

Characteristics of the Country of Origin and Immigrant Children's Psychological and Sociocultural School Adjustment

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Abstract

In many Western countries, immigrant children lag behind their native peers in educational attainment, yet there appear to be systematic differences between immigrant groups. We set out to examine (1) if these differential outcomes can be linked to group specific acculturation patterns, following similar processes to those observed at individual level; and (2) to what extent characteristics of the country of origin could help to explain differences in the acculturation process and school adjustment of immigrant children in Germany. In particular, we investigated country-level relationships between children's acculturation conditions (e.g., perceived parental acculturation expectations and cultural practices in the family), orientations (ethnic and mainstream), and school-related outcomes (psychological and sociocultural) as well as how these in turn are related to characteristics of the countries of origin (e.g. cultural values, level of development and religious composition). Country-level analyses were based on a diverse sample of 695 second- and third-generation immigrant children from more than 50 different countries in Germany. (1) Our results confirm that country-level relationships between different components of the acculturation process are very similar to what has been found at individual level. (2) We found some relationships between characteristics of the country of origin and acculturation conditions, yet, the relationships with children's acculturation orientations and outcomes were much weaker. These findings suggest that (1) there appear to be immigrant group-specific acculturation patterns which can explain differences in school adjustment and (2) characteristics of the country of origin only play a minor role in immigrant children's school adjustment.

Introduction

Education is the key to success in later life and an important outcome of the acculturation process for immigrant youth. However, in many countries, students with an immigrant background lag behind their native peers when it comes to school performance (OECD, 2012). This gap appears to be particularly pronounced in countries with a tracked school system, such as Germany. At the same time, large differences can be observed between different immigrant groups. Differences between children representing different immigrant groups have also been found on a wider range of school adjustment outcomes (Schachner, Van de Vijver, & Noack, 2013). Such differences may be rooted in acculturation patterns of an immigrant group as well as in characteristics of the culture of origin.

Based on the acculturation framework (Arends-Tóth & van de Vijver, 2006) and Bronfenbrenner's (1979) ecological systems theory, the aim of this study is two-fold. Firstly, we want to confirm whether the relationships between different components of the acculturation process that are found at individual level also

hold at country level (involving here the country of origin of the child or his or her parents). Similarity of correlations would suggest similar processes at individual and group level. Secondly, we want to explore the relationship between objective characteristics of the country of origin and children's acculturation conditions, orientations, and school-related outcomes. If such relationships can be found, this might identify some of the causes for why different immigrant groups have different acculturation patterns. In the following, we first introduce ecological models of acculturation and development as they form the background of our research. We then elaborate the acculturation framework in more detail, as we want to investigate its validity at country level, and review empirical findings on the relationship between different components of children's acculturation process and other country-level variables. Based on this theoretical and empirical background, we derive some specific hypotheses. Yet, since the research base at country level we could draw on is still limited and we wanted to include a wide range of variables, the nature of this study is to some extent exploratory.

Ecological Models of Acculturation and Development

Ecological models of acculturation and development propose that acculturative and developmental processes take place in and are influenced by context. In ecological systems theory (Bronfenbrenner, 1979), which has been very influential in developmental research, a distinction is made between different types of environment, in which individual development takes place, ranging from micro-level as the most proximal context to macro-level as the most distal context. A similar distinction between distal and proximal environments impacting on psychological processes has been conceptualised in acculturation research (e.g., Arends-Tóth & van de Vijver, 2006).

Looking at immigrant children's acculturation process, at the micro-level there is the family or group of friends, which may affect children's acculturation orientations and outcomes (Arends-Tóth & van de Vijver, 2006). The family in turn is nested in a particular immigrant group from a particular country of origin. We would therefore expect that there is systematic variation in the acculturation process of children from different immigrant groups and countries of origin. At the same time, the host society also provides a particular societal context, which may vary in the way immigrants are received and where different immigrant groups may have a different status in relation to other immigrant groups and the mainstream society. This societal context also has to be taken into account when interpreting acculturative patterns of different immigrant groups.

Group-Level Relationships Between Acculturation Variables

So far, the relationships between different components of the acculturation process as specified in acculturation models such as the acculturation framework (Arends-Tóth & van de Vijver, 2006) have only been investigated at individual level. In our study, our first aim is to see whether these relationships also hold at the level of the country of origin. In country-level analyses, all cases from a single country are aggregated and some statistic, usually the mean, is taken as an indicator of the status of the country on the variable. In the last decades there is increasing interest in models in which individual- and country-level variables are related to each other (called multilevel equivalence or isomorphism in multilevel research; van de Vijver, van Hemert, & Poortinga, 2008). If we find similar relationships at country- or immigrant group-level to what has been found at individual-level, this supports the idea of immigrant group specific acculturation patterns and suggests that they are based on similar processes at country level to what has been specified at individual level. The acculturation framework (Arends-Tóth & van de Vijver, 2006) divides the acculturation process into conditions, orientations, and outcomes and suggests a mediation model, where a range of conditions affect outcomes either directly or via the individual's orientation towards the culture of origin and the national (majority group) culture.

In particular, a larger perceived distance between the culture of origin and the mainstream culture have been associated with a lower mainstream and a higher ethnic orientation (Suanet & Van de Vijver, 2009). Taking the family as a micro-level environment, acculturation conditions such as educational opportunities at home, perceived parental acculturation expectations, and cultural practices in the family have been shown to affect children's acculturation orientations and school adjustment at individual level (Schachner et al., 2013).

In particular, more educational opportunities, more perceived school involvement and interest shown by the parents, and a more frequent use of the mainstream language at home have been associated with a higher (perceived) mainstream orientation amongst immigrant parents and children and a better school adjustment of the children. Religious practices on the other hand are one way of maintaining cultural traditions of one's country of origin (Güngör, Bornstein, & Phalet, 2012) and have therefore been associated with a higher orientation towards the ethnic culture. Although this has been found mainly amongst Muslim immigrants (Ward, 2013), our own individual-level research could demonstrate that the intensity of religious practice is a stronger predictor of ethnic orientation than the differentiation between various religious denominations (Schachner, Van de Vijver, & Noack, 2011). Due to cultural transmission processes, perceived acculturation expectations of the parents concerning ethnic and mainstream culture have been strongly linked to children's own orientations towards either culture at individual level (Schachner et al., 2013).

Our individual-level analyses further showed that antecedents often have opposite effects on the two acculturation orientations (i.e., where we had anticipated a positive effect on mainstream orientation, there was simultaneously a negative effect on ethnic orientation and the other way round). Although children's own orientations are positively correlated, this suggests that in the family environment, the two cultures seem to be seen as mutually exclusive. This is also in line with literature suggesting that a unidimensional conceptualisation of acculturation, viewing it as a movement from one culture to the other, is prominent in Germany, both within the mainstream society and amongst immigrants (Berry, Phinney, Sam, & Vedder, 2006b; Yağmur & van de Vijver, 2012; Zick, Wagner, Van Dick, & Petzel, 2001).

Acculturation orientations have also been shown to be differentially related to sociocultural and psychological outcomes (Arends-Tóth & van de Vijver, 2006; Ward, 2001; Ward & Searle, 1991). The orientation towards the national culture has been found to be primarily associated with sociocultural outcomes in the domain of the national culture. These are mainly related to the acquisition of cultural skills, such as competence in the national language, the ability to build up relationships with majority group members, and general skills related to the life in the society of settlement. A stronger orientation towards the culture of origin on the other hand is conducive for maintaining stronger ties and a more extensive social support network in the ethnic group and has therefore been associated primarily with psychological outcomes. These include psychological well-being, life satisfaction, and self-esteem as positive indicators, and psychological and mental health problems as negative indicators.

Since we were interested in immigrant children's school adjustment, we focused on sociocultural and psychological outcomes that are relevant in the school context, such as their academic and social self-concept, their academic performance and their relationship with native peers in class. A conceptual overview of the different components of the framework which are included in this study is displayed in Figure 1. At individual level, we have largely confirmed the expected relationships between variables as specified above (Schachner et al., 2013). Our first aim in the present study is to test to what extent these relationships found at individual level generalise to country level.

Acculturation Variables and their Relationship with Other Country-Level Variables

Based on the ecological models of acculturation and development described above, acculturation variables aggregated at country of origin-level can be expected to be related to other characteristics of immigrants' country of origin, such as cultural values, the religious composition, and the level of economic development. In particular, it was the second aim of our study to test for relationships between country-level social indicators (such as level of affluence of the country of origin) and aggregated scores of perceived cultural distance, cultural practices and (perceived) acculturation strategies of parents and children, (perceived) opportunity structures at home and children's psychological and sociocultural school adjustment (aggregation is across all participants from the same country of origin).

Perceived cultural distance. Since perceived cultural distance refers to the subjective perception of cultural differences between the country of origin and the host country, we expect that aggregated perceptions of cultural distance at country of origin-level are associated with between-country differences on more objective

measures of the country-level characteristics just mentioned. Yet, very few studies have examined the relationship between such objective characteristics and perceived cultural distance: In a study with international exchange students in Russia, Suanet and Van de Vijver (2009) investigated country-level relationships between perceived cultural distance and mean differences between host country and country of origin on characteristics such as cultural values and the level of development. However, they only found a significant negative correlation with Uncertainty Avoidance. In a study on German expatriates abroad, Stroppa (2011) found significant relationships between perceived cultural distance and country differences in Assertiveness Orientation, Ingroup Collectivism and Human Orientation. Relationships with socioeconomic indicators could not be confirmed.

Germany is usually amongst the top countries when it comes to economic and political development (World Bank, 2011). In terms of values, Germany scores relatively high on Harmony (vs. Mastery), Egalitarianism (vs. Hierarchy) and Autonomy (vs. Embeddedness; Schwartz, 2009). Using Hofstede's (2009) values, Germany scores relatively low on Power Distance and Indulgence (vs. Restraint), and relatively high on Individualism (vs. Collectivism), Uncertainty Avoidance, Masculinity (vs. Femininity) and Long-Term (vs. Short-Term) Orientation. Concerning the religious composition, Germany has a relatively large proportion of Christians and non-religious people whereas the proportion of Muslims is relatively low (Wikipedia, 2007). Since economic and political development, cultural values and religious composition are central variables when describing cultural differences, it seems likely that children from countries which are more similar to Germany on those characteristics perceive a lower level of cultural distance.

Cultural practices and acculturation strategies. As previously mentioned, a higher perceived cultural distance has been associated with a stronger ethnic orientation at individual level (Suanet & Van de Vijver, 2009). Similarly, at country of origin level, we expect that children from countries that are more dissimilar from Germany in terms of values, religious composition and development show a stronger preference for cultural maintenance and a weaker preference for adopting the mainstream culture and perceive their parents to have similar acculturation expectations. This should also be reflected in the mainstream language being used less at home in these groups.

Concerning the link with values, a study with Turkish immigrant adolescents in Belgium (which is similar to Germany on many country-level characteristics) confirms this at the individual level by revealing that Separatedness, which is comparable to Schwartz's notion of Autonomy and Hofstede's (2001) notion of Individualism, is linked with a higher orientation towards the national culture (Güngör, 2007). Conformity, an opposite value, which is comparable to Schwartz's (2006) notion of Embeddedness and Hofstede's (2001) notion of Collectivism, has been associated with a higher orientation towards the ethnic culture.

Religiosity has been linked to more conservative values at country level (He, van de Vijver, Dominguez Espinosa, & Mui, 2012; Schwartz, 2012). We therefore expect that a higher proportion of people belonging to a religious group in the country of origin is associated with a higher importance of religion in the family as well as a higher (perceived) preference for cultural maintenance and a lower (perceived) preference for cultural adoption by parents and children as well as a lower national language use at home.

Opportunity structures at home and children's school adjustment. As previously mentioned, there is some individual-level evidence linking a better adjustment with lower levels of perceived cultural distance (Suanet & Van de Vijver, 2009; Ward & Searle, 1991). Galchenko and Van de Vijver (2007) also confirmed that exchange students from countries that were more similar to the host country on core country-level characteristics were better adjusted. Yet, relationships of value discrepancies between country of origin and host country with adjustment could not be confirmed (Ward & Searle, 1991). In light of these findings, it seems likely that children from countries that are more similar to Germany in terms of values, religious composition, and level of development, show more psychological and sociocultural adjustment. Further, parents from countries that are more similar to Germany on those variables are likely to be better adjusted themselves. We therefore expect that they provide more opportunities for learning at home, are perceived as more involved in their children's school life, and communicate in the mainstream language more often.

The Present Study

The present study goes beyond previous research as it is one of very few studies in which country-level variables are studied in an acculturation context, using data from immigrants from a large number of countries as well as country-level data from large-scale international data bases. Based on the literature and arguments presented above, we expect the following relationships:

Hypothesis 1: Relationships between different components of immigrant children's acculturation process at country of origin-level replicate what has been found at individual-level (Schachner et al., 2013). Our specific expectations are:

Hypothesis 1a: A larger perceived cultural distance, a higher importance of religion in the family, and a stronger perceived parental expectation to maintain the ethnic culture are associated with a stronger orientation towards the ethnic culture and a weaker orientation towards the mainstream culture.

Hypothesis 1b: More learning opportunities at home, a higher perceived parental interest in children's school life, a more frequent use of the mainstream language at home, and a stronger perceived parental expectation to adopt the mainstream culture are associated with a stronger orientation towards the mainstream culture and a weaker orientation towards the ethnic culture.

Hypothesis 1c: More learning opportunities at home, more perceived parental interest in children's school life, and more frequent use of the mainstream language at home are also associated with better school adjustment outcomes.

Hypothesis 1d: A stronger ethnic orientation is primarily associated with better psychological adjustment, whereas a stronger mainstream orientation is primarily associated with better sociocultural adjustment.

Hypothesis 2: Larger differences on country-level characteristics (cultural values, level of development, and religious composition) are associated with aggregated acculturation variables in the same way as what has been found in relation to perceived cultural distance at individual level.

Hypothesis 2a: Children from countries that are more different from Germany in terms of cultural values, level of development, and religious composition experience a larger cultural distance between their country of origin and Germany.

Hypothesis 2b: Children from countries that are more dissimilar from Germany in terms of values, religious composition and development perceive a greater importance of religion at home and show a stronger preference for cultural maintenance and a lower preference for adopting the mainstream culture. They perceive their parents to have similar acculturation expectations.

Hypothesis 2c: Children from countries that are more similar to Germany in terms of values, religious composition, and level of development show more psychological and sociocultural adjustment. Parents from countries that are more similar to Germany are expected to provide more opportunities for learning at home, to be perceived as more involved in their children's school life, and to communicate in the mainstream language more often.

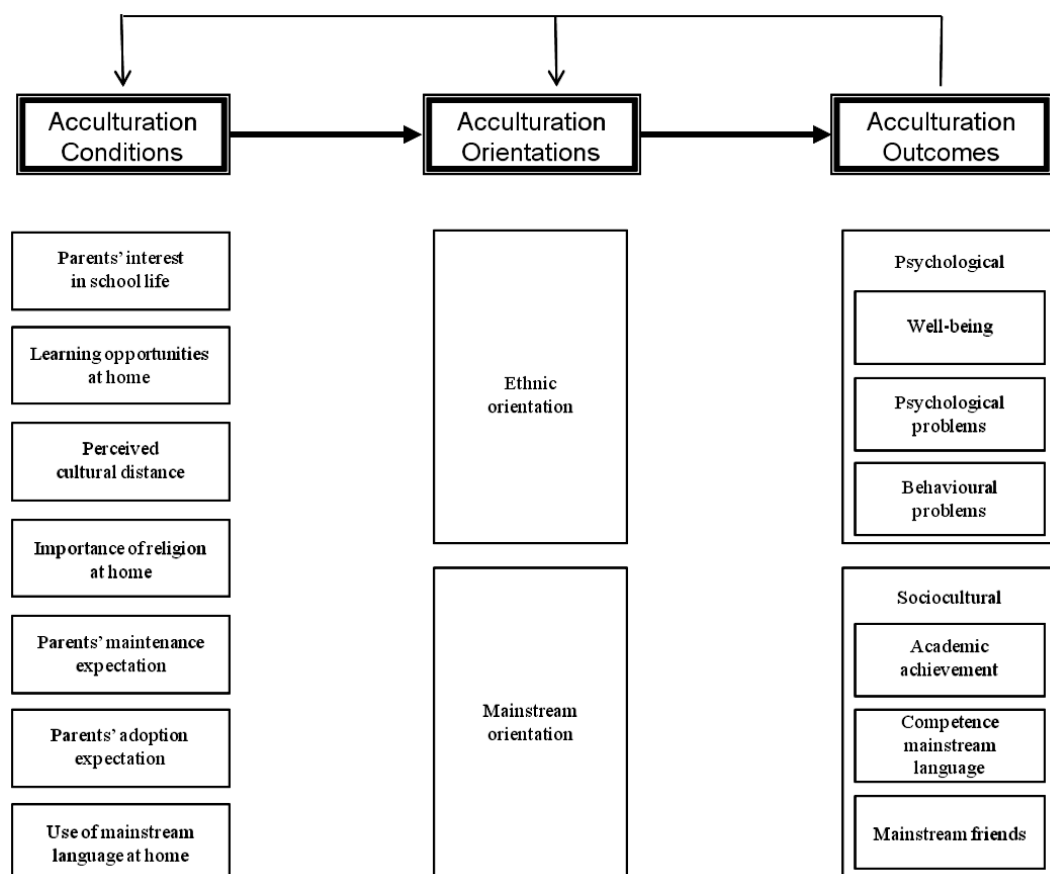


Figure 1. Conceptual overview of components of the acculturation framework included in our study

Method

Participants

A total of 695 students with an immigrant background (age: $M = 11.04$ years, $SD = 0.88$, 49% male) participated in the study. All students came from a mono-ethnic parental background. Students represented 54 countries of origin, reflecting the major immigration waves to Germany, with guest workers from Turkey and Southern Europe arriving in the 1960s and 1970s and refugees from Eastern Europe and the Balkan in the 1990s. The biggest groups came from Turkey ($N = 281$), Italy ($N = 45$), Kosovo ($N = 39$), Greece ($N = 38$), Croatia ($N = 32$), Russia ($N = 30$), and Bosnia ($N = 23$). The majority of students (86%) were born in Germany. Average age at migration for first generation students was $M = 4.66$ years ($SD = 3.31$). The three main secondary school types in Germany were all well represented in the sample: low vocational track (“Hauptschule”, $N = 210$), high vocational track (“Realschule”, $N = 281$), and academic track (“Gymnasium”, $N = 204$). Usually, the concentration of children with an immigrant background is much higher in the lower tracks (OECD, 2012). However, to make results comparable across school types, schools with a similar proportion of immigrants were targeted in all three tracks, averaging at 69%.

Measures

Measures included variables, which were part of a questionnaire administered to students and therefore measured at individual level, whereas country-level variables were taken from various country-level data bases as specified below.

Individual level. Individual-level variables are listed below in the order they occur in the conceptual overview of the different components of the acculturation framework which are included in this study (see Figure 1). Children’s psychological and sociocultural adjustment each consisted of three components, which are listed separately. For psychological adjustment these components were well-being, psychological and behavioural

problems. Psychological and behavioural problems were included as measures tapping into internalising and externalising ways of coping with psychological issues as defined by Lazarus and Folkman (1984). Since boys and girls differ in their (maladaptive) coping strategies, it is important to include both types of outcomes when studying both sexes (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). For sociocultural adjustment, these components were the number of mainstream friends, national language competence, and academic achievement. Measures not originally available in German were translated using a translation back-translation method (Van de Vijver & Leung, 1997). Some scales were developed or adapted based on qualitative interviews and subsequently tested in a pilot study with 51 immigrant children from the target age group. Scale characteristics are displayed in Table 1.

Learning opportunities at home were measured with a single item, asking the child about the number of books in the household on a 5-point Likert scale from (1) *none or very few* to (5) *more than 200 books*. This is a standard measure for children of this age group, who might not yet know the educational attainments of their parents, and has been validated in large-scale studies (e.g., Albert, Hurrelmann, & Quenzel, 2010).

Perceived parental interest in children's school life was measured using a newly developed scale. This scale comprised three items (e.g., "My parents often ask me what we are doing at school."). Responses were given on a 5-point Likert scale from (1) *no, that's not right* to (5) *yes, that's right*.

Perceived cultural distance was measured using an adaptation of Galchenko and Van de Vijver (2007). The six items measured how similar or different the children perceived their culture of origin and the German culture, tapping into public and private life domains relevant and familiar to children of this age, such as family life, general way of life, dress and parenting styles (e.g., "How similar or different do people dress in Germany and your other country?"). Responses ranged from (1) *very similar* to (5) *very different*.

The importance of religion at home was measured using a single item, which was newly developed and asked the children how important they felt religion was in their family. Responses ranged from (1) *not important at all* to (5) *very important*.

Perceived parental acculturation expectations were measured with 12 items adapted from scales by Arends-Tóth and Van de Vijver (2007), which tapped into the public and private domain and were mirrored for ethnic and mainstream dimensions (e.g., "My parents want me to get to know the customs and traditions from my other country."). Responses ranged from (1) *no, that's not right* to (5) *yes, that's right*.

The use of the mainstream language at home was measured with a single item, asking children which language(s) was spoken at home, with responses ranging from (1) *always my ethnic language* to (5) *always the mainstream language*.

Children's acculturation orientations were measured with a reformulation of the items measuring perceived parental acculturation expectations which had been adapted from Arends-Tóth and Van de Vijver (2007, e.g., "I like the way families live in my other country."), but were extended to tap into more aspects, resulting in a total of 18 items. Responses ranged from (1) *no, that's not right* to (5) *yes, that's right*. Additionally, ethnic and mainstream identity were measured with ten items by Phinney (1992, e.g., "I have a lot of pride to be a member of my ethnic group").

Well-being comprised measures of general life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985), academic self-esteem (SESSKO; Schöne, Dickhäuser, Spinath, & Stiensmeier-Pelster, 2002), and social self-esteem (Marsh, 1988). General life satisfaction was measured with the widely used Satisfaction With Life Scale (SWLS; Diener et al., 1985), which comprises five items (e.g., "I am satisfied with my life."). The SWLS has recently been validated in different immigrant communities and age groups (Ponizovsky, Dimitrova, Schachner, & van de Schoot, 2012). Academic self-esteem was measured with five items from the SESSKO scale by Schöne et al. (2002), which is frequently used in the German context (e.g., "Learning new things is easy for me."). Social self-esteem was

measured using seven items from the relations with peers subscale of the Self-Description Questionnaire for early adolescents (SDQ I) by Marsh (1988; e.g., "I make friends easily."). Answers on all three scales ranged from (1) *no, that's not right* to (5) *yes, that's right*.

Psychological problems were measured with a combination of five items on physiological stress symptoms (e.g., “I feel dizzy and faint.”) and five items on depressive mood (“I worry a lot.”), which have been used with immigrant youth in 13 countries (Berry, Phinney, Sam, & Vedder, 2006a). Responses ranged from (1) *almost never* to (5) *very often*.

Behavioural problems were measured with scales on disruptive behaviour (McCarthy & Hoge, 1987) and delinquency (Jenkins, 1995), consisting of five and six items respectively. In the former, children were asked how often a particular situation had occurred over the last four weeks (e.g., “How often did you chat with your neighbour during class in the last four weeks?”), from (1) *never* to (5) *very often*. In the latter, children were asked how often a particular situation had occurred over the last 12 months (e.g., “How often have you destroyed school property in the last 12 months?”), from (1) *never* to (5) *once a month or more*.

The number of mainstream friends was measured by asking the children to list their five best friends in the classroom, using their respective numbers on the class list. This was then matched with their friends’ questionnaire data to obtain their demographic information and extract the number of mainstream friends for every child. This procedure is less prone to social desirability and has been found to be effective in previous research (Vervoort, Scholte, & Scheepers, 2011). The actual number of friends was then turned into a categorical variable with (0) *no German friend*, (1) *one German friend*, and (2) *at least two German friends*.

National language competence was measured firstly, by asking the child about the respective mark obtained in the last report (German language marks from (1) *very good* to (6) *unsatisfactory* were re-coded to match the second measure). The second measure was a single item where the child rated his or her ability to communicate in the mainstream language (German) from (1) *not at all* to (5) *very good*.

Academic achievement was measured using school type as a proxy. In South-West Germany, where the data were collected, children get a recommendation from primary school for any of three types of secondary school, which is based on standardized exams and binding. The school type (with scores of (1) *low vocational track*, (2) *high vocational track* and (3) *academic track*) is therefore a good indication of overall academic performance for children who just entered secondary schools.

Country level. At country level, a number of indicators from various data bases were included, which were expected to be correlated with aggregated individual-level variables as specified in the introduction. In particular, we chose the most prominent psychological variables describing cultural differences, namely cultural values (Schwartz, 2006; Hofstede, 2001), as well as the most common indicators of economic and political development, namely the Human Development Index (HDI; United Nations, 2010), and the globalisation index (Swiss Federal Institute of Technology Zurich, 2010). For religious composition, we chose the proportion of the two largest religious groups (Muslim and Christian) and the proportion of agnostics in a country.

Values were measured using data from the Schwartz Value Survey (Schwartz, 2009) and Hofstede’s (2009) data on his value dimensions. Schwartz’s (2006) model comprises of seven cultural values along three dimensions: Embeddedness versus Affective and Intellectual Autonomy, Mastery versus Harmony and Hierarchy versus Egalitarianism. Hofstede’s (2001; Hofstede, Hofstede, & Minkov, 2010) model comprises of six dimensions, namely Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-Term versus Short-Term orientation, and Indulgence versus Restraint. Values on a national level range from (1) *not important* to (5) *very important*.

Religious composition was measured using the proportion of Muslims, Christians, and non-religious people within a country (Wikipedia, 2007). Muslims and Christians were chosen as they made up the largest religious groups within our sample. The proportion of non-religious people in a country was chosen as non-religious people have been shown to differ from religious people on a number of variables including values (Schwartz, 2012). Values range from (0) *none* to (1) *the total population*.

Globalisation was measured using the KOF Index of Globalisation (Swiss Federal Institute of Technology Zurich, 2010). It combines measures of economic (e.g., percentage of GDP in trade), social (e.g., number of TVs per 1000 people), and political (e.g., number of embassies in the country) dimensions of globalization.

Development was measured with the Human Development Index (HDI; United Nations, 2010), comprising 24 variables. It measures the average achievements in a country in three basic dimensions of human development: a long and healthy life (e.g., life expectancy at birth), access to knowledge (e.g., mean years of schooling), and a decent standard of living (e.g., gross national income per capita).

Procedure

Students were recruited from the lowest two grades in culturally heterogeneous secondary schools in Germany. Subject to permission from school authorities and parental consent, they completed a questionnaire in class and under supervision of the first author and her assistants. The questionnaire was part of a larger project on school-related acculturation processes of immigrant children and took the children about 1.5 hours to complete.

Results

Preliminary Analyses

Prior to the hypothesis tests, exploratory factor analyses (EFA) were carried out on all individual level scales to establish their dimensionality. The expected structure emerged on all subscales. Reliabilities, means, and standard deviations for each subscale are displayed in Table 1. As all internal consistencies were above .60 and several well above .80, it was concluded that the internal consistencies were adequate.

Table 1
Scale Characteristics by Subscale

Scale	<i>M (SD)</i>	Reliability
Acculturation conditions		
Perceived cultural distance	3.45 (.91)	.83
Use of mainstream language at home	2.75 (.85)	-
Learning opportunities at home	3.03 (1.14)	-
Importance of religion at home	3.89 (1.24)	-
Parents' acculturation orientations		
Adoption expectation	3.51 (1.11)	.85
Maintenance expectation	3.97 (1.01)	.84
Parents' interest in children's school life	4.17 (.86)	.67
Attitudes towards mainstream and ethnic culture		
Ethnic identity		
Germany	2.86 (1.18)	.94
Other country	4.22 (.87)	.88
Acculturation orientation		
Mainstream orientation (adoption)	3.42 (.88)	.83
Ethnic orientation (maintenance)	3.80 (.80)	.81
Psychological outcomes		
Depression	1.81 (.86)	.84
Physiological stress symptoms	1.80 (.69)	.73
Self-concept		
Social self	3.95 (.83)	.87
Academic self	3.58 (.80)	.81
Life satisfaction (SWLS)	3.76 (.93)	.82
Disruptive behavior at school	1.99 (.68)	.62
School delinquency	1.27 (.43)	.66
Sociocultural outcomes		
Academic performance	1.99 (.77)	-
Number of national friends	1.06 (.82)	-
Competence national language		
School mark	2.93 (.80)	-
Self-reported competence	4.31 (.72)	-

Note. 679 < *N* < 695

In order to reduce the number of variables in the model, EFAs were computed on the basis of subscale means at individual level. Concerning attitudes towards mainstream and ethnic culture, an ethnic and a mainstream factor emerged including the respective acculturation orientation and identity. With respect to psychological outcomes, three factors emerged: The first one covered positive outcomes related to general well-being and well-being at school, namely social and academic self-concept and general life satisfaction. The other two factors covered negative outcomes, with one factor related to psychological problems (physiological stress symptoms and depression) and one factor related to behavioural problems (school misconduct and delinquency). The three indicators for psychological and sociocultural adjustment respectively were then merged into two higher order factors, one measuring psychological adjustment and the other one measuring sociocultural adjustment. Proportions of variance explained by these higher order factors ranged from 68% to 81% and loadings of individual scales onto these factors ranged from .81 to .90.

Country-Level Analyses

In the first step, we aggregated individual-level variables by country of origin. In order to accommodate the different sample sizes within countries of origin, we used log (base 10) transformations of the number of

participants per country as weights before calculating correlations between them (five countries with only one or two respondents each and extreme scores on some variables were excluded, namely Paraguay, Slovenia, Philippines, The United States of America, and Saudi-Arabia). Country-level correlations of the aggregated individual level variables are displayed in Table 2.

Table 2
Country-Level Correlations between Aggregated Individual-Level Variables

	Opp	P-Int	PCD	Rel	P-Mai	P-Ado	Lang	Eth	Main	Psy	Soc
Acculturation conditions											
Opportunities for learning	-	.25*	-.33**	-.21	-.29**	.00	.02	-.14	.17	.20	.35**
Interest in children's school life		-	.02	.09	.12	.11	-.28*	.24*	-.12	-.12	-.05
Perceived cultural distance			-	.23*	.20	-.22	-.23*	.01	-.35**	.12	-.06
Importance of religion				-	.53**	-.26*	-.22*	.56**	-.35**	-.19	-.24*
Ethnic maintenance expectation					-	.05	-.14	.59**	-.42**	-.15	-.38**
Mainstream adoption expectation						-	.26*	-.17	.44**	-.26*	-.02
Use of mainstream language							-	-.21	.16	-.32**	.09
Acculturation orientations											
Ethnic								-	-.19	-.12	-.58**
Mainstream									-	-.10	.11
Psychological outcomes											
										-	.06
Sociocultural outcomes											
											-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $44 < N < 80$. Opp = learning opportunities at home. P-Int = parents' interest in school life. PCD = perceived cultural distance. Rel = importance of religion at home. P-Mai = parents' maintenance expectation. P-Ado = parents' adoption expectation. Lang = use of mainstream language at home. Eth = ethnic orientation. Main = mainstream orientation. Psy = psychological outcomes. Soc = sociocultural outcomes. Significant correlations are printed in boldface.

Country-level correlations between these aggregated individual-level variables reveal a similar pattern of relationships to what has been found at individual level (Schachner et al., 2013). Hypothesis 1 was therefore largely supported. In particular, higher levels of perceived cultural distance were associated with a lower preference for the mainstream culture (Hypothesis 1a) but distance was not significantly linked to children's adjustment. More opportunities for learning at home were linked with a lower preference for ethnic maintenance and a better sociocultural adjustment (Hypotheses 1b and 1c). There were no significant positive relationships between acculturation orientations and outcomes (contrary to common findings at individual level); negative links were found between the preference for ethnic maintenance and sociocultural outcomes and between the preference for adoption to the mainstream culture and psychological outcomes (Hypothesis 1d). In the next step, we calculated country-level correlations between the aggregated individual-level variables and the country-level variables. In particular, we were looking for correlations between country-level characteristics and country of origin-level aggregated scores of perceived cultural distance, cultural practices and (perceived) acculturation strategies of parents and children, (perceived) opportunity structures at home and children's psychological and sociocultural school adjustment. Country-level correlations between aggregated individual- and country-level variables are displayed in Table 3.

Table 3
Country-Level Correlations between Aggregated Individual-Level and Country-Level Variables

Country level variables	Conditions							Orientations		Outcomes	
	Opp	P-Int	PCD	Rel	P-Mai	P-Ado	Lang	Eth	Main	Psy	Soc
Values (Schwartz)											
Harmony	.00	-.09	-.32*	-.08	-.12	.11	.03	.00	-.06	-.07	-.06
Embeddedness	-.12	.14	.45**	.22	.03	.09	-.03	-.09	-.04	-.09	.04
Hierarchy	-.16	-.16	.38**	-.10	-.03	.11	-.06	-.24	.12	.02	.10
Mastery	-.12	-.02	.32*	.09	.04	-.22	-.09	-.02	-.13	-.08	.03
Affective autonomy	.17	.00	-.41**	-.14	.10	-.03	.03	.18	.12	.05	.10
Intellectual autonomy	.15	-.12	-.48**	-.17	-.16	-.07	.13	.04	-.03	.03	.01
Egalitarianism	-.15	-.10	-.09	.21	.17	-.13	-.05	.18	-.21	.12	-.26
Values (Hofstede)											
Power Distance	-.34*	.04	.24	-.01	.01	.01	-.12	.03	-.04	-.38*	-.08
Individualism	.35*	.54**	-.41**	.03	.15	.08	-.29	.37*	-.17	.08	-.21
Masculinity	.34*	.17	-.40**	-.04	.01	.07	-.05	.00	-.02	.12	.04
Uncertainty Avoidance	.01	.05	-.24	.06	.06	.15	.19	.22	.01	-.10	-.32*
Long-Term vs. Short-Term Orientation	.14	-.04	-.17	-.44**	-.24	-.06	-.09	-.22	.22	-.06	.13
Indulgence vs. Restraint	.04	.17	-.06	.09	-.01	.09	.12	.20	.14	-.04	-.11
Religious composition											
Proportion of Christians	.13	.15	-.24*	-.17	.00	-.13	-.09	.19	.06	.05	-.31**
Proportion of Muslims	-.23*	-.10	.15	.37**	.19	.10	.23*	-.02	-.21	-.17	.12
Proportion of non-religious	.34**	.00	-.32**	-.33**	-.25*	-.10	-.12	-.16	.03	.08	.24*
Economic and political development											
Development (HDI)	.37**	.21	-.49**	-.33**	-.31**	-.16	.00	.08	-.03	.05	.16
Globalisation	.33**	.18	-.51**	-.19	-.22	-.05	-.03	.11	.05	.18	.02

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $44 < N < 80$. Opp = learning opportunities at home, P-Int = parents' interest in school life, PCD = perceived cultural distance, Rel = importance of religion at home, P-Mai = parents' maintenance expectation, P-Ado = parents' adoption expectation, Lang = use of mainstream language at home, Eth = ethnic orientation, Main = mainstream orientation, Psy = psychological outcomes, Soc = sociocultural outcomes. Significant correlations are printed in boldface.

As expected, perceived cultural distance was significantly correlated with most other country-level variables (Hypothesis 2a), notably Schwartz's (2009) cultural values: Higher levels of perceived cultural distance were associated with higher levels of Embeddedness, Hierarchy, and Mastery and with lower levels of Intellectual and Affective Autonomy. However, as for Hofstede's (2009) values, significant (negative) relations were only found for with Individualism and Masculinity. Moreover, higher levels of perceived cultural distance were associated with a lower proportion of Christians and non-religious people and lower levels of development and globalization in the country of origin.

Relationships with parents' and children's acculturation strategies and related behaviour, however, were much weaker (Hypothesis 2b). The importance of religion in the family and parents' maintenance expectations, also strongly linked with one another, showed the same pattern of relationships with country-level variables: They were associated with a stronger Short-Term Orientation, a higher proportion of Muslims and a lower proportion of non-religious people in a country, as well as with lower levels of development. Parents' adoption expectation on the other hand was only significantly and positively linked with Individualism, whereas language use at home did not significantly correlate with any of the country level variables. Finally, ethnic orientation was associated with higher levels of Uncertainty Avoidance in the country of origin; no such relationship was found for mainstream orientation.

Concerning country level links with adjustment (Hypothesis 2c), there were no significant relationships with children's psychological adjustment. However, parents from countries with higher Masculinity values, a higher proportion of non-religious people and higher levels of development provided more opportunities for

learning and parents from more individualistic countries showed a greater interest in their children's school life. Finally, children from countries with lower levels of Uncertainty Avoidance as well as a higher proportion of non-religious people and a lower proportion of Christians showed higher levels of sociocultural adjustment. Taken together, there was some support for Hypothesis 2. Country-level characteristics and how different they were from Germany were associated with acculturation conditions in the family but not so much with children's acculturation orientations and outcomes.

Discussion

Based on the acculturation framework (Arends-Tóth & van de Vijver, 2006) and Bronfenbrenner's (1979) ecological systems theory, the aim of this study was twofold. On the one hand, we wanted to confirm whether relationships between different components of the acculturation process that are found at individual level (Schachner et al., 2013) also hold at the level of the country of origin. On the other hand, we wanted to explore the relationship between social indicators of the country of origin and children's acculturation conditions, orientations and school-related outcomes. Our analyses were based on data from 695 second- and third-generation immigrant children from 54 different countries of origin living in Germany. The results suggest that as expected, the relationships between different aspects of the acculturation process are similar at country of origin level to what has been found at individual level (Hypothesis 1). Further, we found that the relationship with more objective characteristics of the country of origin is generally weak. However, the relationships we found replicate associations with perceived cultural distance at individual level (Hypothesis 2). In the following, we provide a detailed discussion of specific relationships found, followed by some critical remarks about the limitations of our study, a general conclusion and some implications of our research.

Group-Level Relationships Between Acculturation Variables

There were many significant and meaningful relationships between acculturation variables at the level of the country of origin, following similar patterns to what has been found at individual level (Schachner et al., 2013). This supports the idea of immigrant group specific acculturation patterns and suggests that correlations are based on similar processes at group-level to what has been specified at individual-level. However, it can be observed that opposite relationships between aspects related to the maintenance of the culture of origin and aspects related to the adoption of the national culture are even stronger at country of origin-level. Interestingly, almost all significant relationships with adjustment outcomes were negative. In particular, aspects related to cultural maintenance were associated with less positive sociocultural outcomes and aspects related to cultural adoption were associated with less positive psychological outcomes. This pattern was particularly strong for the importance of religion, with more religious immigrant groups showing a stronger tendency towards separation and lower (sociocultural) adjustment.

Taken together, this suggests that at group level, the orientations towards both cultures appear to be mutually exclusive (and even more so than what has been found at individual level). Immigrant groups, in this case differentiated by country of origin, vary in their acculturation strategies between separation as one end of the scale and assimilation as the other end of the scale. This again supports the prominence of a unidimensional conceptualisation of acculturation in Germany, where it is viewed by mainstreamers and immigrants as a movement from one culture to the other (Berry et al., 2006b; Yağmur & van de Vijver, 2012; Zick et al., 2001). Our data also show, however, that choosing one culture over the other comes at a cost for immigrant groups, which often seems to outweigh the benefits. Previous literature has also identified Germany as one of the countries in Europe, where Islam is most underprivileged compared to other religions (Güngör, Fleischmann, Phalet, & Maliepaard, 2013). This societal climate has been associated with more conservative forms of religious practice combined with separation tendencies amongst Muslim immigrants, as we found them in our sample.

Acculturation Variables and their Relationship with Other Country-Level Variables

As expected, we found many relationships between characteristics of children's country of origin and aggregated perceptions of cultural distance. Values, religious composition, and level of development were mostly associated with perceived cultural distance in the expected direction. This suggests that – although most of the

participants were second- or third-generation immigrants and quite young – they had a fairly adequate idea of the degree of difference or similarity between their ancestral culture and the German national culture. This finding is remarkable and novel as to our knowledge objective and subjective measures of cultural distance have not been successfully linked to this extent before. The accuracy of perceptions of cultural distance in this age group also replicates previous studies which found that children of similar age are already aware of status differences between different immigrant groups in a country (Verkuyten, Hagendoorn, & Masson, 1996). These status differences are strongly related to perceived cultural differences between specific ethnic groups and the mainstream society.

We had also expected that children from countries which were more different from Germany in terms of values, religious composition, and development would prefer cultural maintenance more and cultural adoption of the mainstream culture less and perceive their parents to hold similar attitudes. However, it turned out that this was only the case to a limited extent. The links observed were mainly in relation to preferences for ethnic maintenance and they were stronger for perceived parental preferences than for children's own preferences. Except for the link between perceived parental adoption orientation and Individualism, we did not find any other relationships between (perceived) acculturation preferences and cultural values.

As expected, a higher proportion of non-religious people in the country of origin was associated with a lower preference for cultural maintenance. Although not significant, the opposite was the case for the proportion of Muslims in a country, whereas the proportion of Christians in a country was not associated with cultural maintenance. Taken together, this supports literature suggesting that religion is an important vehicle for cultural values, norms, and traditions (Güngör et al., 2012; Ward, 2013) and our individual-level findings that the intensity of religious practice is more important for cultural maintenance than which particular religion is practiced (Schachner et al., 2011). The slightly different findings concerning the proportion of Christians and Muslims in the country of origin support what has also been suggested in the literature, namely that the link between religion and cultural maintenance is especially strong amongst Muslim immigrants. Also, since a lot of the German traditions are rooted in Christianity, the link between religious practice and cultural maintenance may not be as strong amongst Christian immigrants.

Further, the practice of religion is more important in families from Muslim countries compared to families from countries with a higher proportion of Christians and non-religious people. Surprisingly, the proportion of Muslims in the country of origin is also associated with a more frequent use of the mainstream language at home. To some extent, this relationship may be explained by the fact that many families of Muslim children in our sample are already in Germany for a relatively long time. Another explanation may be that we did not differentiate between language spoken with siblings and parents. Since families with a Muslim background are often larger compared to other immigrant families, the higher use of the mainstream language in Muslim families may reflect language use with siblings more than with parents.

Finally, we were interested in the relationships between characteristics of the country of origin, opportunity structures at home and children's school adjustment. Similar to our findings for acculturation strategies, we only found some relationships with variables describing the opportunity structures at home and none with children's actual adjustment. These opportunity structures seem to reflect parental sociocultural adjustment as these structures are all somehow connected to parental competence in the national language, but also to their understanding of the German education system and the kind of support they can provide to their children to succeed in this system. Notably the provision of opportunities to learn (measured in our study as the number of books in the household) was strongly related to most characteristics of the country of origin. In families from countries that were more similar to Germany in terms of values, religious composition and development, children had access to more books at home. This is a very important finding as children's exposure to books is crucial for language acquisition and educational attainment (Schachner et al., 2013).

To summarize, we could indeed find relationships between characteristics of the children's country of origin, their immediate family environment, and different components of their acculturation process as ecological models would suggest. The relationships with perceived parental acculturation strategies and opportunity

structures at home were much stronger than with children's orientations and adjustment. This suggests that amongst second- and third-generation immigrant children, associations of their adjustment outcomes with the culture of origin may have eroded even though the children have still enough knowledge of their ancestral culture to appreciate its differences from mainstream culture. Nevertheless, there may be indirect associations with their culture of origin through the way parents deal with their intercultural situation (e.g., through religious practice or their perceived acculturation strategies) and the opportunities and support they can provide to their children. Given that we did not find many associations of adjustment outcomes with any variables at country of origin level however, this may also mean that individual-level factors are more decisive for these outcomes than factors at group level.

Limitations and Future Directions

Although our study draws on a large dataset and includes children from many different countries of origin, there are several limitations to it. First, most of the children in our sample are second- or third-generation immigrants. This means the relationships with characteristics of the country of origin may not be as strong in our sample as they would have been in a sample of first-generation immigrants. It would be interesting to see similar studies drawing on a sample of first-generation immigrants with more recent immigration experiences and a longer exposure to the country of origin prior to migration. Secondly, the analyses presented in this study are purely correlational and not controlling for relationships at individual-level. This allowed us to include a wide range of variables, take a more exploratory approach and get an overview of the patterning of relationships between variables at the level of the country of origin. Nevertheless, we cannot make conclusions about causality. Based on our research, future studies could select a smaller set of variables and assess the relationships between them simultaneously at both levels, using multilevel analyses. Thirdly, parental attitudes were not assessed amongst parents, but we relied on children's perceptions of parental attitudes and the family environment. Future studies should also include data obtained from parents directly. Fourthly, although we have interpreted some of our findings in relation to Germany as an example for specific type of receiving society (namely assimilationist), it would be interesting to extend this research to other receiving societies and look at interactions between a particular receiving context and different immigrant groups.

Conclusion and Implications

In our study, we drew on a large sample of immigrant children from 54 countries and some of the most important indices used to describe psychological differences between people from different countries. Based on this unique combination of data, our study provided insights on the interplay between macro- and micro-level environments and their associations with immigrant children's adjustment, which is rarely done. Moreover, we assessed all main components of the acculturation process – conditions, orientations, and outcomes – which enabled us to provide an overview of which particular aspects of the process are linked to characteristics of the children's country of origin.

Taken together, our most important findings suggest that (1) the relationship between different components of the acculturation process follows a similar pattern at the level of country of origin to what has been found at individual level. This supports the idea that there is systematic variation between different immigrant groups in the way they acculturate, which is even visible amongst second and third generation immigrant children. (2) The overall pattern of relationships at country of origin level suggests that groups vary in their acculturation practices, strategies, and outcomes along a continuum from separation to assimilation, which is particularly characteristic for the German context and has also been identified in other studies (Berry et al., 2006b; Yağmur & van de Vijver, 2012; Zick et al., 2001). (3) Associations with characteristics of children's country of origin suggest that this group-specific variation to some extent seems to be rooted in differences between countries of origin. Associations were mainly found with specific conditions in the family and not so much with children's outcomes. This suggests that parents are closer to these countries and more likely to be influenced by them still than their children, who belong to the second or third generation of immigrants. Yet, even in the absence of a direct relationship, characteristics of children's countries of origin may be linked to children's outcomes indirectly via the family context. (4) Religion, both concerning the religious composition of the coun-

try of origin and the importance of religion in families from particular immigrant groups, was associated with many other acculturation variables. This supports recent voices that more attention should be paid to religion and religious practice when studying the acculturation of immigrants (Güngör et al., 2013; Ward, 2013).

There are practical and policy implications that can be derived from our study. In particular, our results emphasize the importance of continuing efforts to reduce differences in opportunity structures at home between children from different immigrant groups. Where there is limited access to books and other educational materials at home, it is essential to ensure that children are exposed to such materials in pre-school educational settings. Further, our results suggest that immigrant groups in Germany vary mainly on a continuum between separating into an ethnic community and completely assimilating to the mainstream culture. The tendency towards either end is associated with less beneficial adjustment outcomes. In the light of these findings, it is important to create a societal climate that embraces cultural pluralism and allows immigrants to integrate their ethnic, mainstream and religious identities.

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