a result that holds also when comparing as-similar-as-possible minority groups. The destination countries differ in many respects, and we cannot empirically determine what the underlying causes are, but the destination country differences are at least in line with the idea that welfare state policies, rather than making youth more sensitive to

stress, have a positive relation with mental health. We should however be careful in interpreting the destination country effect, partly because mental health is strongly age-related in youth, partly because stress is likely to be associated with the timing of important transitions in school, which vary cross-nationally. However, such differences would hardly affect the minority–majority health gap. The smaller and less systematic immigrant advantages in England may signal that the different type of migration to England (fewer refugees, relatively highly educated immigrants) means that English immigrants are closer to the majority in terms of, e.g., language, living conditions, and reference groups.

Of the different theories we outlined, it is not so likely that social comparison mechanisms are behind the immigrant mental health advantage. This is because comparisons to friends and relatives in the country of origin should recede with the integration into the host society, and we found small and unsystematic differences in the advantage between those who had different time of exposure to destination country influences, a result which was consistent across different definitions (although long-term panel data would ideally be needed for a rigorous test of this).

A possible limitation of our study is that the observed differences between majority and immigrant-background youth may partly reflect systematic reporting differences ([Johnson et al., 2005](#)). We have no external assessments of mental health to validate self-reports against, but [Allen, McNeely, and Orme \(2016\)](#) find the validity of

self-rated health to be similar for adolescents of different ethnic groups, and in a review [Paalman et al. \(2013\)](#) report high cross-cultural validity for youth self-reports (but not parent or teacher reports) of externalizing problems. In line with this, our measures of internalizing and externalizing problems demonstrate similar scale properties for immigrant-background and majority youth. Hence, we doubt that reporting differences would explain the observed immigrant advantage in our data.

We are left with potential explanations in terms of some stable, probably intergenerationally transmittable characteristic being more prevalent among youth of immigrant background. This could stem from positive selectivity on parents' characteristics or resources that children can draw upon. The results could also be accounted for by differences in socialization patterns, and in family values, norms, and attitudes (Mood, Jonsson, and Låftman, forthcoming). Further research could address the issue of counterbalancing mechanisms—for example, whether stress from socio-economic disadvantage, discrimination, and cultural adaptation have a negative impact but that some characteristic of immigrant families induce resilience in their children, compensating such problems and even leading, on average, to a positive net health effect.

In a broader context, our results give quite an optimistic picture of immigrant integration. Whatever the mechanisms behind, the fact that children of immigrants report better mental health than the majority (at least as measured here, and in this particular age group) is a sign that their overall situation is bearable. This indicates that problems of acculturation, discrimination, and deprivation—serious as they may be for some—are not as detrimental as is often feared, or can be successfully dealt with.

Notes

- 1 Multiculturalism Policy Index, <http://www.queensu.ca/mcp/> (accessed 22 November 2015).
- 2 Questions about law-breaking behaviour were not allowed in one German federal state so the analyses using this variable excludes a fifth of the German sample. We report tests using also an alternative externalizing variable.
- 3 Those of mixed origin (one immigrant and one native-born parent) tend to lie quite close to the majority group in mental health.
- 4 Residuals from the OLS regression are roughly normally distributed for internalizing problems, but somewhat skewed for externalizing problems. No alternative specification that we tried provided a

better fit, and using OLS for both outcomes enables comparability.

- 5 This is often preferred to using survey weights when estimating effects in a regression framework (cf. [Winship and Radbill, 1994](#)). Even if statisticians lean towards not using survey weights in models, there is no consensus as how to handle stratified samples (e.g., [Solon, Haider, and Wooldridge 2015](#)).
- 6 We have run models with sub-indices of internalizing and externalizing problems, giving smaller (but still substantial) effects for the psychological than the somatic internalizing items, somewhat smaller effects when alcohol- and drug-related items are excluded from the externalizing index, and somewhat bigger effects when delinquency-related items are excluded.
- 7 This is true also for parental income, which we do not include as it has a large number of missing values.
- 8 When we use alternative externalizing scales, excluding either delinquency or drug/alcohol use, the difference between England and the other countries remains.
- 9 Separate analyses by gender reveals that gender interactions do not affect the findings and are hence left out for reasons of space.
- 10 This does not appear to be driven by heterogeneity in the composition of origin countries: results for single-origin countries that are large enough to be studied separately suggest no convergence either.
- 11 We have no direct information on whether our respondents' families were labour market migrants, refugees, or had some other reason for migration. However, generalizing from country labels, of the 10 uppermost countries we would depict Eritrea, Somalia, FYR Macedonia, Kosovo-Albania, Lebanon, and Bosnia and Herzegovina as typical refugee origins, the others overall as labour market migrants (including colonial-type migration).
- 12 Admittedly, even at this unusually detailed level there may be remaining ethnic variation in given origin groups across our destination countries, although we use self-reported origin 'country', making possible ethnic identification (e.g., Kurdistan). Controlling for parents' characteristics removes part of the residual heterogeneity.

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Supplementary Data

Supplementary data are available at ESR online.

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