
UNIVERSITY OF TWENTE

MASTER THESIS

Bogar Vallejo Martinez

Faculty of Behavioural Management and Social Sciences

Master Educational Science and Technology

University of Twente

Enschede, Netherlands

**Sense of belonging of 15-year-old second-generation immigrant students in
long-destination countries with many settled, low-educated migrants.**



EXAMINATION COMMITTEE

Dr M.R.M Meelissen

Dr J. W. Luyten

DATE

August 26th 2019

Acknowledgements

This work would not have had the essence and significance without the invaluable support and reassurance of the people who accompanied me throughout this intense journey. Foremost, I would like to express my sincere gratitude to my first supervisor Dr M.R.M. Meelissen whose expertise, understanding, and guidance made it possible for me to develop a topic which is close to my heart. She showed boundless patience, challenging me through insightful suggestions and questions. Her encouragement helped me overcome countless ordeals.

By the same token, I wish to convey my deep appreciation to my second supervisor Dr J. W. Luyten for allowing me to develop my thesis under his guidance. His appropriate counselling allowed me to further develop and strengthen my research project.

Above ground, I am indebted to Mr J.M.J. Nelissen, who supported me during the enrolment and scholarship process. If this was not enough, he also advocated for my acceptance in the honour's research program; I have no words to express my gratitude. I would also like to thank Ms Leonie ten Have who assisted me before and during my stay at the University of Twente.

To my honour's program supervisors, Dr Petra C. de Weerd-Nederhof, A.M. Dijkstra, and M.E. Waite MA, I am immensely grateful for all your direction and encouragement. Your program and supervision benefitted me both academically and personally.

Furthermore, I wish to extend my sincere recognition to my classmates, professors, programme director, and everyone else who aided me in one way or another. Without a doubt, I learned from each person and every experience.

Finally, I dedicate this project to that special someone, my brother, daughter, and above all, to my mom, who has always believed in me and has never let my dreams fade away. Thank you for helping me change my stars. May good health envelop you, spurring a quick recovery. Love you, mom.

Abstract

Sense of belonging has a strong association with educational success and well-being. Immigrant students' self-reported sense of belonging differs widely across countries and persists even after considering learners' socioeconomic status. Research suggests that among several factors, sense of belonging can be influenced by parents, teachers, and peers. Therefore, this cross-sectional study aimed to explore the possible relationship between the sense of belonging of 15-year-old native and second-generation immigrant students, and their experience with bullying, teachers' attitudes, and parental support. The data was gathered from PISA 2015, five nations classified as long-standing destination countries with many settled, low-educated migrants were selected, and then multiple regression analyses were performed. Findings show more similarities between second-generation and native students' sense of belonging within countries than between second-generation learners across countries. Furthermore, results revealed that immigration status interaction effects are not significant and do not have a major impact on students' belongingness at school. Findings also indicate that bullying has the strongest association with school belonging, followed by parental support, whereas teachers' attitudes has the weakest relationship.

keywords: second-generation immigrants, well-being, sense of belonging, parental support, teachers' attitudes, long-standing destination countries.

Table of Contents

Acknowledgements-----	i
Abstract -----	ii
List of Tables -----	vi
List of Figures -----	vii
Chapter 1 – Introduction -----	1
1.1 Theoretical Framework -----	3
1.1.1 Migration. -----	3
1.1.2 Immigrants. -----	6
1.1.2 Host countries and their immigrant population. -----	7
1.1.2.1 Austria-----	9
1.1.2.2 Belgium-----	10
1.1.2.3 France-----	11
1.1.2.4 Germany-----	12
1.1.2.5 Netherlands-----	13
1.1.4 Students’ well-being. -----	14
1.1.5 Students’ social well-being. -----	15
1.1.5.1 Students’ sense of belonging. -----	15
1.1.5.2 Students’ perception of bullying. -----	19
1.1.5.3 Students’ perception of teachers’ attitudes. -----	21
1.1.5.4 Students’ perception of parental support. -----	22
1.2 Research Questions and Model-----	23
1.2.1 Research question. -----	24
1.2.2 Sub-questions. -----	24
1.3 Scientific & Practical Relevance -----	25
Chapter 2 – Methods -----	26
2.1 Research Design -----	26
2.2 Respondents -----	26
Instrumentation-----	28

Data Analysis and Procedure	30
Chapter 3 – Results.....	31
3.2 Self-reported Sense of Belonging.	31
3.3 Experience with Bullying	34
3.4 Experience with Teachers’ Attitudes	38
3.5 Experience with parental support.	41
3.1 Correlations.	43
3.1.1 Sense of belonging and Bullying	44
3.1.2 Sense of belonging and teachers’ attitudes.	45
3.1.3 Correlation between sense of belonging and parental support.	45
3.2 Multiple regression analysis	46
3.2.1 General overview	46
3.2.2 Bullying	48
3.2.3 Teachers’ Attitudes	48
3.2.4 Parental support	49
3.3 Interaction effects	50
3.3.1 General Overview	50
Chapter 4 - Conclusions and Discussion	52
4.1 Discussion	52
Sense of belonging of native and second-generation immigrant learners within and across countries.	52
Native and second-generation immigrant learners’ experience with bullying within and across countries.	53
Native and second-generation immigrant learners’ report of teachers’ attitudes.	53
Native and second-generation immigrant learners’ report of parental support.	54
Relationship between bullying and sense of belonging.	54
Relationship between teachers’ attitudes and sense of belonging.	55
Relationship between parental support and sense of belonging.	56
4.2 Limitations and Recommendations for Future Research.....	56

4.3 Conclusions	57
Reference List	59
Appendix A	66
Appendix B	67
Appendix C	71
Appendix D	76
Appendix E	79
Appendix F	80
Appendix G	84

List of Tables

Table 1	Possible answers for each variable.....	28
Table 2	Items used for the scale of sense of belonging (BELONG).....	28
Table 3	Items used for the scale or exposure to bullying (bullying).....	29
Table 4	Items used for the scale of students' perception of their teachers' attitudes (unfairteacher).....	29
Table 5	Questionnaire items used for the scale of students' perception of parental support (EMOSUPS	30
Table 6	Correlations between variables across all selected host countries.....	43
Table 7	Summary of regression analysis results on students self-reported sense of belonging across all countries.....	46
Table 8	Summary of regression analysis (with immigrant status interactions) on students' self-reported sense of belonging.....	51

List of Figures

Figure 1	International immigration trend in Austria.....	9
Figure 2	International immigration trend in Belgium.....	10
Figure 3	International immigration trend in France.....	11
Figure 4	International immigration trend in Germany.....	12
Figure 5	International immigration trend in the Netherlands.....	13
Figure 6	Well-being dimensions in PISA 2015.....	14
Figure 7	Social dimensions of students' well-being.....	15
Figure 8	Sense of belonging items in PISA 2015.....	16
Figure 9	Sense of belonging of international migrants in different host countries.....	17
Figure 10	Measures of bullying from victim's perspectives.....	19
Figure 11	Teachers' attitudes and behaviour items in PISA 2015.....	21
Figure 12	Parental support items in PISA 2015.....	22
Figure 13	Research Model.....	24
Figure 14	Mean score on the sense of belonging index, by country.....	32
Figure 15	Mean score on the sense of belonging index, by country and immigration status.....	32
Figure 16	Percentage of students who agreed or strongly agreed with the sense of belonging items.....	34
Figure 17	Mean score on the sense of belonging index, by country and immigration status.....	35
Figure 18	Percentage of students who reported being bullied a few times or more in a month.....	37
Figure 19	Percentage of students who reported unfair treatment by the teacher 'once a week or more' or 'a few times a month'.....	38
Figure 20	Percentage of students who reported any unfair treatment a few times or more in a month, by items.....	40

Figure 21	Percentage of students who agreed or strongly agreed with receiving parental support.....	41
Figure 22	Percentage of students who agreed or strongly agreed with receiving parental support, by items.....	43
Figure 23	Correlation between sense of belonging and bullying by country.....	44
Figure 24	Correlation between sense of belonging and teachers' attitudes by country.....	45
Figure 25	Correlation between sense of belonging and parental support by country.....	46
Figure 26	Summary of regression analysis results on students' sense of belonging.....	47
Figure 27	Results regression analysis sense of belonging/bullying by country.....	48
Figure 28	Results regression analysis sense of belonging/teachers' attitudes by country.....	49
Figure 29	Results regression analysis sense of belonging/parental support by country.....	49
Figure 30	Summary of regression analysis (with immigration status interactions) results on students' self-reported sense of belonging (OECD, 2017a).....	51

Chapter 1 – Introduction

Migrant children face significant intersectional challenges that contribute to their sense of safety and belonging to the host country and its academic institutions (Janta & Harte, 2016). Living and studying in another country constitutes particular demands on families and learners (Wirén, 2013). The manner in which governments and school systems respond to migrant children's hardships has an enormous economic and social impact on all the members of its communities. Therefore, nations and educational institutions have the delicate task of integrating vast immigrant population and asylum seekers who are trying to escape social-economic issues and injustices that hinder their opportunity of a decent lifestyle (OECD, 2015a). Countries' success in integrating immigrant children into society depends mainly on the efficacy of social policy in general and education policy in particular (Cattaneo & Wolter, 2012).

Over the years, policymakers' and scholars' concern have mainly focused on students' academic performance (OECD 2012). However, over the past two decades, researchers have recognised the importance of a safe and healthy school environment (Konishi, Hymel, Zumbo, & Li, 2010). This has resulted in a growing interest in students' well-being, their sense of belonging, and overall development. According to research, high levels of well-being among learners are associated with positive life experiences and better school performance; similarly, a strong sense of belonging is positively associated with well-being and academic achievement. The previous shows a relevant circular relationship between the three variables (OECD, 2015a), which is why further exploration of these associations is vital.

The rise of immigrant students poses new dilemmas regarding integration at school, as immigrant learners have to interact with peers and teachers from diverse cultural backgrounds and experience complex situations in which living conditions are often not appropriate for an overall healthy lifestyle (OECD, 2017a). Educational systems for countries represent, in some cases, a possibility to integrate society. Research suggests that educational system designs are essential for a successful life as international migrant students (Wirén, 2013). Despite the growing interest in immigrant learners and their integration process, research is still scarce (Bradshaw, 2014).

There is an imperative need for a more comprehensive analysis and discussion in favour of a successful educational acculturation of immigrant students (Dustman, Frattini, & Lanzara, 2011; Tang, 2018). This is a crucial challenge for policymakers, researchers, and academic institutions all around the world. Unfortunately, many European countries are not adequately prepared for this task in comparison to the US, Australia, and Canada because of such a new phenomenon of diverse culturally and ethnically populations (Dustmann, Frattini, & Lanzara, 2011). Additionally, rising numbers of second and third-generation immigrants cause relevant impact for European countries because their needs differ from that of first-generation immigrants. This new dilemma involves helping immigrants overcome structural barriers that will enable them to succeed in higher education and on the labour market (Collet & Petrovic, 2014).

A strong sense of belonging is associated with increased self-esteem, positive mood, higher levels of motivation, and academic achievement (Faust, Ennis, & Hodge, 2014; Slaten, Ferguson, Allen, Brodrick, & Waters, 2016; St-Amand, Girard, & Smith, 2017). A revealing fact is that immigrant students' perceived sense of belonging differs widely across countries and persist even after considering students' socioeconomic status and the previously mentioned factors. The latter suggests that integration policies and school systems play an important role in narrowing performance differences and improving learners' overall development (OECD, 2016). To further understand these issues, it is necessary to analyse the complicated relationship between the policies and school systems of Organisation for Economic Cooperation and Development (OECD) host countries and the progress or hindrance of immigrant students' academic performance and their social and psychological well-being.

Therefore, the following research aims to contribute to a dialogue which addresses a much needed international reconciliation with the immigrant population. This work strives to explore 15-year-old native and second-generation immigrant students' sense of belonging and its interaction with three subjective indicators (students' perception of teachers' attitudes, parental support, and bullying) within and across five OECD long-standing destination countries with many settled, low-educated migrants. Continuous research of 15-year-old learners' sense of belonging is fundamental on the grounds that school is one of the most critical social

environments for teenagers (OECD, 2015a), and pupils at this age go through physical and emotional changes which may have long-term consequences (Borgonovi & Pál, 2016). Furthermore, this ‘emotional engagement to school’ in secondary years respond to the developmental needs of students which may have long-lasting effects in their future studies (Wang, & Eccles, 2012, p. 31).

As part of the methods design, descriptive and analytical statistics using PISA survey data were performed. Due to their similar immigrant influx, Germany, the Netherlands, France, Belgium, and Austria were selected for this study to help control extraneous variables and reduce their effects; by selecting second-generation immigrant students, the analysis is less likely to be affected by new immigration policies which could alter the characteristics of recently arrived immigrants.

This paper begins by providing an overview of migration trends and their challenges. It then states the different concepts of immigrants, followed by a delineation of the selected host countries, their immigrant population, and policies. The selected variables (sense of belonging, bullying, teachers’ attitudes, and parental support) are then described, succeeded by the research questions and the hypotheses. Afterwards, the data, methodology, and analyses are explained. Finally, the last section of this work presents the results, limitations, recommendations for future research, and the conclusions.

1.1 Theoretical Framework

The main focus of this study is to compare the relationship of 15-year-old native and second-generation immigrant students’ sense of belonging, and their perception of parental support, bullying, and teachers’ attitudes within and across the selected host countries. The following section will provide in-depth information about the different constructs and selected variables for this research.

1.1.1 Migration.

Migration involves the movement of people from diverse backgrounds and with different purposes in life (IOM, 2017). According to Gögebakan-Yildiz (2017), migration can be regarded as a voluntary or forced social phenomenon which implies an individual or massive movement of

people from one place of settlement to another due to natural disasters, cultural, socioeconomic and political reasons. Migration is often categorised as internal migration when the relocation of people is within the same country, and international migration when the relocation of people occurs between countries (Hilderink et al., 2002). It is essential to recognise that international migration involves not only the crossing of territorial borders, but also the development and establishment of foreign resident populations in the host countries (Messer, Schroeder, & Wodak, 2012).

In the last few decades, globalisation has been one of the leading causes for such a significant rise in international migration, which has had severe effects on all the agents involved. According to the United Nations (UN) (2017a) International Migration Report, international migrants reached 258 million in 2017; 38 million more than in 2010 and 85 million more than in 2000. Over 30 per cent of all international migrants live in Europe (78 million). In 2016, the total number of refugees and asylum seekers in the world was estimated at 25.9 million; Turkey hosting the largest refugee population with 3.1 million refugees and asylum seekers, followed by Jordan, and the State of Palestine. In 2017, India was the largest country of origin of international migrants (17 million), followed by Mexico (13 million), the Russian Federation (11 million), China (10 million), Bangladesh (7 million), and the Syrian Arab Republic (7 million).

In 2017, women comprised slightly less than half of all international migrants. However, female migrants outnumbered male migrants in Europe. The median age of international migrants worldwide was 39 years. This is a slight increase from 38 years in 2000. Between 2000 and 2015, positive net migration contributed to population growth in Northern America and Oceania. Whereas, in Europe, the size of the population fell by one per cent in the absence of a net inflow of migrants (UN, 2017a).

Migration can be considered by many 'as a disruption' to the pre-conceived ideas of host nations that a migrant is a threat to the core values of the state and its people (Messer, Schroeder, & Wodak, 2012, p. 31). However, international migration and economic development support each other, becoming one of many forms of development in host countries (Clemens, 2017). While emigration and immigration may be considered as unfavourable by diverse agents, it can't

be denied that these phenomena also provide countries, societies, and migrants with many benefits, such as ‘growth population’ in ageing countries (UN, p. 18, 2017a), the reduction of unemployment and increase of significant capital flows of the country of origin, the transfer of skills, knowledge, and technology, and the increment of gross domestic product of the host country. Nevertheless, these opportunities also come with considerable challenges for immigrants and host countries alike. As a result, migration is considered a high-priority policy issue by many governments and politicians worldwide (IOM, 2017). The aim for policy-makers and scholars is to better understand these complex phenomena and its various manifestations in hopes of designing and developing effective immigration and integration policies so that migrants and host countries can adequately adapt and benefit from this international movement of people (IOM, 2017).

Some contrasting perspectives and theories attempt to contribute to a more profound understanding of immigrant integration. For instance, the assimilation theory which dominates the field in the US and some parts of Europe, the cultural pluralism models and multiculturalism approaches in Canada and England, and the more familiar idea of integration and social cohesion in most of the European countries. These different paradigms have tried to address how immigrant groups are being integrated into the diverse structural components of host countries. Nevertheless, these attempts have caused an absence of universal theoretical frameworks (Messer, Schroeder, & Wodak, 2012). It seems that the only common ground among these perspectives is the lack of effective means that enrich the lives of immigrants.

The European Union (EU), for example, has laws and regulations which attempt to address immigrant integration. However, despite these efforts, in many EU countries, there continues to be human rights violations and a lack of comprehensive immigration and integration policies, which in turn affect the harsh reality of immigrant populations. Consequently, all the actors involved endure political, social, economic, religious and cultural struggles that polarise this situation even more. Indisputable is the fact that social and educational implementations which are not only effective but sustainable are required to empower immigrants and provide peace to all those implicated in this scenario (Magalhães & Campina, 2018).

In the last decades, a new paradigm called inclusive education has emerged in Europe to promote integration among immigrant students. Educational requirements such as the development of intercultural competencies and compensatory education are addressed by this distinct conception, which is based on international laws. European countries incorporate inclusive education in their legislation as an attempt to guarantee quality education that is fair, compassionate, and tolerant. However, the reality in the classrooms of many countries display signs of exclusion and isolation for immigrant students. Host countries need to update their integration laws and regulations so that integration policies are up-to-date with current social changes. Furthermore, within these updated policy frameworks, governments need to consider educational systems and families because, without these two core pillars, positive transformations in immigrant students' overall well-being are less likely to happen (Manzano-García & Fernández, 2016).

Parental support has been identified as an important factor that affects immigrant students' school engagement and sense of belonging (Chiu, Pong, Mori, & Chow, 2012). Middle school learners need adult role models who support them in establishing their sense of belonging at school during a period of consequential individual and social development (Faust, Ennis, Hodge, & William, 2014). Thus, school systems and families need to work together to provide immigrant teenage students with the support they need to feel they are part of the educational community.

For the present study, it is vital to understand the characteristics that make an individual be considered a native, a first-generation immigrant, or a second-generation immigrant. The following section focuses on describing the concept of immigrant and its characteristics.

1.1.2 Immigrants.

At present, there is no specific consensus on the definition of immigrants, but it is most commonly defined as any person who changes his or her country of usual residence. A person living in the host country for three to nine months is considered a short-term immigrant. An individual is considered a long-term immigrant only after a year of legal residency in the host country. International immigrants are, therefore, individuals who come from another country

than the one in which they live (U.N., 1998; Tani, 2017; OECD/ILO, 2018). This definition does not take into account the citizenship of people nor the purpose of the stay.

In line with the previous definition, to be able to make an objective comparison between natives and international immigrants, the latter will be distinguished according to three variables obtained through PISA information: student's country of birth, as well as those of their mother and father (Cattaneo & Wolter, 2012).

- **Definition 1:** At least one parent was born outside the host country.
- **Definition 2:** Both parents were born outside the host country, independent of where the child was born, or the child was born abroad of at least one foreign-born parent. This definition, therefore, includes both first and second generation immigrants. Depending on where the child was born, it could be considered either definition 3 (first generation immigrant) or definition 4 (second generation immigrant).
- **Definition 3:** The parents and child were born abroad.
- **Definition 4:** Child born in the host country from two parents born abroad.

This study aims to analyse the self-reported sense of belonging of second-immigrant students. Therefore, definition four will be considered for this research.

1.1.2 Host countries and their immigrant population.

Immigration has become a central focus in political debates during the end of the twentieth and early twenty-first century in Europe and around the world (Messer, Schroeder, & Wodak, 2012). Admitting immigrants into countries vary considerably according to immigration policies, which in turn affects the integration of immigrants in host societies and their educational systems. While large scale assessments such as PISA demonstrate that immigrant students tend to be outperformed by non-immigrant students, in some countries such as Canada, Australia, and Switzerland, immigrant students' test results are comparable to those of natives. The previous might be due to changes in the individual background characteristics of the new immigrants caused by immigration policies and laws that favour the immigration of highly qualified migrants resulting in different socio-economic characteristics; this can explain much of the success of migrants in some OECD countries (Cattaneo & Wolter, 2012).

Additionally, PISA results also show a strong correlation between immigrant overall well-being and the characteristics of the education systems and policies in host countries. PISA data suggest that school systems and policies affect immigrant learners with similar cultural and socio-economic backgrounds (OECD, 2016a). Migrant children and their families face important challenges, and how countries support them through social and educational regulations is vital for their general well-being (IOM, 2017). Learner outcomes and perceived sense of belonging depend on several different factors, including those from the individual profile, the country of origin, and the host country. Despite considering these factors and grouping OECD countries into categories according to similar circumstances and the characteristics of their immigrant populations, there are significant disparities in integration and student achievement.

According to the OECD (2016a), five groups can be identified among countries with a large number of immigrant populations. For this research, countries from one of these groups were selected.

Countries with a large number of immigrants:

- **Settlement countries where immigration has contributed to the country's development and is considered to be part of its heritage and history.** These countries include Australia, Canada, Israel, and New Zealand.
- **Long-standing destination countries *with* many recent and highly educated immigrants.** These countries include Luxembourg, Switzerland and the United Kingdom. The United States can also be included, although its more recent arrivals include large numbers of low-educated immigrants from Latin America.
- **Long-standing destination countries with many settled, low-educated migrants.** This group of countries includes Austria, Belgium, France, Germany, and the Netherlands.
- **Countries with large populations of recent and humanitarian immigrants with strong integration policies.** These countries include Denmark, Finland, Norway, and Sweden.
- **New destination countries with large populations of low-educated immigrants.** Greece, Italy, Portugal, and Spain are included in this group.

The aim of this work is to explore the perceived sense of belonging of second-generation 15-year-old immigrant students and whether it varies in and within countries with similar

immigrant background. With this in mind, this study was based on the five long-standing destination countries with many settled, low-educated migrants: Austria, Belgium, France, Germany, and the Netherlands.

1.1.2.1 Austria

In 2000, the population of Austria was estimated to be just over 8 million (World Bank, n.d.), 12.3% of the population were international migrants. Most of the immigrants were from Serbia, Germany, Bosnia and Herzegovina, and Turkey (U.N., 2017b). Whereas in 2017, the population was estimated to be just under 9 million (World Bank, n.d.), 19% of the population were international migrants. The same countries previously mentioned comprised most of their international migrants that year (see Figure 1) (U.N., 2017b).

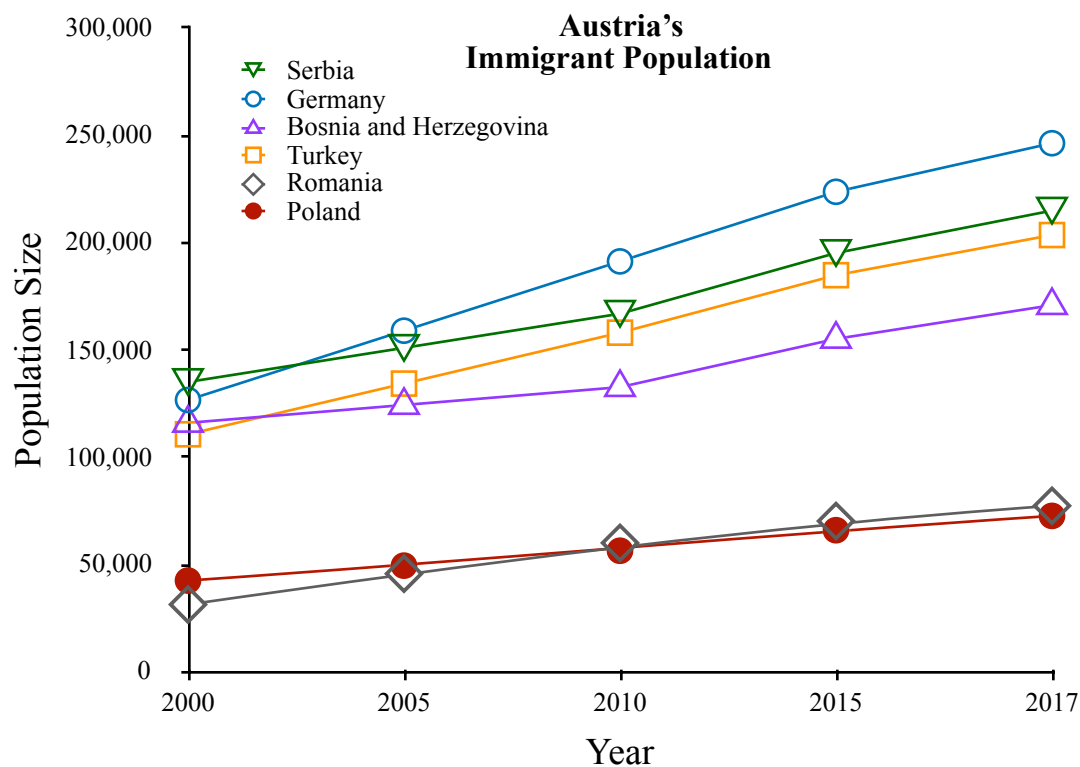


Figure 1. International immigration trend in Austria. Adapted from ‘Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017)’, by United Nations, Department of Economic and Social Affairs. Population Division, 2017, Copyright 2016 by The Office of the Director, Population Division/DESA, United Nations, DC2-1950.

1.1.2.2 Belgium

The population of Belgium in 2000 was estimated to be just over 10 million (World Bank, n.d.), 8.7% of the population were international migrants. Most of the immigrants were from Italy, France, Morocco, and the Netherlands (U.N., 2017b). In 2017, the population was estimated to be over 11 million (World Bank, n.d.), 11.1% of the population were international migrants. The countries previously mentioned and Spain comprised most of their international immigrants (see Figure 2) (U.N., 2017b).

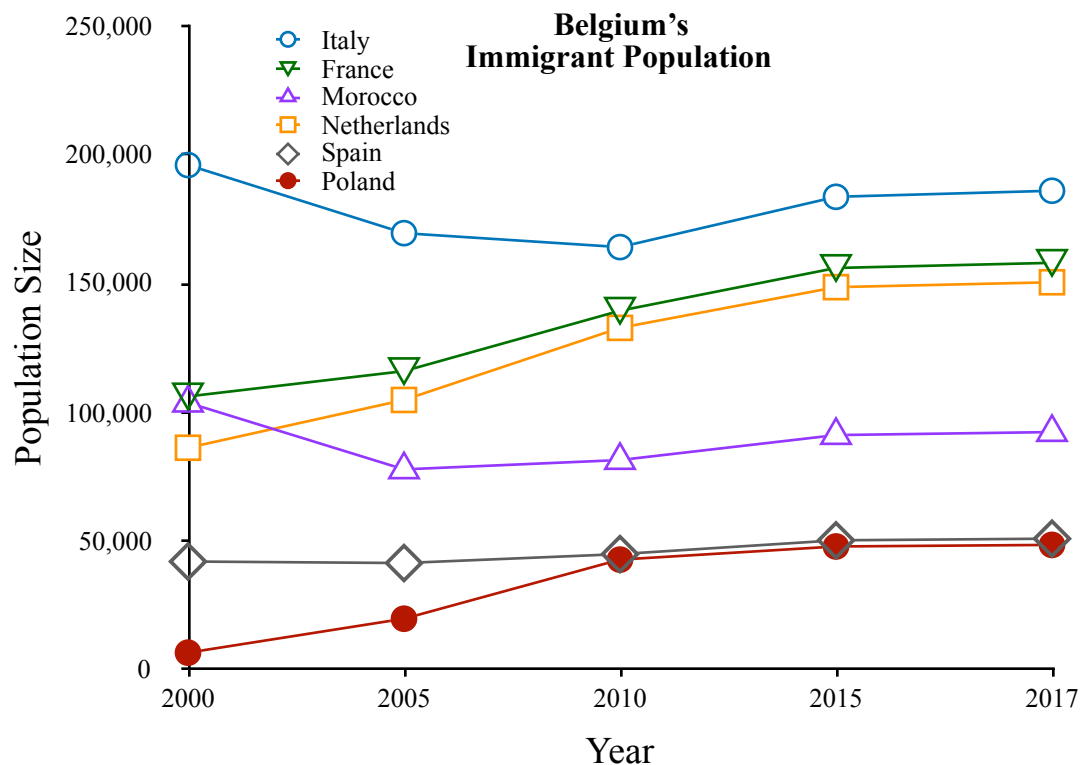


Figure 2. International immigration trend in Belgium. Adapted from ‘Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017)’, by United Nations, Department of Economic and Social Affairs. Population Division, 2017, Copyright 2016 by The Office of the Director, Population Division/DESA, United Nations, DC2-1950.

1.1.2.3 France

In 2000, the population of France was estimated to be just over 65.5 million (World Bank, n.d.), 10.5% of the population were international migrants. Most of the immigrants were from Algeria, Portugal, Morocco, Italy, and Spain (U.N., 2017b). The population in 2017 was estimated to be over 67 million (World Bank, n.d.), 12.2% of the population were international migrants. Algeria, Morocco, and Portugal comprised most of their international immigrants (see Figure 3) (U.N., 2017b).

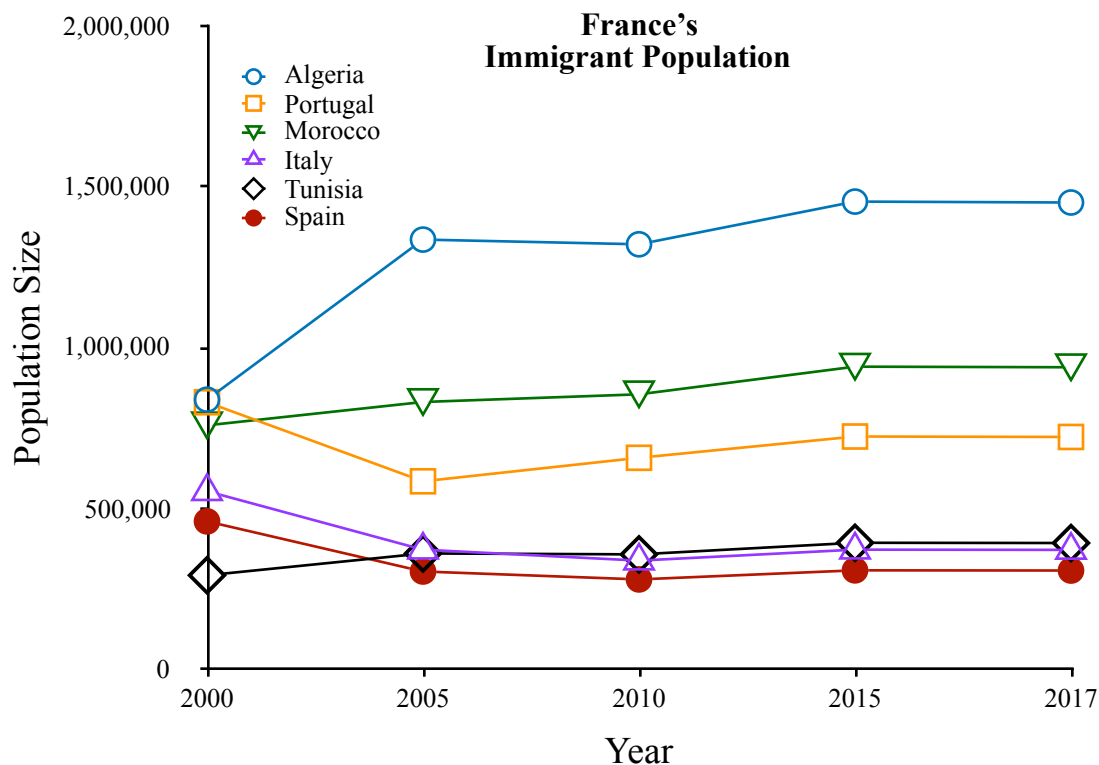


Figure 3. International immigration trend in France. Adapted from ‘Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017)’, by United Nations, Department of Economic and Social Affairs. Population Division, 2017, Copyright 2016 by The Office of the Director, Population Division/DESA, United Nations, DC2-1950.

1.1.2.4 Germany

In 2000, the population of Germany was estimated to be just over 81 million (World Bank, n.d.), 11% of the population were international migrants. Germany was one of the 5 countries in the world hosting the largest number of immigrants which were mainly from Turkey, Russian Federation, Poland, Serbia, and Italy (U.N., 2017b). In 2017, the population was estimated to be just over 82.5 million (World Bank, n.d.), 14.8% of the population were international migrants. Poland, Turkey, Russian Federation, and Kazakhstan comprised most of their international immigrants (see Figure 4) (U.N., 2017b).

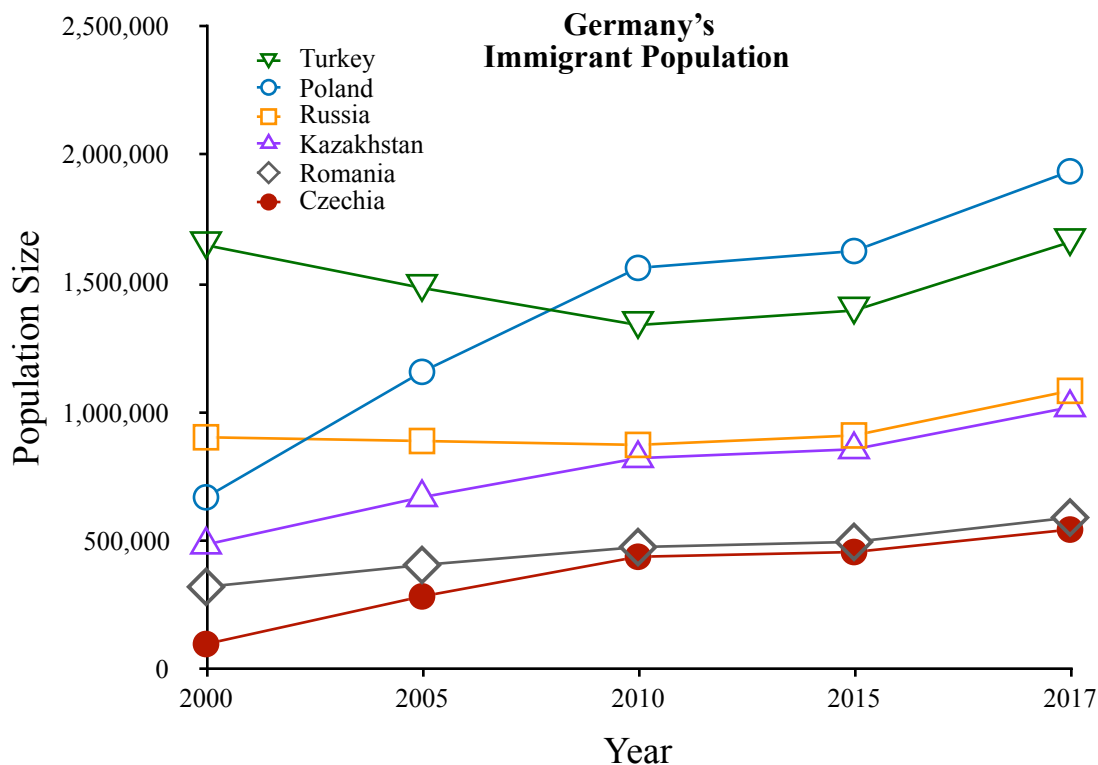


Figure 4. International immigration trend in Germany. Adapted from 'Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017)', by United Nations, Department of Economic and Social Affairs. Population Division, 2017, Copyright 2016 by The Office of the Director, Population Division/DESA, United Nations, DC2-1950.

1.1.2.5 Netherlands

The population of the Netherlands in 2000 was estimated to be just under 17 million (World Bank, n.d.), 9.8% of the population were international migrants. Most of the immigrants were from Suriname, Turkey, Indonesia, Morocco, and Germany (U.N., 2017b). The population in 2017 was estimated to be just over 17 million (World Bank, n.d.), 12.1% of the population were international migrants. The countries previously mentioned and Poland comprised most of their international immigrants (see Figure 5) (U.N., 2017b).

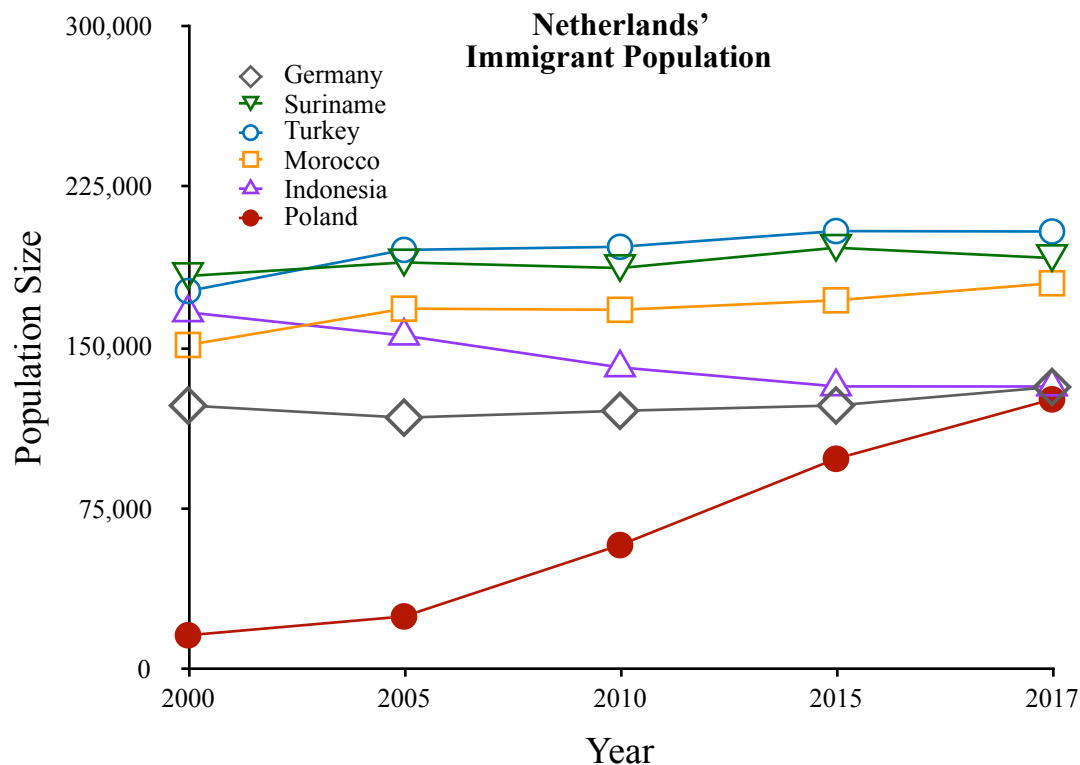


Figure 5. International immigration trend in the Netherlands. Adapted from 'Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017)', by United Nations, Department of Economic and Social Affairs. Population Division, 2017, Copyright 2016 by The Office of the Director, Population Division/DESA, United Nations, DC2-1950.

1.1.4 Students' well-being.

According to Borgonovi & Pál (2016, p. 8), well-being is described as 'a dynamic state characterised by students experiencing the ability and opportunity to fulfil their personal and social goals'. This state includes cognitive, psychological, physical, social, and material dimensions of students' lives. These five dimensions (see Figure 6) can be measured through different subjective and objective indicators such as competencies, perceptions, expectations and living conditions which are strongly dependent on home and school contextual factors.

The previous definition considers objectively living conditions related to basic human needs and rights, as well as subjective aspects in which students evaluate their life, feelings, and emotions in and outside school. In other words, objective indicators that relate to the life-capabilities of an individual, and subjective indicators which focus on how people feel about their lives according to their internal preferences and experiences (Hendriks, 2018).

The five domains of well-being identified in PISA 2015 contribute to determining students' overall functioning, satisfaction, and an evaluation of the quality of their lives (Borgonovi & Pál, 2016).



Figure 6. Well-being dimensions in PISA 2015. Adapted from 'A Framework for the Analysis of Student Well-Being in the Pisa 2015 Study: Being 15 In 2015,' by F. Borgonovi, and J. Pál, 2016, OECD Education Working Papers, 140, p. 9. Copyright 2016 by OECD.

1.1.5 Students' social well-being.

The social dimension of students' well-being includes sociological perspectives such as family, peers, and teacher relationships, the availability of emotional and practical support, and interpersonal skills (Pollard and Lee, 2003). PISA 2015 measures five areas of social well-being (see Figure 7): belongingness to school; social learning experiences; relationship with their teachers, their peers, and their parents. Each dimension is analyzed through a set of instruments and measured within the student survey (Borgonovi & Pál, 2016).

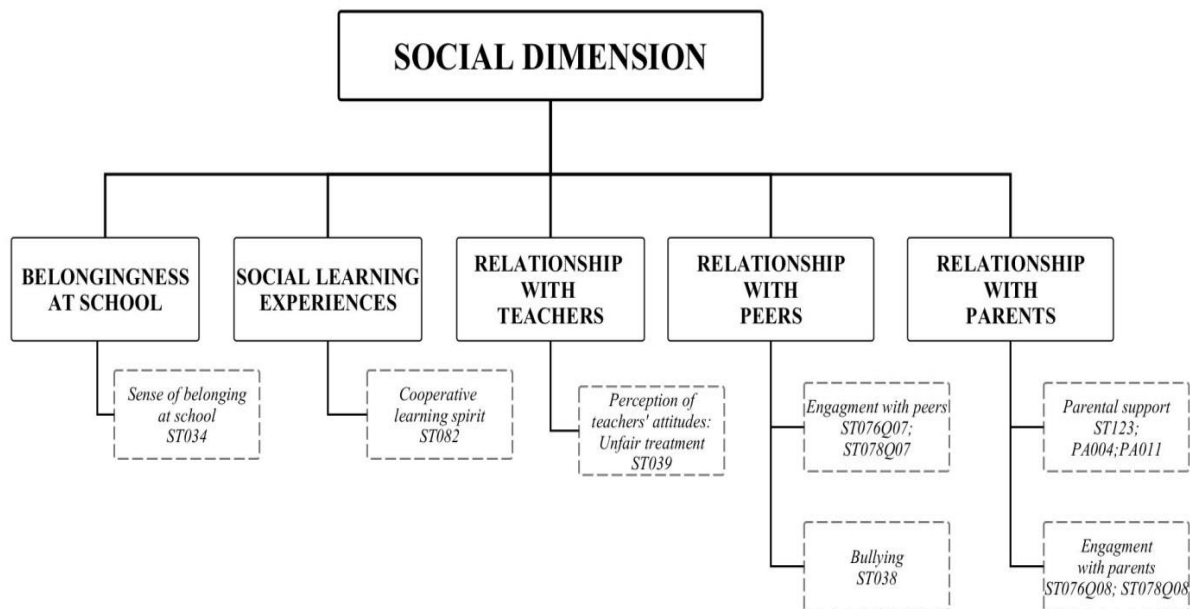


Figure 7. Social dimension of students' well-being. Adapted from 'A Framework for the Analysis of Student Well-Being in the Pisa 2015 Study: Being 15 In 2015,' by F. Borgonovi, and J. Pál, 2016, OECD Education Working Papers, 140, p. 29. Copyright 2016 by OECD.

1.1.5.1 Students' sense of belonging.

Sense of belonging is an 'important psychological construct with formative implications' which can have long-term effects (Slaten, Ferguson, Allen, Brodrick, & Waters, 2016, p. 1). Sense of

belonging at school refers to the feelings of being accepted by teachers, peers, and any other individuals that interact in the educational context (Wilmms, 2013). According to the foundational work of Maslow (1943), belongingness needs will only emerge if physiological and safety needs are met first; issues that should be considered with every human being, but most importantly with immigrant youth, who on many occasions, live under vulnerable circumstances. Belonging has a strong association with educational success and well-being as well as a direct positive relationship with self-esteem and motivation (De Bortolli, 2018). Furthermore, high sense of belonging is linked with the reduction of stress and other physical aspects such as the reduction of diseases, strokes, and mortality (Slaten et al., 2016).

According to the OECD (2017a), on average across countries, disadvantaged students and minorities were less likely than advantaged students to report that they feel that they belong at school. In 28 countries, girls were less likely than boys to report a greater sense of belonging at school. Furthermore, on average, in 29 countries, learners without an immigrant background reported a stronger sense of belonging than immigrant students. Sense of belonging varies greatly across countries, even after accounting for gender and socioeconomic status, and as such, other factors must be taken into consideration when analysing school belonging.

In PISA 2015, students were asked six questions related to their sense of belonging to school (see Figure 8). Stated in the OECD (2017b) technical report, on average, in most of the OECD countries, learners without an immigrant background reported a stronger sense of belonging than immigrant students, even after accounting for the index of economic, social, and cultural status (ESCS).

PISA 2015 results suggest that students' perception of negative relationships with their teachers is one of the major threats to students' sense of belonging at school. This same data supports that happier students tend to report positive relations with their teachers. PISA 2015 results also imply that students' perceptions of their parents' support is related to their own attitudes towards education.

Similarly, PISA 2015 results confirm the idea that bullying is associated with students' difficulties finding their place at school (OECD, 2017b). Based on the literature and the PISA

data, there appears to be an important relationship between the students' self-reported sense of belonging, teacher's attitudes, parental support, and bullying.

Sense of Belonging Items		
Q1	ST034Q01TA	I feel like an outsider (or left out of things) at school.
Q2	ST034Q02TA	I make friends easily at school.
Q3	ST034Q03TA	I feel like I belong at school.
Q4	ST034Q04TA	I feel awkward and out of place in my school.
Q5	ST034Q05TA	Other students seem to like me.
Q6	ST034Q06TA	I feel lonely at school.

Figure 8. Sense of belonging items in PISA 2015. Adapted from ‘PISA 2015 Results: Vol. III. Students’ Well-Being,’ by OECD, 2017a, OECD Publishing, p. 119. Copyright 2017 by OECD.

On average, across OECD countries, 73% of 15-year-old students felt they belonged to school, while the other 27% did not have the same perception. The percentage of teenage learners who report feeling like an outsider has increased on average, almost 10% between 2003 and 2015. PISA results suggest that students who feel like an outsider score on average more than 20% lower in science (OECD, 2017a).

In similarity to the learner outcomes, belongingness to school also differs across countries. Figure 9 illustrates how immigrant students from the same country of origin have a diverse sense of belonging at schools in different host countries. For instance, learners from China have a stronger sense of belonging in New Zealand and Australia compared to Hong Kong-China and Macao China, which suggests that immigrant students' experience with belonging might also be affected by schools systems, educational policies (OECD, 2015a), or even internal socio-cultural and political conflicts.

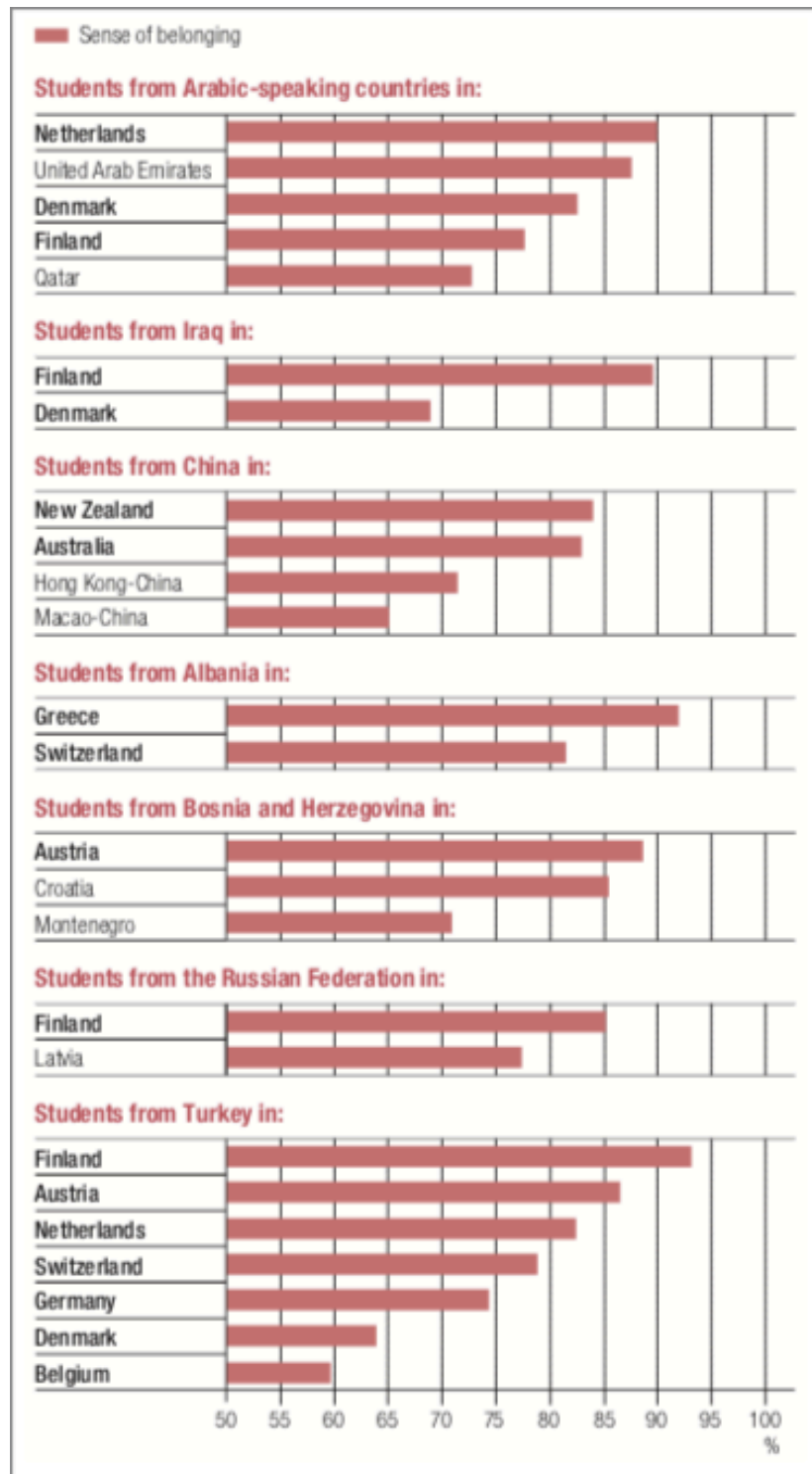


Figure 9. Sense of belonging of international migrants in different host countries. Adapted from 'Helping immigrant students to succeed at school - and beyond,' by OECD, OECD Publishing, p. 7. Copyright 2015 by OECD.

1.1.5.2 Students' perception of bullying.

Research indicates that 'individual demographic factors and school characteristics are significantly associated with victimisation' (Zhao & Chang, 2019, p. 98). Violence in schools can be defined as any type of physical or psychological abuse, which includes: corporal punishment, sexual violence, verbal abuse, and bullying. The act of bullying in schools is not an isolated event, but rather a behaviour pattern described as undesired aggressive acts or attitudes among learners or staff members of the educational institution that 'involve a real or perceived imbalance of power' (UNESCO, 2017, p. 8). Bullying is also classified as 'relation bullying' (OECD, 2017a, p. 44), which refers to social exclusion, and it is characterised by rejection, gossip, and public humiliation by peers. Moreover, with the current means of online technology, cyberbullying has emerged as a new form of aggression.

The ecological theory by Bronfenbrenner (1979, p. 3), defines human development as the manner in 'which a person perceives and deals with his environment'. This theory contends that the student's ability to develop and learn is deeply influenced by a set of nested structures. Family and school are found within the most inner structures. The complex interaction among the learner, the family and school, play an important role in how bullying is viewed and experienced (Zhao & Chang, 2019).

Learners' report of bullying is investigated in PISA 2015 using an index of exposure to bullying. Incidence of bullying information is gathered according to the victim's answers to six questions which analyse different forms of bullying (see Figure 10). Students are classified as frequently bullied if they are among the 10% of students with the highest value on the index. 'This cut-off was selected because most of the students at or above this level are frequently exposed (at least a few times per month) to at least three of the six forms of bullying measured by the index' (OECD, 2017a, p. 135).

Measures of Bullying from Victim's Perspectives

Action	Type of Bullying
Other students left me out of things on purpose.	Relational
Other students made fun of me.	Verbal
I was threatened by other students.	Verbal/Physical
Other students took away or destroyed things that belonged to me.	Physical
I got hit or pushed around by other students.	Physical
Other students spread nasty rumours about me.	Relational

Figure 10. Measures of bullying from victim's perspectives. Adapted from 'PISA 2015 Results: Vol. III. Students' Well-Being,' by OECD, 2017a, OECD Publishing, p. 135. Copyright 2017 by OECD.

According to the UNESCO (2017) report, research indicates that among adolescent students, those who are underprivileged, come from ethnics or linguistic minorities, or have special needs are more likely to be bullied. On occasions, bullying may overlap when it is experienced in different scenarios and context, including those at school, home, and online environments. Unfortunately, bullying is often ignored by parents and educational staff members, which ultimately affects the well-being and sense of belonging of teenage learners (OECD, 2017a).

PISA 2015 results reveal that verbal and psychological abuse are the most common forms of bullying. Across OECD countries, around 10% of 15-year-old students reported they were subject to some type of bullying behaviour. Approximately 4% of the perceived bullying was related to physical bullying. Boys were more likely to report all forms of bullying, except behaviours related to psychological abuse. Results also suggest that immigrants that come at an older age and low performers were more likely to report bullying. However, low performers' experience with bullying might be due to the concentration of these students at institutions where there is a lack of resources. Additionally, the proportion of learners who reported bullying is larger when reports of unfair teachers and disciplinary issues are reported (OECD, 2017a).

1.1.5.3 Students' perception of teachers' attitudes.

According to PISA 2015, on average, across OECD countries, 20% of 15-year-old learners reported they were treated unfairly by their teachers at least a few times a month (Zhao & Chang, 2019). Students who perceive teacher support are more likely to have a stronger sense of belonging (Chiu, Pong, S., Mori, & Chow, 2012; Faust, Ennis, & Hodge, 2014; Konishi, Hymel, Zumbo, & Li, 2010). In contrast, learners who report the teacher disciplines them more harshly than other students and ridicules them in front of others tend to feel like an outsider at school (OECD, 2017a).

Based on the classroom justice theory (Cropanzano and Greenberg, 1997) cited by Chory-Assad & Paulsel (2004), perception of fairness is examined from the distributive and procedural justice literature. Distributive justice refers to the organisational outcomes that are received in a certain transaction which are in connection, among other things, to students' perception about who gets the teacher's attention or who gets certain grades. These perceptions are affected by students' past experiences and expectations. Procedural justice, on the other hand, refers to the perception of the fairness of procedures that regulate the distribution of those resources and outcomes. In other words, the manner in which a teacher decides what grade to assign, considering, for example, students' attendance, behaviour, and any classroom assignments or tests (Chory-Assad & Paulsel, 2004). The interaction between these two justices will ultimately affect students' perception of teachers' attitudes and fairness.

The quality of the interaction between teachers and students can affect learners' school engagement, and their social and emotional development (J-F, Swabey, Pullen, Getenet, & Dowden, 2018; OECD, 2017a). In PISA 2015, students were asked six questions about teachers' attitudes and behaviour (see figure 11). According to PISA 2015 results, on average across OECD countries, 35% of students reported their teachers called on them less than others at least a few times per month; 21% reported their teachers gave them the impression they were less intelligent than they actually were; 18% reported that their teachers graded them more harshly than others; 14% reported that their teachers disciplined them more harshly than others; 10% reported that their teachers ridiculed them in front of others; and 9% reported that their teachers insulted them in front of others (OECD, 2017a).

As with bullying, boys were more likely to perceive unfair treatment by teachers. Similarly, disadvantaged learners with an immigrant background were also more likely to report unfair teacher behaviour. On average across OECD countries, 4% of students with an immigrant background were more likely than those without an immigrant background to report they frequently received at least one type of unfair behaviour from their teacher (OECD 2017a).

Teachers' Attitudes and Behaviour Items

Q1	ST039Q01NA	Teachers called on me less often than they called on other students.
Q2	ST039Q02NA	Teachers graded me harder than they graded other students.
Q3	ST039Q03NA	Teachers gave me the impression that they think I am less smart than I really am.
Q4	ST039Q04NA	Teachers disciplined me more harshly than other students.
Q5	ST039Q05NA	Teachers ridiculed me in front of others.
Q6	ST039Q06NA	Teachers said something insulting to me in front of others.

Figure 11. Teachers' attitudes and behaviour items in PISA 2015. Adapted from 'PISA 2015 Results: Vol. III. Students' Well-Being,' by OECD, 2017a, OECD Publishing, p. 146. Copyright 2017 by OECD.

1.1.5.4 Students' perception of parental support.

In line with bullying and teacher fairness, parental support can also be used as a predictor for students' sense of belonging at school (Uslu & Gizir, 2017; Allen, Kern, Vella-Brodrick, Hattie, & Waters, 2018). Parental support is defined 'as the ability for parents or other caregivers to provide academic support as well as social support, open communication and supportive behaviour' (Allen et al., 2018, p. 5). Family is the first social environment which affects how a child learns and develops. The interaction between parents and their children are associated with the child's overall well-being. The relationship between parents and 15-year-old children evolve from reading together and assisting with homework to other types of interactions characterised by discussion and negotiation (OECD, 2017a). However, this teenager's sense of autonomy has to be taken with significant consideration; otherwise, too much freedom can be seen as lack of interest which might affect student's interaction at school among many other aspects.

Students' sense of belonging can be affected by the family's involvement and attitudes toward school. Family involvement may facilitate a student's identification with their schools and teachers, which can result in learners feeling accepted and supported by the school community (Uslu & Gizir, 2017). According to 4 questions asked in PISA 2015 (see figure 12), on average across OECD countries, 94% of students reported that they 'agree' or 'strongly agree' that their parents were interested in their school activities. Students who have negative views of their parents' interest in their school activities are more likely to report feeling lonely at school (OECD, 2017a). A vast body of research suggests the importance of peer and teacher relationships in the interaction with the sense of belonging of learners; however, according to a meta-analysis (51 studies) developed by Allen et al. (2018), parental support made a more substantial contribution to students' sense of belonging when compared with peer support.

Parental Support Items (Students' Survey)		
Q1	ST123Q01NA	My parents are interested in my school activities.
Q2	ST123Q02NA	My parents support my educational efforts and achievements.
Q3	ST123Q03NA	My parents support me when I am facing difficulties at school.
Q4	ST123Q04NA	My parents encourage me to be confident.

Figure 12. Parental support items in PISA 2015. Adapted from 'PISA 2015 Results: Vol. III. Students' Well-Being,' by OECD, 2017a, OECD Publishing, p. 163. Copyright 2017 by OECD.

1.2 Research Questions and Model

Based on the framework previously described, this study compares and analyses available international data on second-generation immigrant students in five OECD long-standing destination countries with many settled, low-educated migrants: the Netherlands, Belgium, France, Austria, and Germany. Second-generation immigrant students are the aim of this study so that the analysis is less likely to be affected by new immigration policies which could change the characteristics of recently arrived immigrants. This cross-country comparative study explores the

possible relationships between native and second-generation immigrant students' self-reported sense of belonging, and students' subjective indicators (their perception of teachers' attitudes, parental support, and bullying) in and within the selected OECD countries (see Figure 13). This work aims to advance the understanding of the possible influences of host countries, teachers, parents, and peers on the perceived sense of belonging of second-generation immigrant students by seeking the following research question and sub-questions.

1.2.1 Research question.

The current research aims to investigate the following main question: To what extent is the self-reported sense of belonging of native and second-generation immigrant 15-year-old students related to their perception of teachers' attitudes, parental support, and bullying within and across the five selected host countries?

1.2.2 Sub-questions.

RQ1. To what extent do native and second-generation students differ in their self-reported sense of belonging within and across the five selected host countries?

RQ2. To what extent do native and second-generation students differ in their self-reported experiences with bullying, parental support and teachers' attitudes within and across the five selected host countries?

RQ3. To what extent are students' self-reported experiences with bullying, parental support and teacher attitudes related to students' self-reported sense of belonging within and across the five selected host countries?

RQ4. To what extent are there any differences between native and second-generation students in the relations between students' sense of belonging and their self-reported experiences with bullying, parental support and teachers' attitudes across the five selected host countries?

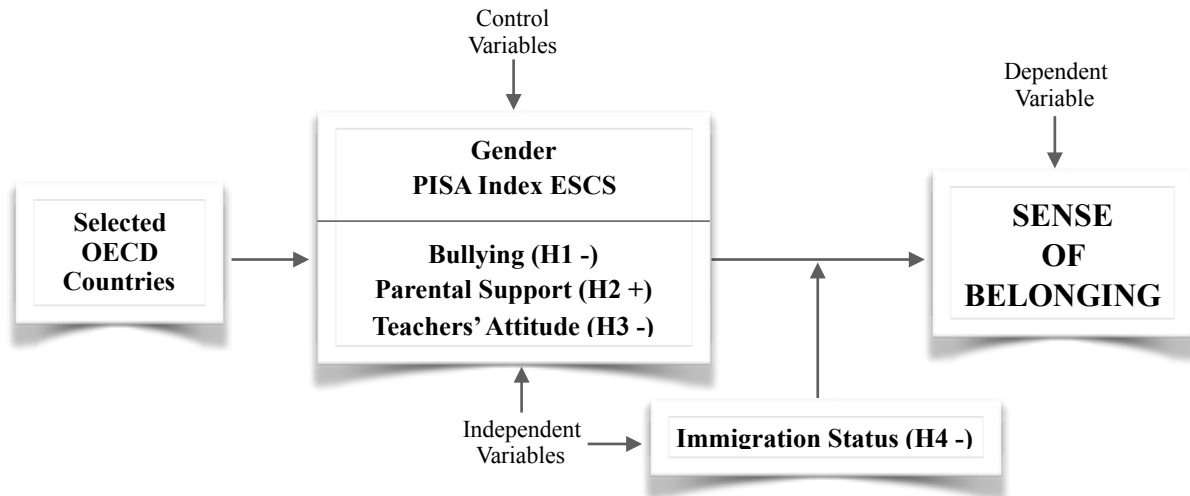


Figure 13. Research Model.

By analysing survey data from PISA 2015, this study examines relevant variables related to the sense of belonging of second-generation immigrant students in the selected host countries and test the following hypotheses:

- Hypothesis 1 (H1): Students' report of bullying is negatively related to students' sense of belonging.
- Hypothesis 2 (H2): Students' report of parental support is positively related to students' sense of belonging.
- Hypothesis 3 (H3): Students' report of teachers' negative attitudes is negatively related to students' sense of belonging.
- Hypothesis 4 (H4): Immigrant status interactions has an effect on students' sense of belonging.

1.3 Scientific & Practical Relevance

Despite the growing interest in the well-being of immigrant students and their integration process, research is still scarce (Bradshaw, 2014; Slaten, Ferguson, Allen, Brodrick, & Waters, 2016). There is a lack of cross-country studies using large-scale survey data and no conclusive evidence regarding the possible causes of the educational performance and overall well-being of

second-generation immigrant students (Dustman, Frattini, & Lanzara, 2011; Tang, 2018). Furthermore, there is a need of quantitative studies that focus on marginalised populations and how these learners experience school belonging in comparison to their majority peers (Fandrem, Strohmeier, & Roland, 2009; Slaten et al., 2016). Thus, the following research aims to contribute to a better understanding of the underlying reasons a teenage student might not feel he or she belongs to a school community.

This study may offer substantial information regarding the relationships among students' perception of parental support, teacher fairness, and bullying and their effect on learners' perceived sense of belonging. Additionally, by comparing countries with similar immigrant population, this work will enrich the literature which focuses on analysing host countries' similarities and differences in terms of immigration and integration policies. Finally, it is the researcher's aspiration to inspire more exploration about youth's sense of belonging and its interaction with the selected 'micro-level factors' (Allen et al., 2016, p. 4): family, teachers, and peers.

Chapter 2 – Methods

2.1 Research Design

The present work is a cross-sectional quantitative study. Descriptive and analytic statistics using survey data from PISA 2015 were performed. A correlation design was carried out to develop a cross-country comparative study about the self-reported sense of belonging of native and second-generation 15-year-old immigrant students in the selected OECD host countries and the possible relationships between the sense of belonging and students' immigration status, their perception of parental support, teachers' attitudes, and bullying. The sense of belonging (scale) will be the dependent variable. Students' immigration status (nominal), report on parental support (scale), bullying (scale), and teachers' attitude (scale) were the independent variables. Gender (nominal) and the PISA index ESCS (scale) were the control variables.

2.2 Respondents

The present study was based on the representative survey data from PISA 2015, in which students from more than 70 countries were assessed. As in 2006, science was the focal subject of

the data collection. PISA 2015 also included optional assessments of collaborative problem solving and financial literacy (U.S. Department of Education. National Centre for Education Statistics, U.S. Department of Education, n.d.).

PISA first began in 2000 with the participation of 32 countries. PISA is coordinated by the OECD, conducted in the United States by NCES, and administered every three years. Through standardised assessments, PISA measures competences on real-life tasks in reading, mathematics and science of students aged between 15 years 3 months and 16 years 2 months at the time of the assessment who are enrolled in school and have completed at least 6 years of formal schooling, regardless of their grade, socio-economic status, the type of institution in which they are enrolled, whether they are in full-time or part-time education, or whether they attend private, public, or foreign schools within the country (OECD, 2013).

PISA also includes measures of general or cross-curricular competencies, such as collaborative problem-solving. Although all three core subjects (reading, mathematics, and science) are assessed, PISA assesses only one subject area in-depth in each cycle. Along with the assessment of competences, students, teachers, and school principals are also asked to fill out a background standardised questionnaire to provide some contextual information. These additional surveys provide insights, and reveal common patterns into students' background and the influence of school environment in their performance. All the information gathered through PISA assessment furnishes researchers with data to carry out secondary analysis, allowing direct comparison within a country and among countries.

PISA uses a stratified two-stage sample design, where initially, schools are sampled using probability proportional to size sampling, and then students are sampled with equal probability within schools (OECD & Westat, 2013). Initially, each country or education system submits a sampling frame to the international consortium of organisations which are responsible for the implementation of PISA. The OECD's international sampling contractor then validates the system's sampling frame and develops a scientific random sample of a minimum of 150 schools from each frame with two replacement schools for each original school. Then, each country or education system is responsible for recruiting sampled schools, starting with the original sample and only using the replacement schools if an original school refuses to participate. A minimum of

65 per cent of schools from the original sample of schools is required to participate. After this process, students are sampled; a minimum of 5,400 students are required in each country or education system. Student participation must be at least 80 per cent for a country's or education system's data to be reported by the OECD (U.S. Department of Education. National Centre for Education Statistics, U.S. Department of Education, n.d.).

Selection of countries. The present work aims to explore the self-reported sense of belonging of second-generation immigrant students' with similar immigrant background characteristics. According to the OECD (2106a), five groups can be identified among a large number of immigrant populations. Five countries which are categorised as *long-standing destination countries with many settled, low-educated migrants* were selected for this study.

Instrumentation

Drawing on survey data collected by PISA 2015, this study examined four aspects related to the social well-being of second-generation immigrant students in the selected host countries. PISA 2015 produces a set of well-being indicators for adolescents that cover both adverse outcomes and positive impulses that promote healthy development. Well-being is composed of four dimensions, and aspects within each dimension: psychological, cognitive, physical, and social (OECD, 2017a). Sense of belonging is one of the elements that fall under the latter perspective. For this study, data obtained from the surveys gather information related to students' background such as gender, immigration status, and the index of ESCS, and students' perspectives on the sense of belonging, bullying, teachers' attitudes, and parental support. Four instruments were considered for the latter:

- Self-reported sense of belonging (ST034).
- Bullying from the victim perspective (ST038).
- Students perception of their teachers' attitudes (ST039).
- Students perception of parental support (ST123).

PISA 2015 includes questions on students' perceptions about their learning environment and context. Students have to respond to a set of statements (items) through a Likert scale style survey. For each instrument, there are a set of 4 answers (see Table 1) which allow the

comparison of students' perception about the independent and dependent variables previously mentioned. Items used for each variable can be observed in Tables 2-5.

Table 1

Possible answers for each variable.

Instrument	Possible answers
Belonging	Strongly agree; Agree; Disagree; Strongly disagree
Bullying	Never or almost never; A few times a year; A few times a month; Once a week or more
Teachers' attitudes	Never or almost never; A few times a year; A few times a month; Once a week or more
Parental support	Strongly agree; Agree; Disagree; Strongly disagree

Table 2

Items used for the scale of sense of belonging (BELONG)

Item	Thinking about your school: to what extent do you agree with the following statement?
ST034Q01TA	I feel like an outsider (or left out of things) at school.
ST034Q02TA	I make friends easily at school.
ST034Q03TA	I feel like I belong at school.
ST034Q04TA	I feel awkward and out of place in my school.
ST034Q05TA	Other students seem to like me.
ST034Q06TA	I feel lonely at school.

Table 3

Items used for the scale of exposure to bullying (bullying)

Item	During the past 12 months, how often have you had the following experiences in school?
ST038Q03NA	Other students left me out of things on purpose.
ST038Q04NA	Other students made fun of me.
ST038Q05NA	I was threatened by other students.
ST038Q06NA	Other students took away or destroyed things that belonged to me.
ST038Q07NA	I got hit or pushed around by other students.
ST038Q08NA	Other students spread nasty rumours about me.

Table 4

Items used for the scale of students' perception of their teachers' attitudes (unfairteacher)

Item	During the past 12 months, how often did you have the following experiences at school?
ST039Q01NA	Teachers called on me less often than they called on other students.
ST039Q02NA	Teachers graded me harder than they graded other students.
ST039Q03NA	Teachers gave me the impression that they think I am less smart than I really am.
ST039Q04NA	Teachers disciplined me more harshly than other students.
ST039Q05NA	Teachers ridiculed me in front of others.
ST039Q06NA	Teachers said something insulting to me in front of others.

Table 5

Questionnaire items used for the scale of students' perception of parental support (EMOSUPS)

Item	Thinking about <the last academic year>, to what extent do you agree with the following statements?
ST123Q01NA	My parents are interested in my school activities.
ST123Q02NA	My parents support my educational efforts and achievements.
ST123Q03NA	My parents support me when I am facing difficulties at school.
ST123Q04NA	My parents encourage me to be confident.

Data Analysis and Procedure

Quantitative data was downloaded in SPSS format from the official OECD webpage. Eight different SPSS data folders were used for this study. The data includes ID variables, all student questionnaire data, parent-questionnaire data, student and parent-questionnaire scale and derived variables, plausible values, and overall weights (PISA, 2016), wherefrom 8 variables (gender, immigrant status, index of ESCS, academic achievement, sense of belonging, parental support, bullying, and teachers' attitudes) were analysed.

Subsequent the gathering of data, to ensure plausible value methodology when conducting the analyses of possible relationships, multiple regression analysis was carried out using Statistical Package for the Social Science (SPSS) (IBM Statistics Version 24) in combination with the International Database (IDB) Analyser (Version 4.0.14). 'In multiple regression analyses, relationships between one dependent variable and several independent variables are investigated', which was ultimately the goal of this study (Arikan, 2014, p. 712).

The steps for the analyses were based on Arikan's (2014) method procedure:

1. From the main PISA data, a new data file was created with only the selected countries.
2. 'Index Immigration Status' (0 for natives and 1 for second-generation immigrants) and Gender (1 for female and 2 for male) were recorded as dummy variables.
3. The SPSS data was transmitted to the IDB Analyser and processed considering the control of variables (gender, index immigration status, academic achievement, and index of ESCS), the sampling design, sampling weights, and plausible values reported in PISA 2015.
4. The IDB Analyser produced a Statistical Package for the SPSS software to conduct multiple regression analysis and estimate regression coefficients for independent variables which predict a dependent variable.

Chapter 3 – Results

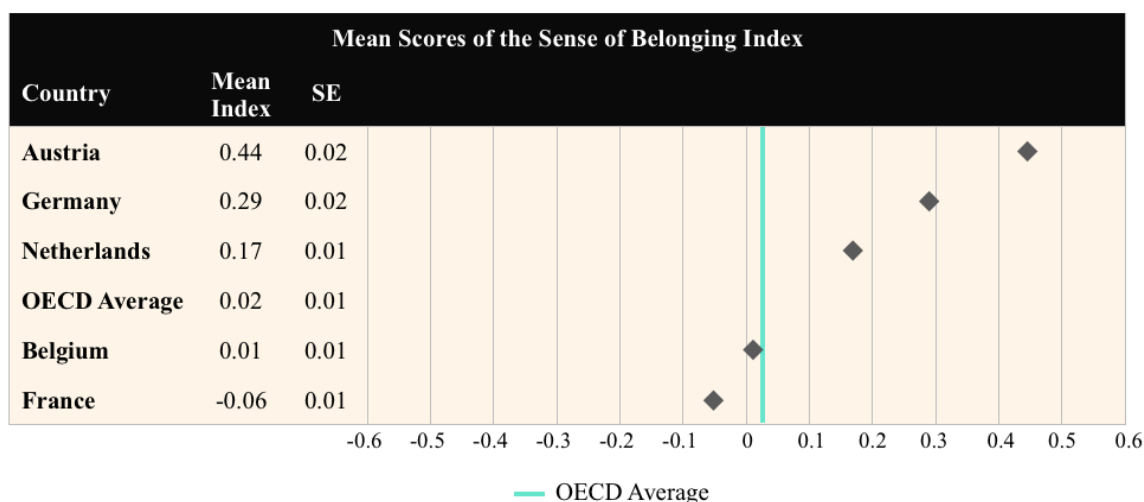
This study aims to deepen the understanding of the interactions among sense of belonging and bullying, teacher's attitudes, and parental support of 15-year-old native and second-generation immigrant students within and across countries with similar immigrant population. Therefore, a correlation design and a multiple regression analysis were carried out. The following section will provide the results obtained through the descriptive and analytic statistics process.

3.2 Self-reported Sense of Belonging.

To answer the first research question (RQ1): 'To what extent do native and second-generation students differ in their self-reported sense of belonging within and across the five selected host countries?', SPSS software was used to obtain the frequency of responses and mean scores. Detailed information is presented in Appendix A.

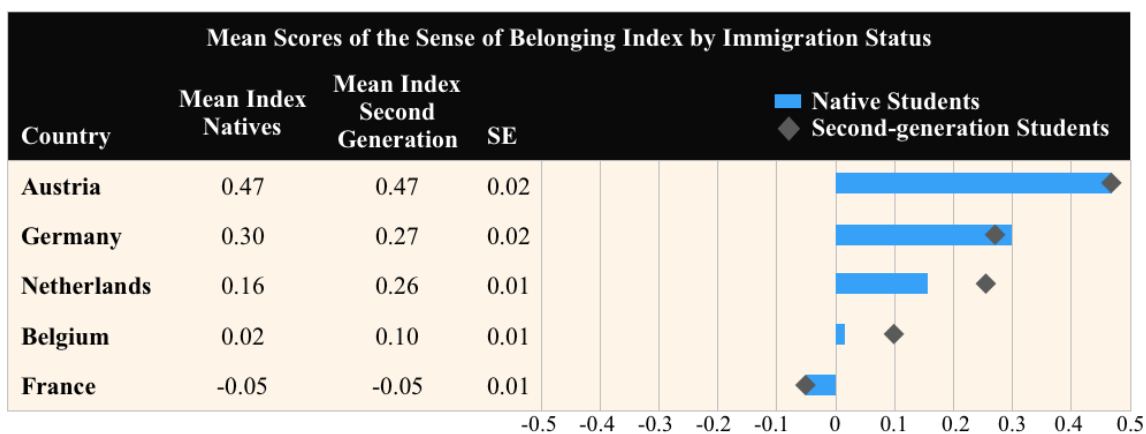
Figure 14 presents the students' mean scores on the sense of belonging index for the selected host countries in PISA 2015. Learners in Austria had the highest levels of sense of belonging with a mean index score of 0.44, followed by students in Germany (mean index score of 0.29) and the Netherlands (mean index score of 0.17), while pupils in France had the lowest level of sense of belonging (mean index score of -0.06), followed by students in Belgium (mean index score of 0.01).

The mean scores on the sense of belonging index for the selected host countries by immigration status are presented in Figure 15. Results indicate there are no major differences between native and second-generation immigrant students' perception of sense of belonging in Austria and France. These same results show significant dissimilarities across the rest of the selected host countries. For instance, second-generation learners have a weaker sense of belonging compared to their native peers in Germany, whereas native students have a weaker sense of belonging in the Netherlands and Belgium.



Note: Higher mean scores refer to higher sense of belonging.

Figure 14. Mean scores on the sense of belonging index, by country (OECD, 2017a).



Note: Higher mean scores refer to higher sense of belonging.

Figure 15. Mean scores on the sense of belonging index, by country and immigrations status (OECD, 2017a).

According to the PISA 2015 results (see figure 16), on average France had the highest percentage of students (native=22.2%; second-generation=23.3%) who agreed or strongly agreed they feel like an outsider, while the Netherlands had the lowest percentage of learners (native=8.6%; second-generation=9.1%) who reported the previous.

France had the highest percentage of native students (86.6%) who agreed or strongly agreed they make friends easily at school, whereas the Netherlands had the highest percentage of second-generation immigrant students (88.7%) who reported the prior; Germany had the lowest percentage of students (native=73.4%; second-generation=76.4%) who agreed or strongly agreed with the prior statement.

The highest percentage of students who agreed or strongly agreed they feel they belong to school were found in the Netherlands (native=81.4%; second-generation=77.6%), while France had the lowest percentage of students (native=41.6%; second-generation=37.2%) who agreed or strongly agreed with the previous statement.

Austria had the highest percentage of native students (16.9%) who agreed or strongly agreed they feel awkward and out of place in their school, whereas Germany had the highest percentage of second-generation immigrant students (21.3%) who agreed or strongly agreed with the prior statement. In contrast, the Netherlands had the lowest percentage of students (native=11%; second-generation immigrant=9.2%) who reported the latter statement.

The Netherlands had the highest percentage of learners (native=91.9%; second-generation=94.5%) who agreed or strongly agreed that students seem to like them, while Austria had the lowest percentage of students (native=84.3%; second-generation=83.3%) who agreed or strongly agreed with the prior statement.

The highest percentage of learners (native=14.9%; second-generation=14.2%) who agreed or strongly agreed they feel lonely at school were found in Austria. Contrarily, the Netherlands had the lowest percentage of students (native=7.6%; second-generation=6.8%) who agreed or strongly agreed with the prior statement.

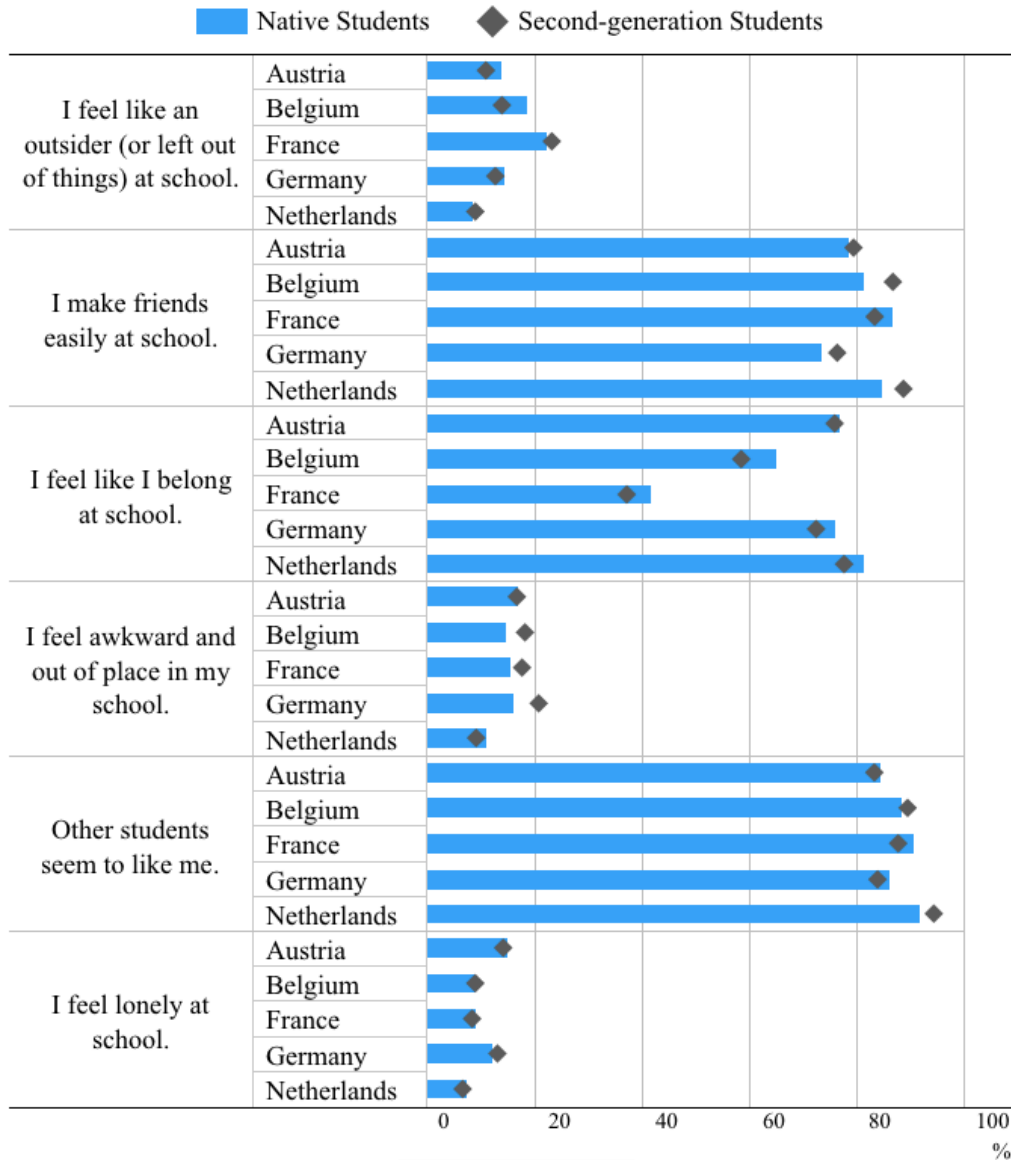


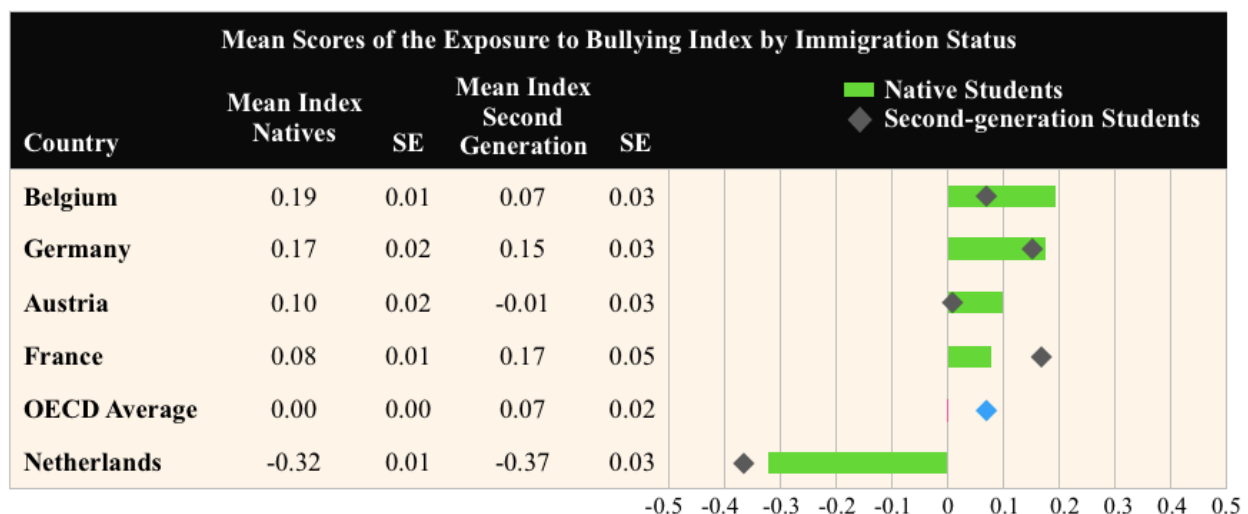
Figure 16. Percentage of students who agreed or strongly agrees with the sense of belonging items (OECD, 2017a).

3.3 Experience with Bullying

To answer the following question (RQ2): ‘To what extent do native and second-generation students differ in their self-reported experiences with bullying, parental support and teachers’ attitudes within and across the five selected host countries?’ The descriptive statistics obtained through the SPSS software provided an overview and comparison within and across the selected host countries. Detailed information is presented in Annexes B, C, and D.

In PISA 2015, students were asked about their experiences with bullying within the school context. According to the index of exposure to bullying (see Figure 17) which summarises students' reported experiences with the six forms of bullying, native students in Belgium (mean index score of 0.19) and Germany (mean index score of 0.17) had the highest levels of bullying, followed by Austria (mean index score of 0.10) and France (mean index score of 0.08) while the Netherlands (mean index score of -0.32) had the lowest levels of bullying. Interestingly, second-generation immigrant students had lower levels of bullying compared to their native peers across all countries except France (mean index score of 0.17). Second-generation learners in Germany had a mean index score of 0.15, followed by Belgium (mean index score of 0.07) and Austria (mean index score of -0.01), whereas the Netherlands (mean index score of -0.37) had lowest levels of bullying.

Learners' responses seem to indicate that both native and second-generation immigrant students experience bullying in one way or another. In some cases, for instance, in Austria and Belgium, native students experience bullying significantly more than second-generation immigrant students. On average, Belgium and Germany seem to have more problems with bullying in general, whereas, in France, there is a significant disparity between second-generation and native students' experience with bullying.



Note: Higher scores refer to higher exposure to bullying.

Figure 17. Mean scores on the exposure to bullying index, by country and immigrations status (OECD, 2017a).

According to the learners' responses (see figure 18), France had the highest percentage of native students (6.6%) who reported they felt other students left them out of things on purpose a few times a month or more, while Germany had the highest percentage of second-generation immigrant students (5.6%) who experienced the prior situation. In contrast, the Netherlands had the lowest percentage of native (2.5%) and second-generation immigrant (1.9%) students who reported the same scenario.

Austria had the highest percentage of native students (12.2%) who reported that other students made of fun of them at least a few times a month or more, whereas France had the highest percentage of second-generation immigrant students (11.5%) who stated the prior. Conversely, the Netherlands had the lowest percentage of learners (native=4.6%; second-generation=4.6%) who experienced the same type of bullying.

Austria had the highest percentage of native students (2.8%) who reported they were threatened by other students a few times a month or more, while France had the highest percentage of second-generation students (3.2%) who reported the same situation. The Netherlands had the lowest percentage of pupils (native=1.1%; second-generation=1.2%) who stated the latter statement.

Austria had the highest percentage of learners (native=5.2%; second-generation=4.5%) who reported that other students took away or destroyed things that belonged to them a few times a month or more. The Netherlands had the lowest percentage of students (native=2.2%; second-generation=1.5%) students who stated the prior situation.

In regards to being hit or pushed around by other students a few times a month or more, Austria had the highest percentage of native students (4.3%) who reported the latter experience, whereas France had the highest percentage of second-generation immigrant students (3.8%) who experienced this situation. The Netherlands had the lowest percentage of pupils (native=1.8%; second-generation=1.2%) who reported the same experience.

Belgium had the highest percentage of native students (8.5%) who reported that other students spread nasty rumours about them once a month or more, while France had the highest percentage of second-generation immigrant students (8.8%) who reported the prior statement. In

contrast, the Netherlands had the lowest percentage of students (native=4.8%; second-generation=4.5%) students who experienced the prior type of bullying.

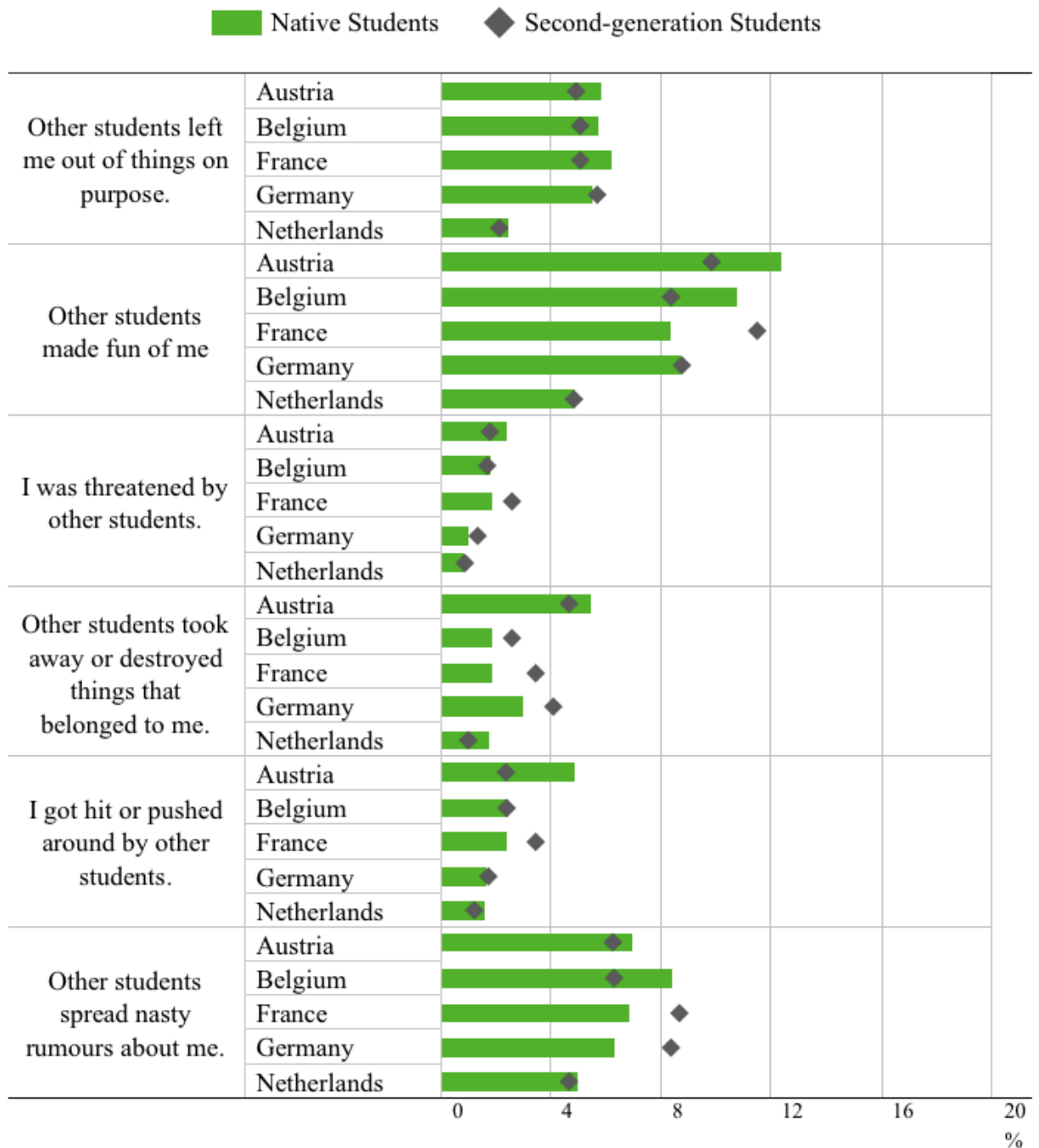


Figure 18. Percentage of students who reported being bullied a few times or more in a month (OECD, 2017a).

3.4 Experience with Teachers' Attitudes

Figure 19 shows the percentage of students who reported an act of unfair treatment by the teacher at least a few times a month or once a week for the selected host countries in PISA 2015. France had the highest percentage of native and second-generation students who reported being treated unfairly with an average score of 60.4% and 65.1% respectively, followed by students in Austria (average score for native students of 54% and second-generation immigrant students of 66.7%) and the Netherlands (native students: 52.7%; second-generation immigrant students: 63.6%), while students in the Netherlands had the lowest percentage of students reporting unfair treatment by the teacher (native students: 34.9%; second-generation immigrant students: 47.7%), followed by students in Belgium (native students: 48.8%; second-generation immigrant students: 60%).

Experience of unfair treatment by the teacher is significantly higher for second-generation immigrant students compared to their native counterparts across all countries. Findings suggest that students in France and Austria report negative attitudes by the teachers more compared to the rest of the selected countries. In contrast, students in the Netherlands experience negative attitudes by teachers well below the OECD average.

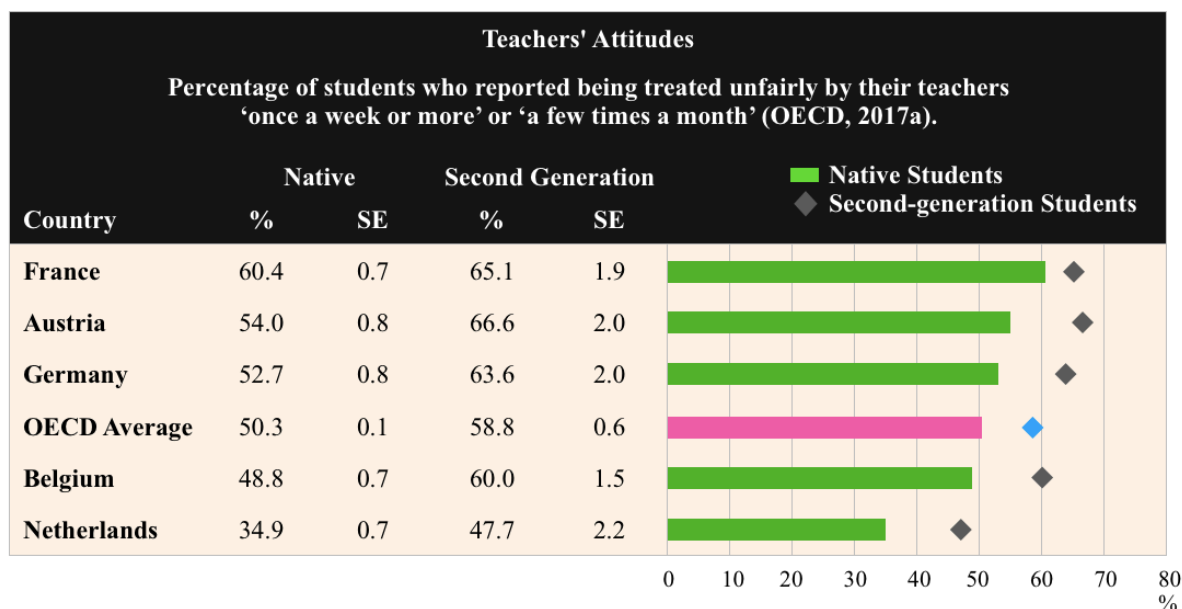


Figure 19. Percentage of students who reported unfair treatment by the teacher 'once a week or more' or 'a few times a month' (OECD, 2017a).

Based on learners' responses in PISA 2015 (see figure 20), France had the highest percentage of students (native=44%; second-generation=47%) who agreed or strongly agreed that their teacher called on them less often than they called on other students. Conversely, the Netherlands had the lowest percentage of learners (native=20.4%; second-generation=30.4%) who reported the prior statement.

The highest percentage of native (27.7%) and second-generation immigrant (27.7%) students who agreed or strongly agreed that teachers graded them harder than other students were found in Belgium. Contrarily, the Netherlands had the lowest percentage of native (12.6%) and second-generation immigrant (19.1%) students who reported the same experience.

France had the highest percentage of native students (26.2%) who reported that teachers gave them the impression that they were less smart than they really are, while Austria had the highest percentage of second-generation students (34.1%) who reported the prior situation. The Netherlands had the lowest percentage of native (10.8%) and second-generation immigrant students (18.7%) who agreed or strongly agreed with the latter statement.

The highest percentage of native (17.4%) and second-generation immigrant (26.2%) students who perceived that teachers disciplined them more harshly than other students were found in Australia. The Netherlands had the lowest percentage of native students (11.5%) who reported the same situation, whereas France had the lowest percentage of second-generation immigrant students (17.9%) who agreed or strongly agreed with the prior statement.

France had the highest percentage of native (10.7%) and second-generation immigrant (16.3%) students who agreed or strongly agreed that teachers ridiculed them in front of others. As with other indicators, the Netherlands had the lowest percentage of native (5.0%) and second-generation immigrant (8.5%) students who reported the same situation.

The highest percentage of native students (8.3%) who agreed or strongly agreed that teachers ridiculed them in front of others were found in Austria, while Belgium had the highest percentage of second-generation immigrant (12.4%) who reported the same situation. In contrast, the Netherlands had the lowest percentage of native (4.0%) and second-generation immigrant (6.6%) students who agreed or strongly agreed with the prior statement.

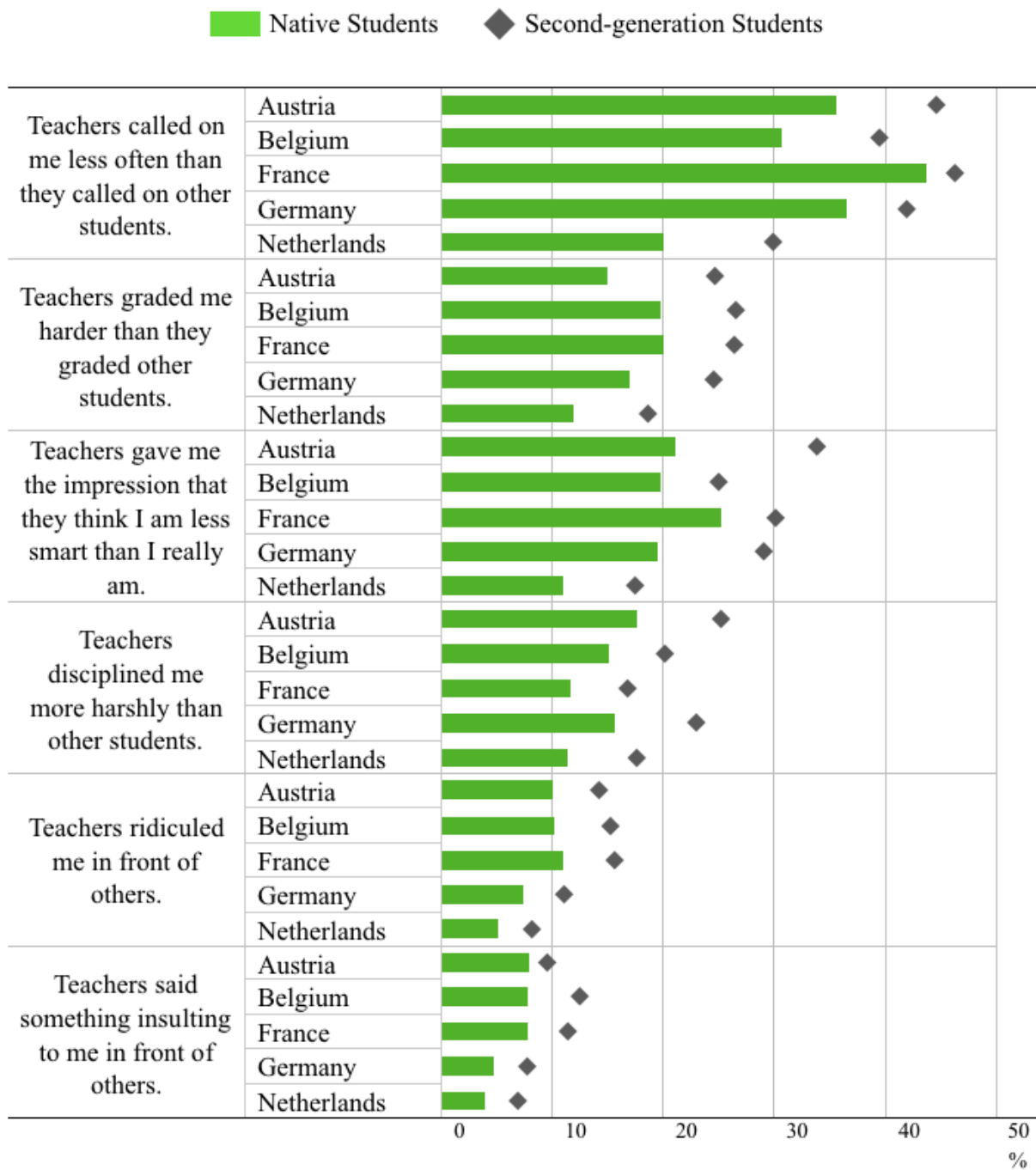


Figure 20. Percentage of students who reported any unfair treatment a few times or more in a month, by items (OECD, 2017a).

3.5 Experience with parental support.

According to students' self-report on parental support in PISA 2015 (see Figure 21), native students across all selected countries had higher levels of parental support compared to their second-generation counterparts. Students in the Netherlands had the highest perception of parental support (native students=96.6%; second-generation students 95.2%), followed by Belgium (native students=93.2; second-generation students=91.4) and Austria (native students=93.2; second-generation students 90.5%). Learners in Germany (native students=92.7%; second-generation students=88.95) and France (native students=92.9%; second-generation students=91.3%) reported less parental support compare to the rest of the countries.

Findings indicate that on average, students in all countries perceive more parental support compared to the OECD average except for second-generation pupils in Germany. However, differences are not significant within or across countries. For the case of Germany, the average of second-generation students who experienced parental support seems slightly low compared to the rest of the selected host countries.

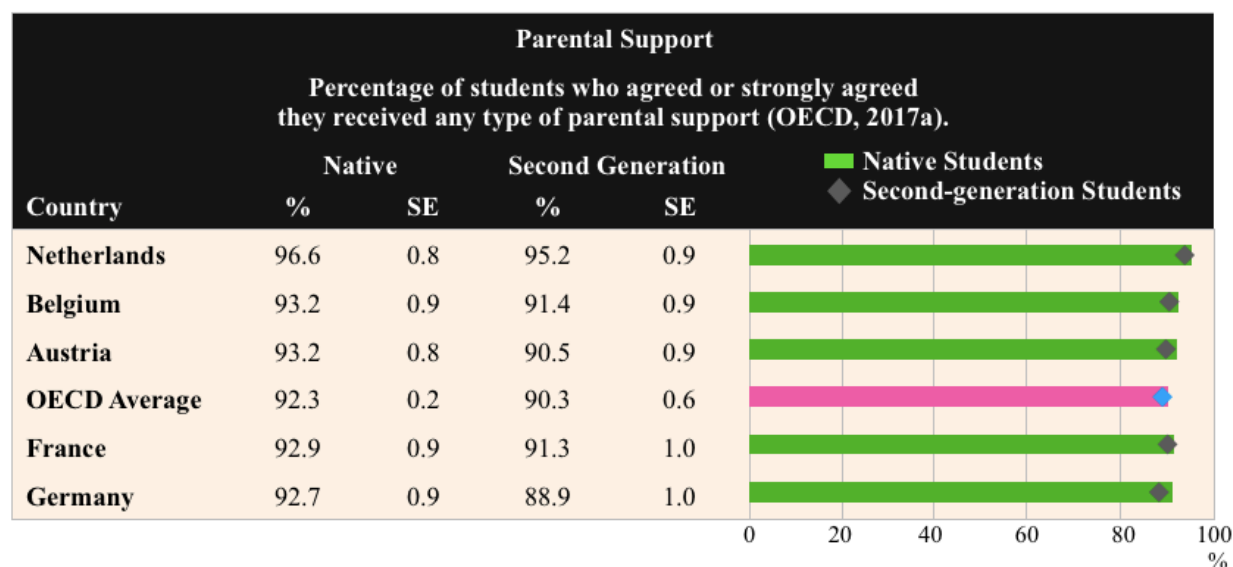


Figure 21. Percentage of students who 'agreed' or 'strongly agreed' with receiving parental support (OECD, 2017a).

PISA 2015 results (see figure 22) show the Netherlands had the highest percentage of native (97.4%) and second-generation immigrant (95.4%) students who agreed or strongly agreed that their parents are interested in their school activities. Belgium had the lowest percentage of native (94.7%) and second-generation immigrant (91.4%) students reporting the same situation.

The highest percentage of native (96.7%) and second-generation immigrant (95.6%) students who agreed or strongly agreed that their parents support their educational efforts and achievements were found in the Netherlands. Austria had the lowest percentage of native students (92.1%) who agreed or strongly agreed with the prior statement, whereas Germany had the lowest percentage of second-generation immigrant students (90.5%) who reported the latter experience.

The Netherlands had the highest percentage of native (97%) and second-generation immigrant (93.4%) who agreed or strongly agreed that their parents support them when they are facing difficulties at school. In contrast, France had the lowest percentage of native students (90.4%) who reported the prior situation, while Germany had the lowest percentage of second-generation immigrant students (85.1%) who experienced the previous scenario.

Native (95.3%) and second-generation immigrant (96.5%) students in the Netherlands were among the highest percentage of learners who agreed or strongly agreed that their parents encourage them to be confident. In contrast, Germany had the lowest percentage of native (89.1%) and second-generation immigrant (85.2%) who stated the same situation.

While percentages of native and second-generation immigrant students who agreed or strongly agreed that they received some form of parental support are high within and across countries, certain differences can be observed. Second-generation immigrant learners seem to perceive less parental support within each of the selected host countries. In general, both native and second-generation immigrant students in the Netherlands tend to experience more parental support, whereas second-generation immigrant students in Germany perceive less parental support; the same thing occurs with native students in France.

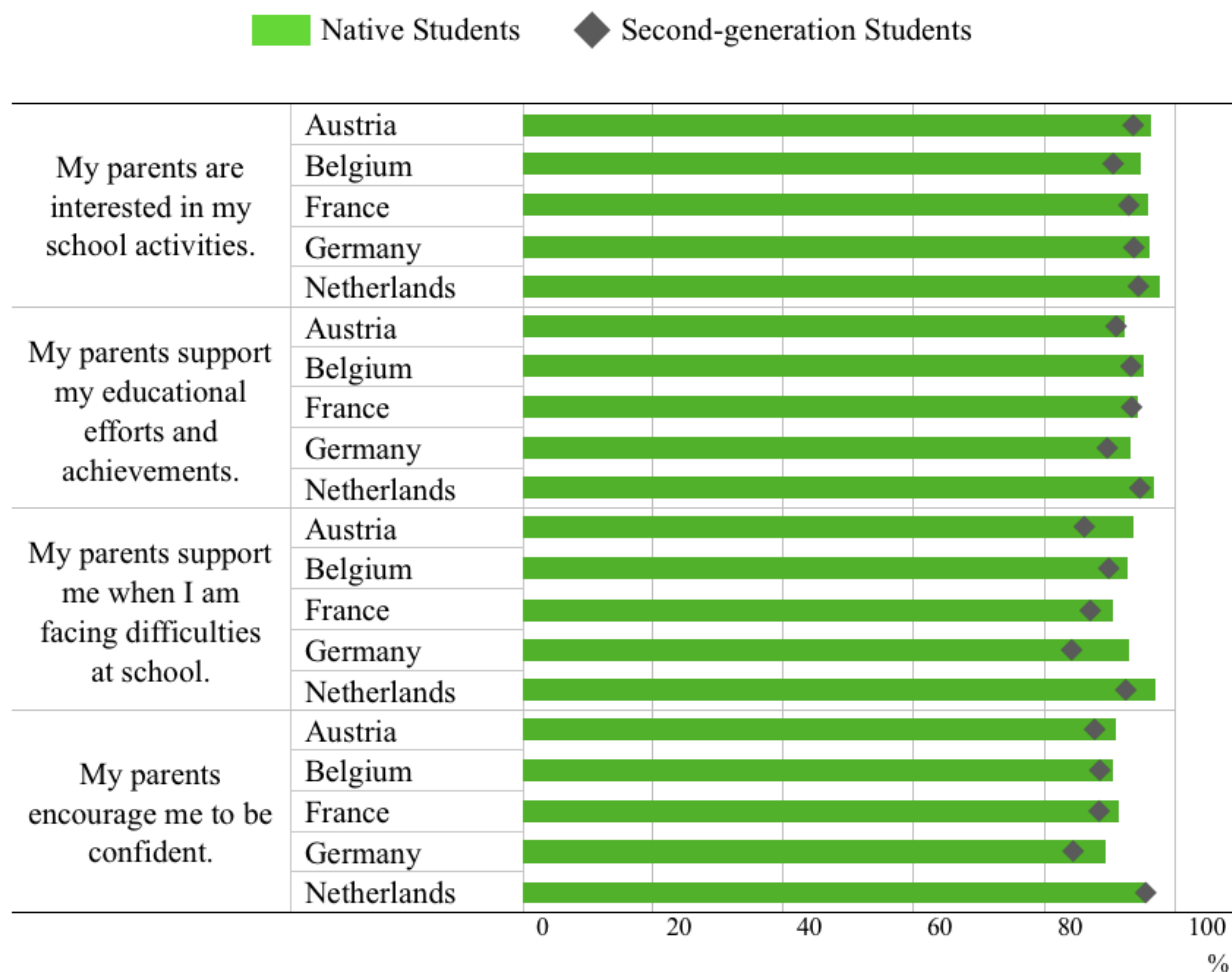


Figure 22. Percentage of students who agreed or strongly agreed with the parental support items (OECD, 2017a).

3.1 Correlations.

Questions three (RQ3): ‘To what extent are students’ self-reported experiences with bullying, parental support and teacher attitudes related to students’ self-reported sense of belonging within and across the five selected host countries?’ was answered by performing correlation and regression analyses using the IDB analyser. Detailed information is presented in Appendix E.

Predictor variables were selected according to the literature review. As seen in the Pearson’s correlation analysis (see Table 6), it was confirmed that all of the subjective indicators exhibited a significant correlation with the sense of belonging variable. Therefore, all variables were included in the subsequent regression analysis.

Table 6.

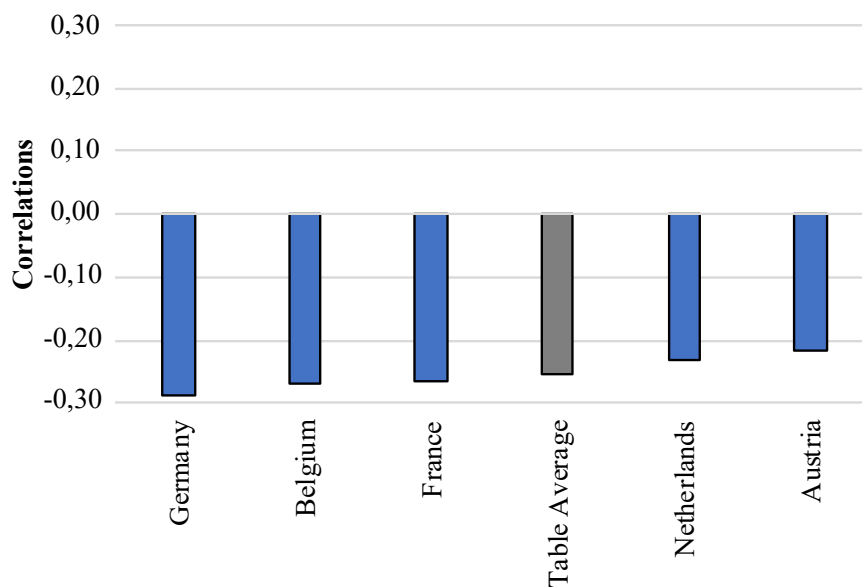
Correlations between variables across all selected host countries in PISA 2015 (OECD, 2017a).

	Sense of belonging	Bullying	Teachers' attitudes	Parental support
Sense of belonging	-			
Bullying	-0,253**	-		
Teachers' attitudes	-0,106**	0,293**	-	
Parental support	0,188**	-0,123**	0,293**	-

**Correlation is significant at $p \leq 0.01$ level (2-tailed).

3.1.1 Sense of belonging and Bullying

The correlation between sense of belonging and bullying ranges from -0,288 to -0,215 (see figure 23). The correlation is negative and statistically significant across all 5 countries.

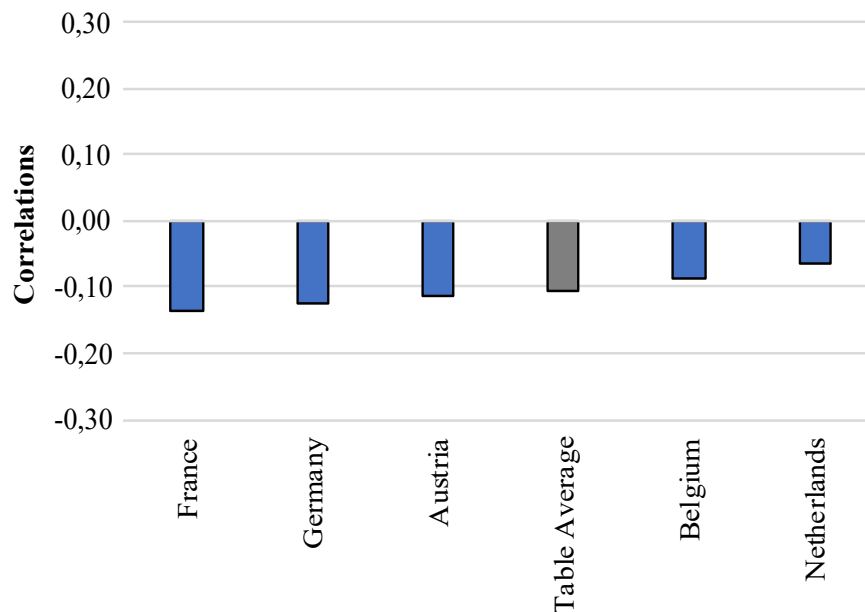


Note: Significant effects are marked in blue.

Figure 23. Correlation between sense of belonging and bullying by country (OECD, 2017a).

3.1.2 Sense of belonging and teachers' attitudes.

The correlation between sense of belonging and teachers' attitudes ranges from -0,138 to -0,065 (see figure 24). The correlation is negative and statistically significant for all the selected host countries. It is important to note that on average, across all countries, the significance of correlations is larger between sense of belonging and bullying compared to the correlation between sense of belonging and teachers' attitudes.

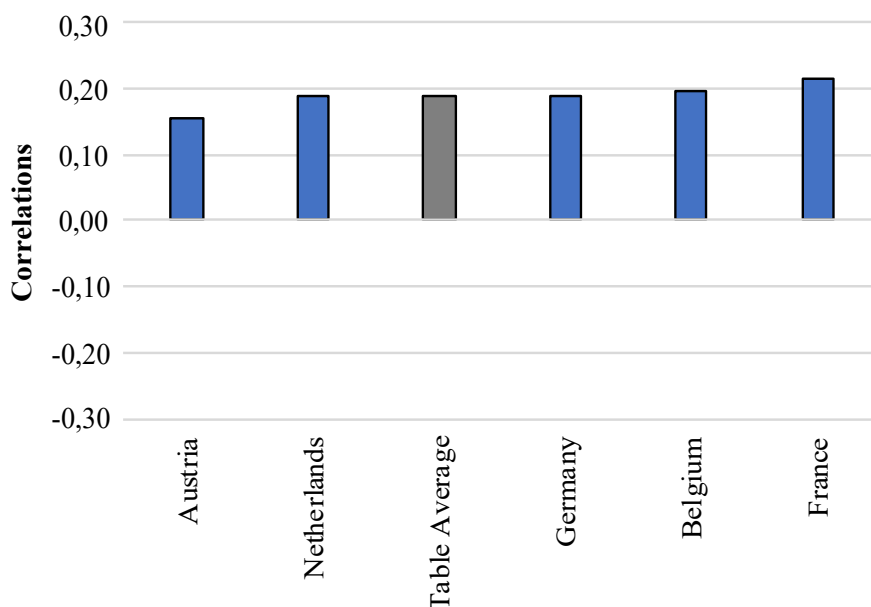


Note: Significant effects are marked in blue.

Figure 24. Correlation between sense of belonging and teachers' attitudes by country (OECD, 2017a).

3.1.3 Correlation between sense of belonging and parental support.

The correlation between sense of belonging and parental support ranges from 0,156 to 0,213 (see figure 25). The correlation is positive and statistically significant for all countries. On average across all selected host countries, the correlation significance is larger between sense of belonging and parental support compared to teachers' attitudes; however, the significance is lower compared to bullying.



Note: Significant effects are marked in blue.

Figure 25. Correlation between sense of belonging and parental support by country (OECD, 2017a).

3.2 Multiple regression analysis

In order to analyse the relationship between the dependent variable (i.e., sense of belonging), the predictor variables (i.e., bullying, teachers' attitudes, and parental support), and the control variables (i.e., socio-economic status and gender), a multiple regression analysis was performed. The significance threshold was set at 05. (2-tailed). The axes values for the predictor variables (Figure, 22, 23, and 24) are not comparable among each other due to the differences in their effects.

3.2.1 General overview

Figure 26 and Table 7 provide an overview of the standardised results of the explanatory variables on the sense of belonging for both native and second-generation 15-year-old immigrant students across all countries. Complete results are presented in Appendix F.

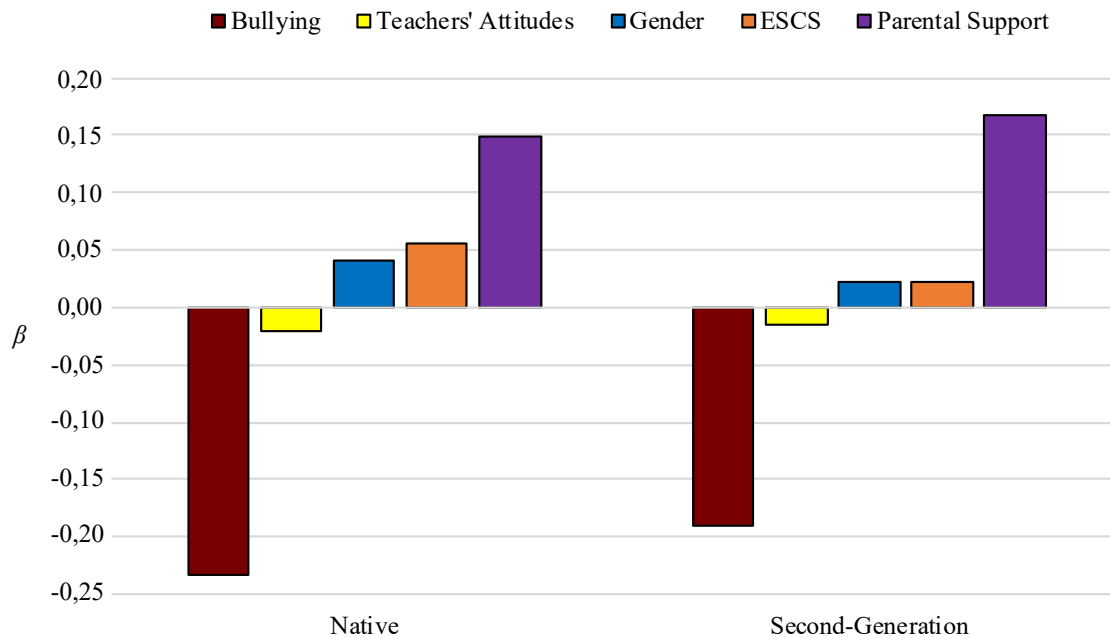


Figure 26. Summary of regression analysis results on students' sense of belonging (OECD, 2017a).

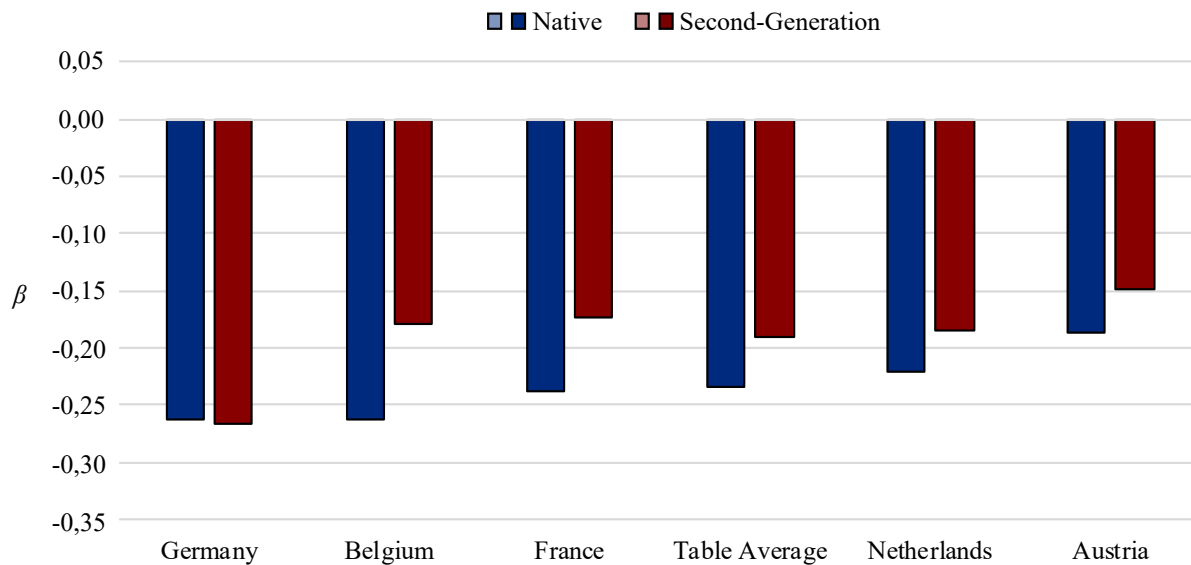
Table 7

Summary of regression analysis results on students self-reported sense of belonging across all countries (OECD, 2017a).

	Immigration status	Model	<i>b</i>	<i>SE b</i>	β	<i>t</i>
Sense of Belonging R ² =.099	Native	(CONSTANT)	0,835	0,025		
		Bullying	-0,545	0,017	-0,234	-37,364
		Parental Support	0,150	0,007	0,149	24,453
		ESCS	0,066	0,008	0,055	8,636
		Teachers' Attitudes	-0,006	0,002	-0,020	-2,762
		Gender (Dummy)	0,077	0,011	0,041	6,729
	Second-Generation	(CONSTANT)	0,852	0,072		
R ² =.092		Bullying	-0,517	0,051	-0,190	-10,611
		Parental Support	0,171	0,019	0,168	8,637
		ESCS	0,024	0,021	0,023	1,294
		Teachers' Attitudes	-0,004	0,005	-0,016	-0,813
		Gender (Dummy)	0,047	0,036	0,022	1,244

3.2.2 Bullying

According to the analysis, bullying has a significant negative effect on students' self-reported sense of belonging across all countries for both native and second-generation immigrant students (see figure 27). The largest effects are observed in Germany and Belgium for native learners ($\beta=-0,262$, $p<.001$). For second-generation immigrants students, the largest effect is observed in Germany ($\beta=-0,267$, $p<.001$). The smallest effects for both native and second-generation immigrant students are observed in Austria (native students, $\beta=-0,186$, $p<.001$; second-generation students, $\beta=-0,148$, $p<.001$).

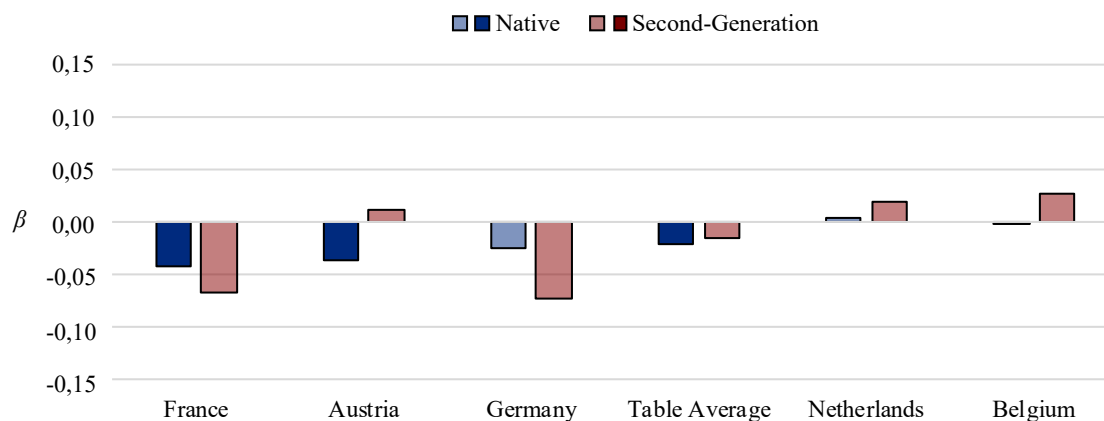


Note: Significant effects are marked in darker tone.

Figure 27. Results regression analysis sense of belonging/bullying by country (OECD, 2017a).

3.2.3 Teachers' Attitudes

As shown in Figure 28, teachers' attitudes has a significant negative effect on students' self-reported sense of belonging only for native learners in France ($\beta=-0,042$, $p<.007$) and in Austria ($\beta=-0,036$, $p<.010$). For second-generation immigrants students, there are no significant effects on any of the selected host countries.

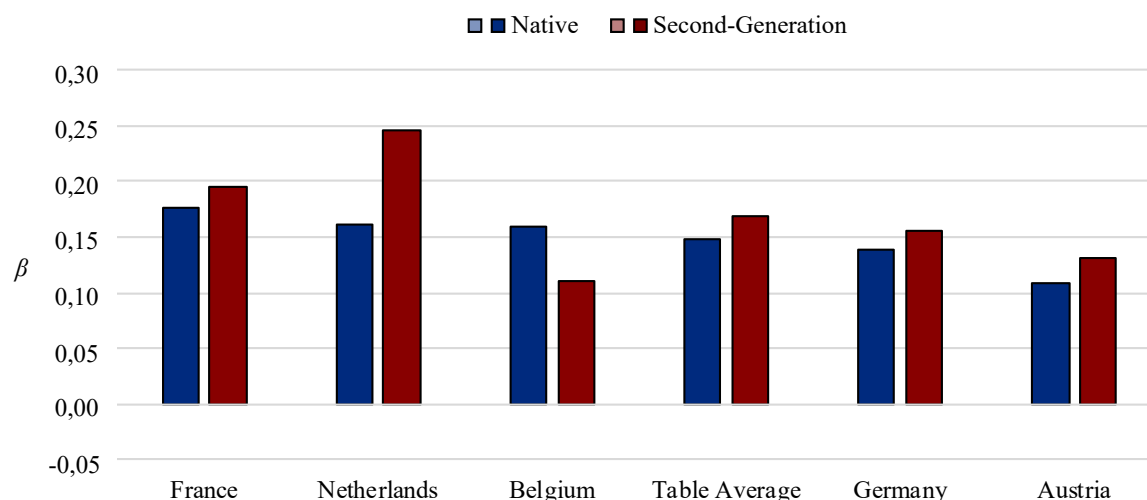


Note: Significant effects are marked in darker tone.

Figure 28. Results regression analysis sense of belonging/teachers' attitudes by country (OECD, 2017a).

3.2.4 Parental support

Results show that parental support has a significant positive effect on students' self-reported sense of belonging across all countries for both native and second-generation immigrant students (see figure 29). The largest effect is observed in France for native students ($\beta=0,176, p<.001$). For second-generation immigrants students, the largest effect is observed in the Netherlands ($\beta=0,247, p<.001$). The smallest effects are observed in Austria for native students ($\beta=0,109, p<.001$) and in Belgium for second-generation students ($\beta=0,110, p<.001$).



Note: Significant effects are marked in darker tone.

Figure 29. Results regression analysis sense of belonging/parental support by country (OECD, 2017a).

3.3 Interaction effects

Question 4 (RQ4): ‘To what extent are there any differences between native and second-generation students in the relations between students’ sense of belonging and their self-reported experiences with bullying, parental support and teachers’ attitudes across the five selected host countries?’ was investigated by further analysing the influence of immigration status on the outcome variable. From the original regression model, a new model was created to examine interaction effects between immigration status and bullying, teachers’ attitudes, parental support, socioeconomic status, immigration status, and sense of belonging. Immigration status was recorded as a dummy variable (0 for native students and 1 for second-generation students), and the significance threshold was set at .05 (2-tailed).

3.3.1 General Overview

According to the analysis, the main effects show no major differences in relation to the first regression analysis. Bullying and teachers’ attitudes have significant negative effects on students’ self-reported sense of belonging across all countries for both native and second-generation immigrant students (bullying: $\beta=-0,229$, $p<.001$; teachers’ attitudes: $\beta=-0,024$, $p<.001$;). Immigration status, gender, socioeconomic status, and parental support have significant positive effects (immigration status: $\beta=0,018$, $p<.001$; gender: $\beta=0,041$, $p<.001$; ECSC: $\beta=0,058$, $p<.001$; parental support: $\beta=0,148$, $p<.001$) on sense of belonging.

Results show immigration status has no interaction effects on any of the variables among all the selected host countries. Therefore, description of the analysis per country is not presented in this section. An overview of the standardised results of the explanatory variables and the interaction effects of immigration status across all countries can be observed in Figure 30 and Table 8. Complete results of the regression analysis per country, including the main effects are presented in Appendix G.

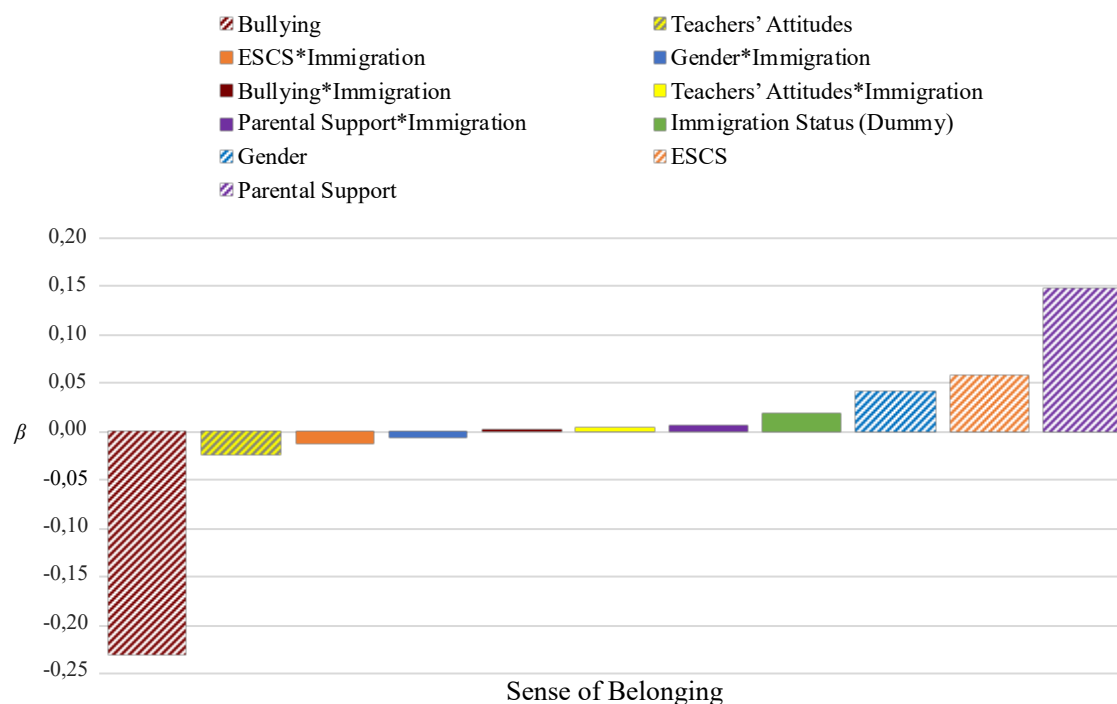


Figure 30. Summary of regression analysis (with immigration status interactions) results on students' self-reported sense of belonging (OECD, 2017a).

Table 8

Summary of regression analysis (with immigrant status interactions) on students' self-reported sense of belonging (OECD, 2017a).

	Model	<i>b</i>	<i>SE b</i>	β	<i>t</i>
Table Average	(CONSTANT)	0,825	0,023		
R ² =.098	Bullying	-0,535	0,016	-0,229	-38,872
	Bullying*Immigration	0,017	0,055	0,003	0,526
	Teachers' Attitudes	-0,006	0,002	-0,024	-3,269
	Teachers' Attitudes*Immigration	0,003	0,006	0,004	0,520
	Parental Support	0,148	0,006	0,148	25,446
	Parental Support*Immigration	0,022	0,021	0,006	0,947
	ESCS	0,066	0,007	0,058	8,801
	ESCS*Immigration	-0,043	0,022	-0,012	-1,716
	Gender	0,076	0,011	0,041	6,992
	Gender*Immigration	-0,029	0,038	-0,005	-0,855
	Immigration Status (Dummy)	0,056	0,023	0,018	2,571

Chapter 4 - Conclusions and Discussion

4.1 Discussion

This work sought to determine the level of interactions between native and second-generation 15 year-old learners' sense of belonging and their experience with bullying, teachers' attitudes, parental support. This is one of the few studies that examines the relationship between sense of belonging and three subjective indicators according to students' perceptions. The present research aimed at furnishing valuable insight into the factors that might affect students' sense of belonging and how these are similar or different within and across countries with comparable immigrant population. This section provides an analysis of the principal findings described in the previous chapter.

Sense of belonging of native and second-generation immigrant learners within and across countries.

According to the OECD (2017a), on average, PISA results have suggested that native and second-generation learners tend to have a similar sense of belonging at school, which indicates that integration is progressive. The previous claim is in line with the results of this study. Austria, Germany and France have no significant differences. In fact, in Belgium and the Netherlands, second-generation students have a stronger sense of belonging. This is consistent with the OECD's (2017a) findings which confirm that the sense of belonging of students with an immigrant background vary widely within and across countries according to the manner in which integration policies and schools help non-native students adapt into the host communities. This is indicative that sense of belonging is not only affected by immigrants' country of origin, but also by the characteristics of the host nation and its community (OECD, 2015a).

Notable differences can be observed when the sense of belonging of learners is analysed across countries. For this study, host nations were selected according to their immigrant population similarities to enhance reliability when comparing populations. Students in Austria have a stronger sense of belonging compared to the rest of the selected host countries and the OECD average. Pupils in France have the weakest sense of belonging, followed by Belgium compared to the rest of the selected countries and the OECD average. Findings suggest that

immigration status has a weak association with sense of belonging and that host countries' contextual factors have a similar effect on both native and second-generation students.

Native and second-generation immigrant learners' experience with bullying within and across countries.

There is a substantial amount of research which suggests that immigrant students tend to experience bullying more compared to native learners (Fandrem, Strohmeier, & Roland, 2009; Hong, Peguero, Choi, Lanesskog, Espelage, & Lee, 2014; Peguero, 2012; Sulkowski, Bauman, Wright, Nixon, & Davis, 2014). Results from this study contradict this notion. For instance, there are more reports of bullying by native learners compared to their second-generation counterparts in all countries except for France. These results are consistent with Lim and Hoot's (2015) study, which stated that immigrants were not subjected to a higher frequency of bullying. The present findings are also consistent with the work of Alivernini, Manganelli, Cavicchiolo, and Lucidi (2019) and Borraccino et al. (2018), which noted that the incidence of bullying for second generations was significantly lower compared to first generations.

The analysis across countries indicates that both native and second-generation immigrant students in the Netherlands are less prone to experience bullying. In contrast, results show that learners in Belgium, Germany, and France are more affected by incidents of bullying. These findings are consistent with PISA results (OECD, 2015a; OECD, 2017a), the cross-national profile of bullying and victimisation among adolescents in 40 countries (Craig et al., 2009), and the conclusions in Pollard and Lee's (2003) study, which indicate that bullying varies widely across countries according to several indicators, but not limited to social and cultural contexts, integration policies, school systems, and developmental transitions among other criteria. Similar to sense of belonging, reports of bullying depend on the social-cultural context, and not necessarily the immigration status of the second-generation students.

Native and second-generation immigrant learners' report of teachers' attitudes.

The OECD (2017a) suggests that students with an immigrant background were more likely to report unfair teacher behaviour. The prior is in line with the results of the present study, which indicate that second-generation immigrant students experience negatives attitudes significantly

more compared to their native peers across all countries. This may reveal a relation between immigration status and the perception of teachers' negative attitudes.

Findings also suggest that both native and second-generation immigrant students experience significantly more unfair treatment from teachers in France, Austria, and Germany, whereas the contrary occurs in the Netherlands, followed by Belgium. These differences allude to the OECD's (2017a) claim that school policies and communication practices within countries affect how students and teachers interact.

Native and second-generation immigrant learners' report of parental support.

Second-generation students report less parental support compared to their native peers across all countries, but differences are not significant. However, it is important to note that in almost every single survey item, second-generation learners report less parental support. This might be indicative of factors that negatively influence a supportive environment at home, such as the lack of language knowledge and cultural distance that prevent parents from being more involved in their children's school activities (PISA, 2017a). The analysis across countries show that learners in the Netherlands report more parental support than students from the rest of the selected nations, but the differences are not significant. These results are comparable with the findings presented by the OECD (2017a) in which little variation was observed across the majority of countries participating in PISA 2015.

Relationship between bullying and sense of belonging.

Over the last decade, research has established a clear link between bullying and sense of belonging. It has been well documented how bullying has a direct negative effect on students' belongingness at school (Allen, Kern, Vella-Brodrick, Faust, Ennis, & Hodge, 2014; Hattie, & Waters, 2016; Doumas & Midgett, 2019; Osterman, 2000; Uslu & Gizir, 2017). The present study showed a clear association between the two variables. According to the findings, bullying had the most significant effect on students' self-reported sense of belonging for both native and second-generation immigrant learners among the predictor variables selected for this work. The effect is slightly higher among native students across all countries except Germany. These results are in line with the literature review developed by St-Amand, Girard, and Smith (2017)

and Slaten, Ferguson, Allen, Brodrick, and Waters, (2016), who state peer relationships and bullying as the main determinants for learners' school belonging.

The results of this work confirm bullying has a stronger association with students' sense of belonging compared to teachers' attitudes and parental support. However, it is important to mention that research such as the one developed by Allen, Kern, Vella-Brodrick, Hattie, and Waters (2016), suggests that teacher and parental support have a stronger contribution to learners' sense of belonging. Similarly, Uslu and Gizir's (2017) results confirm that teacher-student relationship was the most significant variable predictor, which explained a substantial percentage of the variance in the sense of school belonging. While literature differs in the analysis of the relationship between bullying and sense of belonging, it can be concluded that school violence is a strong predictor of both native and second-generation learners' belongingness at school.

The strong correlation between bullying and sense of belonging reveals the importance of a safe environment and positive peer relationships. The OECD (2017a) recommends a series of strategies such as anti-bullying programs, teacher training programs, and the involvement of parents. The interaction between students depends on several actors and processes that need to work together. As Uslu and Gizir (2017, p. 77) describe in their research, 'sense of school belonging is attained through supportive and integrative interpersonal relationships that transcend the set social boundaries, cultures or tradition'.

Relationship between teachers' attitudes and sense of belonging.

For many years, researchers have explored the relationship between teacher-student relationship and learners' sense of belonging. For instance, Osterman (2000) identified teachers as a crucial element to increase students belongingness to school. Konishi, Hymel, Zumbo, and Li (2010) identified a link between student perceptions of teacher support and greater feelings of school belonging. Findings from several relevant studies (Capps, 2004; Chiu, Pong, S., Mori, & Chow, 2012; Faust, Ennis, & Hodge, 2014; J-F, Swabey, Pullen, Getenet, & Dowden, 2018; OECD, 2017a) have established the importance of supportive teachers to promote school belonging. Interestingly, the results of the present work, indicate a very weak association between teachers' attitudes and students' sense of belonging within and across countries.

According to the OECD (2017a), an important proportion of students report some type of unfair behaviour by the teacher. However, these data reflect the amount of unfair treatment and not the gravity of the actions which might explain this weak relationship between teachers' attitudes and school belonging. Furthermore, the scale of students' perception of their teachers' attitudes (unfair teacher scale) was used for this study. There are two other scales in PISA that consider students' perception of the relationship with their teachers: 'teacher support in a science class' scale and 'perceived feedback' scale which could be included in future studies to expand and compare associations with belongingness at school.

Relationship between parental support and sense of belonging.

Results of the present study show that parental support has a significant positive effect on native and second-generation learners' sense of belonging. Prior research has stated this association. Family involvement has been indicative of a stronger sense of belonging. According to the meta-analysis developed by Allen et al. (2016), in which 51 studies were examined, among other individual and social factors, parental support had a strong effect on students' sense of belonging. Notably, the researchers concluded that contrary to their expectations, parental support was more influential than peer interaction in regards to belongingness at school.

According to the OECD (2017a), parental support can influence students' views about the value of education and their life satisfaction. Furthermore, parental support has an effect on students' academic performance. The current study confirms that parental support can also influence how students relate to their school. This might have to do with the fact that students who experience high levels of parental support are more motivated to do well in school (OECD, 2017a), which in turn might affect their sense of belonging at school.

4.2 Limitations and Recommendations for Future Research

This study should be interpreted in the context of both its strengths and limitations. PISA 2015 furnishes high-quality data which include a large representative international sample, a high response rate, and the use of standardised questionnaires. However, because data were collected at a single point in time, alternative explanations cannot be ruled out. The relationships among variables identified in this work must be construed with caution and should not be regarded as causal. Longitudinal designs that analyse trends are recommended for future studies. This would

provide researchers the possibility of understanding how sense of belonging and its association evolve throughout the different stages of a student's life.

Secondly, only 15-year-old learners were considered for this study. Therefore, results cannot be generalised to pupils of different ages. It may be worthwhile to develop similar research which focuses on younger children. Furthermore, the analysis for the present work is based solely on self-reports. Participants' answers are influenced by their values, beliefs, and feelings. This could result in a certain margin of error due to response bias, which is affected by cultural norms or by simply being part of a study (i.e. demand bias or social desirability bias).

Another limitation of the present work is that only five countries were analysed. The purpose was to investigate countries with similar immigrant populations. However, future investigations can consider all countries participating in PISA to provide researchers with the possibility of more comprehensive analyses and conclusions. Furthermore, this study was based on native and second-generation learners. Because findings indicate that host countries and their integration policies have a similar effect in both populations that were analysed, it would be advisable to include first-generation immigrant students in future research.

Surprisingly, teachers' attitudes did not have a significant effect on students' sense of belonging. To better understand the underlying reasons, it would be relevant to expand the study and include all countries participating in PISA, or explore other variables related to learners' perceptions of their interaction with teachers (i.e. teacher support or perceived feedback).

Finally, the current work was based exclusively on students' perception. Future studies could extend the methodology by considering parents' and teachers' reports. It would be valuable to analyse and identify whether the responses of each population relate in any way.

4.3 Conclusions

Results of the current study show more similarities between second-generation and native students' sense of belonging within countries than between second-generation learners across countries. Moreover, the fact that in three host nations the differences are not significant, and in two countries, sense of belonging is stronger for non-native students implies that the predictor variables analysed in this work seem to affect both populations in similar fashion within the selected countries. The prior is in line with the OECD's (2015a) report which states that there is a

noticeable disparity in the sense of belonging of immigrant students with similar backgrounds among different host countries due to contextual factors.

Research on school belonging is necessary to improve both native and immigrant students' overall development and well-being. The understanding of the underlying causes that might hinder or enhance learners' belongingness at school is crucial to create a process which promotes learning in a safe and happy environment. Parents, teachers, and peers play central roles in creating opportunities for students to experience a sense of belonging at school. Regardless of the strength of associations, it is essential to analyse school belongingness through a holistic approach.

The results in the multiple regression analysis indicate that bullying best explained the variance in school belonging, followed by parental support. These results highlight the importance of supportive peer interaction and the involvement of parents in their child's education. How students get along and parents participate in the school context will increase the possibilities of feeling accepted at school. Academic institutions, educational leaders and teachers must follow the OECD's (2017a) recommendations and establish a concrete and coherent disciplinary structure, promote harmonious relationships among students and parents, create anti-bullying programs, and develop effective processes of communication with parents.

Regarding teachers' attitudes, results from this study show a weak relationship with sense of belonging. As mentioned previously, the survey focuses on the amount of unfair treatment and not the severity, which might explain the latter. Moreover, because in PISA 2015 there are other student self-reported indicators related to the learner-teacher relationship, teachers' attitudes might account for only a fraction of the association between teacher's negative behaviour and students' sense of belonging at school.

To conclude, school sense of belonging furnishes many benefits to students that are all very well documented. However, many factors support or hamper pupils' belongingness at school. By analysing three important pillars which are part of the learners' support system: family, teachers, and peers, researchers are leading the way so that governments, institutions, teachers, and families can better serve the children's' overall development.

Reference List

- Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2016). What schools need to know about fostering student belonging: A meta-analysis. *Educational Psychology Review*, 30(1), 1–34. <http://doi.org/10.1007/s10648-016-9389-8>
- Alivernini, F., Manganelli, S., Cavicchiolo, E., & Lucidi, F. (2019). Measuring Bullying and Victimization Among Immigrant and Native Primary School Students: Evidence From Italy. *Journal of Psychoeducational Assessment*, 37(2), 226–238. <https://doi.org/10.1177/0734282917732890>
- Arikan, S. (2014). A Regression Model with a New Tool: IDB Analyzer for Identifying Factors Predicting Mathematics Performance Using PISA 2012 Indices. *US-China Education Review*, 4(10), 716-727.
- Borraccino, A., Charrier, L., Berchialla, P., Lazzeri, G., Vieno, A., Dalmasso, P., & Lemma, P. (2018). Perceived well-being in adolescent immigrants: it matters where they come from. *International Journal of Public Health*, 63(9), 1037–1045. <https://doi.org/10.1007/s00038-018-1165-8>
- Borgonovi, F., & Pál, J. (2016). A Framework for the Analysis of Student Well-Being in the Pisa 2015 Study: Being 15 In 2015. *OECD Education Working Papers*, 140. OECD Publishing, Paris.
- Bradshaw, J. (2015). Subjective well-being and social policy: Can nations make their children happier? *Child Indicators Research*, 8(1), 227–241.
- Capps, M. (2004). Teacher perceptions of middle school students' sense of belonging in Southeast Texas. *Journal of Educational Research & Policy Studies*, 4(2), 1–20. Retrieved from <https://files.eric.ed.gov/fulltext/ED491417.pdf>
- Cattaneo, M.A., & Wolter, S.C. (2012). *Migration policy can boost PISA results – Findings from a natural experiment*. Swiss Coordination Centre for Research in Education Staff Paper 7.
- Chiu, M. M., Pong, S., Mori, I., & Chow, B. W. (2012). Immigrant students' emotional and cognitive engagement at school: A multilevel analysis of students in 41 countries. *Journal of Youth and Adolescence*, 41, 1409–1425. <http://dx.doi.org/10.1007/s10964-012-9763-x>.

- Chory–Assad, R.M., & Paulsel, M.L. (2004) Classroom justice: student aggression and resistance as reactions to perceived unfairness. *Communication Education*, 53(3), 253–273. <https://doi.org/10.1080/0363452042000265189>
- Clemens, M. (2017). *Migration is a Form of Development: The Need for Innovation to Regulate Migration for Mutual Benefit*, UN Population Division, Technical Paper No. 2017/8. New York: United Nations. Retrieved from <https://www.un.org/en/development/desa/population/migration/publications/technicalpapers/docs/TP2017-8.pdf>
- Collett, E., & Petrovic, M. (2014). The future of immigrant integration in Europe. Mainstreaming approaches to inclusion. Washington, DC: Migration Policy Institute. Retrieved from <https://www.migrationpolicy.org/research/future-immigrant-integration-europe-mainstreaming-approaches-inclusion>
- Craig, W., Harel-Fisch, Y., Fogel-Grinvald, H., Dostaler, S., Hetland, J., Simons-Morton, B., ... HBSC Bullying Writing Group (2009). A cross-national profile of bullying and victimization among adolescents in 40 countries. *International journal of public health*, 54, 216–224. <https://doi.org/10.1007/s00038-009-5413-9>
- Cropanzano, R., & Greenberg, J. (1997). Progress in organizational justice: Tunneling through the maze. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology*, 12, 317–372. New York: John Wiley & Sons. Retrieved from <https://numerons.files.wordpress.com/2012/04/19-progress-in-organizational-justice-tunneling-through-the-maze.pdf>
- Crul, M., & Holdaway, J. (2009). Children of immigrants in schools in New York and Amsterdam: The factors shaping attainment. *Teachers College Record*, 111(6), 1476–1507. Retrieved from <https://www.elitesproject.eu/publications/articles/26-children-of-immigrants-in-schools-in-new-york-and-amsterdam/file>
- De Bortoli, L. (2018). *PISA Australia in Focus Number 1: Sense of belonging at school*. Melbourne, Australia: Australian Council for Educational Research. Retrieved from <https://research.acer.edu.au/ozpisa/30>
- Doumas, D. M., & Midgett, A. (2019). The Effects of Students’ Perceptions of Teachers’ Antibullying Behavior on Bullying Victimization: Is Sense of School Belonging a

- Mediator?, *Journal of Applied School Psychology*, 35(1), 37–51, <https://doi.org/10.1080/15377903.2018.1479911>
- Dustmann, C., Frattini, T., & Lanzara, G. (2012). Educational achievement of second-generation immigrants: An international comparison. *Economic Policy*, 27(69), 143–185. <https://doi.org/10.1111/j.1468-0327.2011.00275.x>
- Eurostat (n.d). *Overview* Retrieved April 16, 2019, from the Eurostat Website: <https://ec.europa.eu/eurostat/about/overview>
- Gögebakan-Yildiz, D. (2017). Migration Fact from Perspective of Turkish Prospective Teachers and Its Effect on Education. *European Journal of Education Studies*, 3(8), 539–557. <https://doi.org/10.5281/zenodo.841876>
- Faust, P. B., Ennis, L. S., & Hodge, W. M. (2014). The relationship between middle grade student belonging and middle grade student performance. *Alabama Journal of Educational Leadership*, 1, 43-54. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1097548.pdf>
- Fleras, A. (2015). Moving Positively Beyond Multiculturalism. *Zeitschrift Für Kanada-Studien*, 35(1), 63–89. Retrieved from http://www.kanada-studien.org/wp-content/uploads/2015/03/zks_2015_4_Fleras.pdf
- Fandrem, H., Strohmeier, D., & Roland, E. (2009). Bullying and Victimization Among Native and Immigrant Adolescents in Norway: The Role of Proactive and Reactive Aggressiveness. *The Journal of Early Adolescence*, 29(6), 898–923. <https://doi.org/10.1177/0272431609332935>
- Goldin, I., Cameron, G., & Balarajan, M. (2011). *Exceptional people: How migration shaped our world and will define our future*. Princeton University Press. Retrieved from <http://www.jstor.org/stable/j.ctt7rk89>
- Hendriks, M. (2018). *Migrant Happiness : Insights into the broad well-being outcomes of migration and its determinants*. (Doctoral Dissertation, Erasmus University Rotterdam). Retrieved from <http://hdl.handle.net/1765/104017>
- Hilderink, H., van der Gaag, N., van Wissen, L., Jennissen, R., Román, A., Salt, J., Clarke, J., & Pinkerton, C. (2002). *Analysis & Forecasting of International Migration by Major*

- Groups*. Luxembourg: Office for Official Publications of the European Communities.
Retrieved from <https://ec.europa.eu/eurostat/documents/3888793/5819597/KS-CC-03-002-EN.PDF/65a6909a-ebaf-4ecc-a735-8cda113fa10a>
- Hong, J. S., Peguero, A. A., Choi, S., Lanesskog, D., Espelage, D. L., & Lee, N. Y. (2014). Social ecology of bullying and peer victimization of Latino and Asian youth in the United States: A review of the literature. *Journal of School Violence, 13*(3), 315–338. <http://dx.doi.org/10.1080/15388220.2013.856013>
- IOM (2017). *World Migration Report 2018*. New York: United Nations. Retrieved from https://publications.iom.int/system/files/pdf/wmr_2018_en.pdf
- Janta, B., & Harte, E. (2016). *Education of migrant children*. Cambridge: RAND Europe.
Retrieved from https://www.rand.org/content/dam/rand/pubs/research_reports/RR1600/RR1655/RAND_RR1655.pdf
- J-F, J., Swabey, K., Pullen, D., Getenet, S., & Dowden, T. (2018). Teenagers Perceptions of Teachers: A Developmental Argument. *Australian Journal of Teacher Education, 43*(2), 25–38. <http://dx.doi.org/10.14221/ajte.2018v43n2.2>
- Konishi, C., Hymel, S., Zumbo, B. D., & Li, Z. (2010). Do School Bullying and Student-Teacher Relationships Matter for Academic Achievement? A Multilevel Analysis. *Canadian Journal of School Psychology, 25*(1), 19–39. <https://doi.org/10.1177/0829573509357550>
- Lim, S. J. J., & Hoot, J. L. (2015). Bullying in an increasingly diverse school population: A socio-ecological model analysis. *School Psychology International, 36*(3), 268–282. <https://doi.org/10.1177/0143034315571158>
- Magalhães, M., & Campina, A. (2018). Migrants and Refugees in European Union: 'Warm Peace', Human Rights Education and Political Sustainability. *Journal of Education and Training Studies, 6*(29). <https://doi.org/10.11114/jets.v6i11a.3798>
- Maslow, A.H. (1943). A theory of human motivation. *Psychological Review, 50*, 370–396.
Retrieved from <https://psychclassics.yorku.ca/Maslow/motivation.htm>
- Messer, M., Schroeder, R., & Wodak, R. (Eds.) (2012). *Migrations: Interdisciplinary Perspectives*. Berlin: Springer.

- National Center for Education Statistics, U.S. Department of Education. (n.d.). *Program for International Student Assessment (PISA)*. Retrieved April 6, 2019, from the National Center for Education Statistics Website: <https://nces.ed.gov/surveys/pisa/faq.asp>
- OECD. (2004). *Learning for Tomorrow's World: First results from PISA 2003*. Paris: OECD Publishing. Retrieved from <https://www.oecd.org/education/school/programmeforinternationalstudentassessmentpisa/34002216.pdf>
- OECD. (2012). *Untapped Skills: Realising the Potential of Immigrant Students*. Paris: OECD Publishing. Retrieved from <http://www.oecd.org/education/school/Untapped%20Skills.pdf>
- OECD. (2013). *PISA 2012 Results: Excellence through Equity: Giving Every Student the Chance to Succeed (Volume II)*. Paris: OECD Publishing. Retrieved from <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-II.pdf>
- OECD. (2015a). *Helping immigrant students to succeed at school - and beyond*. Paris: OECD Publishing. Retrieved from <https://www.oecd.org/education/Helping-immigrant-students-to-succeed-at-school-and-beyond.pdf>
- OECD. (2016). *PISA 2015 Results: Vol. I. Excellence and Equity in Education*. Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264266490-en>
- OECD. (2017a). *PISA 2015 Results: Vol. III. Students' Well-Being, PISA*. Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264273856-en>
- OECD. (2017b). *PISA 2015 Technical Results*. Paris: OECD Publishing. Retrieved from <https://www.oecd.org/pisa/sitedocument/PISA-2015-technical-report-final.pdf>
- OECD/European Union. (2015). *Indicators of Immigrant Integration 2015: Settling In*. Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264234024-en>
- OECD/ILO. (2018). *How Immigrants Contribute to Developing Countries' Economies*. Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264288737-en>
- OECD & Westat. (2013). *FT Sampling Guidelines*, report produced by Westat, Core 5 Contractor, for the second meeting of the National Project Managers. Retrieved from <https://www.oecd.org/pisa/pisaproducts/PISA2015FT-SamplingGuidelines.pdf>

- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70(3), 323–367. <https://doi.org/10.3102/00346543070003323>
- Peguro, A. A. (2012). Schools, bullying, and inequality: Intersecting factors and complexities with the stratification of youth victimization at school. *Sociology Compass*, 6, 402–412. <https://doi:10.1111/j.1751-9020.2012.00459.x>
- Pollard, E. L., & Lee, P. D. (2003). Child well-being: A systematic review of the literature. *Social Indicators Research*, 61(1), 59–78. <http://dx.doi.org/10.1023/A:1021284215801>
- United Nations. (1998). Recommendations on Statistics of International Migration. New York: United Nations.
- United Nations, Department of Economic and Social Affairs, Population Division (2017a). International Migration Report 2017 (ST/ESA/SER.A/403).
- United Nations, Department of Economic and Social Affairs. Population Division (2017b). Trends in International Migrant Stock: The 2017 revision (United Nations database, POP/DB/MIG/Stock/Rev.2017).
- Uslu, F., & Gizir, S. (2017). School belonging of adolescents: The role of teacher–student relationships, peer relationships and family involvement. *Educational Sciences: Theory & Practice*, 17, 63–82. <http://dx.doi.org/10.12738/estp.2017.1.0104>
- Slaten, C. D., Ferguson, J., Allen, K., Brodrick, D., & Waters, L. (2016). School Belonging: A review of the history, current trends, and future directions. *The Educational and Developmental Psychologist*, 33, 1–15. <http://dx.doi.org/10.1017/edp.2016.6>
- St-Amand, J., Girard, S., & Smith, J. (2017). Sense of Belonging at School: Defining Attributes, Determinants, and Sustaining Strategies. *IAFOR Journal of Education*, 5(2), 105–119. <http://dx.doi.org/10.22492/ije.5.2.05>
- Sulkowski, M. L., Bauman, S., Wright, S., Nixon, C., & Davis, S. (2014). Peer victimization in youth from immigrant and non-immigrant US families. *School Psychology International*, 35(6), 649–669. <https://doi.org/10.1177/0143034314554968>
- Tang, Y. (2018). Immigration Status and Adolescent Life Satisfaction: An International Comparative Analysis Based on PISA 2015. *Journal of Happiness Studies*, 1–20. Springer Netherlands. <https://doi.org/10.1007/s10902-018-0010-3>

- Tani, M. (2017). Paper commissioned for the Global Education Monitoring Report 2019 Consultation on Migration. Paris: UNESCO Publishing. Retrieved from <https://es.unesco.org/gem-report/sites/gem-report/files/Think%20piece%20-%20International%20migration%20and%20education%20-%20Tani%20-%20FINAL.pdf>
- UNESCO (2017). School violence and bullying: Global Status Report. Paris: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000246970>
- Wang, M. & Eccles, J. S. (2012). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence*, 22, 31–39. <https://doi.org/10.1111/j.1532-7795.2011.00753.x>
- Willms, J. D. (2003). *Student engagement at school: A sense of belonging and participation. Results from PISA 2000*. Paris: OECD Publishing. Retrieved from <http://www.oecd.org/education/school/programme-for-international-student-assessment-pisa/33689437.pdf>
- Wirén, E. (2012). *Migrants in Education – what factors are important? A study of European countries participating in TIMSS 2007*. Luxembourg: Publications Office of the European Union EUR. <http://doi:10.2788/78189>
- World Bank (n.d.). Retrieved July 8, 2019, from <https://data.worldbank.org/indicator>
- Zhao, R. B., & Chang, Y.-C. (2019). Students' family support, peer relationships, and learning motivation and teachers fairness have an influence on the victims of bullying in middle school of Hong Kong. *International Journal of Educational Methodology*, 5(1), 97-107. <http://doi.org/10.12973/ijem.5.1.111>

Appendix A

Students' self-report of sense of belonging at school.

Table 8

Percentage of students who reported agree or strongly agree by country and immigration status.

	I feel like an outsider (or left out of things) at school.		I make friends easily at school.		I feel like I belong at school.		I feel awkward and out of place in my school.		Other students seem to like me.		I feel lonely at school.	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Austria												
Native	14.0	0.5	78.5	0.7	76.7	0.6	16.9	0.5	84.3	0.4	14.9	0.4
Second-Generation	11.0	1.1	79.7	1.7	75.9	1.5	16.8	1.3	83.3	1.3	14.2	1.1
Belgium												
Native	18.8	0.5	81.3	0.5	65.1	0.6	14.8	0.4	88.3	0.5	9.1	0.4
Second-Generation	13.9	1.6	86.7	1.4	58.4	2.3	18.3	1.5	89.5	1.4	9.1	1.3
France												
Native	22.2	0.7	86.6	0.5	41.6	0.6	15.5	0.5	90.5	0.4	9.2	0.4
Second-Generation	23.3	2.0	83.6	1.7	37.2	2.5	17.9	2.2	88.2	2.0	8.8	1.4
Germany												
Native	14.6	0.6	73.4	0.8	76.0	0.7	16.2	0.6	86.0	0.6	12.1	0.5
Second-Generation	12.8	1.5	76.4	1.7	72.4	1.7	21.3	1.8	83.9	1.8	13.1	1.8
Netherlands												
Native	8.6	0.4	84.8	0.5	81.4	0.6	11.0	0.5	91.9	0.5	7.6	0.4
Second-Generation	9.1	1.6	88.7	1.5	77.6	2.2	9.2	1.6	94.3	1.3	6.8	1.4

Appendix B

Students' self-report of bullying.

Table 9

Students' self-report of sense of bullying by country and immigration status.

Country	Immigration Status		Other students left me out of things on purpose.				
			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	4575	635	188	133	5531
		Percent	82.7	11.5	3.4	2.4	100
	Second-Generation	Frequency	691	95	23	15	824
		Percent	83.9	11.5	2.8	1.8	100
Belgium	Native	Frequency	6113	956	278	149	7496
		Percent	81.6	12.8	3.7	2	100
	Second-Generation	Frequency	631	61	20	15	727
		Percent	86.8	8.4	2.8	2.1	100
France	Native	Frequency	4123	617	210	127	5077
		Percent	81.2	12.2	4.1	2.5	100
	Second-Generation	Frequency	412	54	15	9	490
		Percent	84.1	11	3.1	1.8	100
Germany	Native	Frequency	3619	617	156	80	4472
		Percent	80.9	13.8	3.5	1.8	100
	Second-Generation	Frequency	567	73	26	12	678
		Percent	83.6	10.8	3.8	1.8	100
Netherlands	Native	Frequency	4116	300	73	39	4528
		Percent	90.9	6.6	1.6	0.9	100
	Second-Generation	Frequency	388	27	5	3	423
		Percent	91.7	6.4	1.2	0.7	100
Other students made fun of me.							
			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	3494	1359	409	268	5530
		Percent	63.2	24.6	7.4	4.8	100
	Second-Generation	Frequency	593	153	49	33	828
		Percent	71.6	18.5	5.9	4	100
Belgium	Native	Frequency	4942	1727	518	303	7490
		Percent	66	23.1	6.9	4	100
	Second-Generation	Frequency	530	135	35	26	726
		Percent	73	18.6	4.8	3.6	100
France	Native	Frequency	3494	1002	340	240	5076
		Percent	68.8	19.7	6.7	4.7	100
	Second-Generation	Frequency	361	72	36	20	489

Germany	Native	Percent	73.8	14.7	7.4	4.1	100
		Frequency	2951	1130	261	140	4482
	Second-Generation	Percent	65.8	25.2	5.8	3.1	100
		Frequency	473	141	36	26	676
Netherlands	Native	Percent	70	20.9	5.3	3.8	100
		Frequency	3627	692	139	67	4525
	Second-Generation	Percent	80.2	15.3	3.1	1.5	100
		Frequency	364	47	10	3	424
		Percent	85.8	11.1	2.4	0.7	100

I was threatened by other students.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	5111	242	76	76	5505
		Percent	92.8	4.4	1.4	1.4	100
	Second-Generation	Frequency	773	32	18	2	825
		Percent	93.7	3.9	2.2	0.2	100
Belgium	Native	Frequency	6846	445	103	74	7468
		Percent	91.7	6	1.4	1	100
	Second-Generation	Frequency	661	47	10	6	724
		Percent	91.3	6.5	1.4	0.8	100
France	Native	Frequency	4659	279	78	56	5072
		Percent	91.9	5.5	1.5	1.1	100
	Second-Generation	Frequency	454	21	8	8	491
		Percent	92.5	4.3	1.6	1.6	100
Germany	Native	Frequency	4235	174	34	31	4474
		Percent	94.7	3.9	0.8	0.7	100
	Second-Generation	Frequency	631	36	9	3	679
		Percent	92.9	5.3	1.3	0.4	100
Netherlands	Native	Frequency	4286	181	28	23	4518
		Percent	94.9	4	0.6	0.5	100
	Second-Generation	Frequency	399	17	3	2	421
		Percent	94.8	4	0.7	0.5	100

Other students took away or destroyed things that belonged to me.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	4553	674	178	110	5515
		Percent	82.6	12.2	3.2	2	100
	Second-Generation	Frequency	697	92	27	10	826
		Percent	84.4	11.1	3.3	1.2	100
Belgium	Native	Frequency	6719	578	129	67	7493
		Percent	89.7	7.7	1.7	0.9	100
	Second-Generation	Frequency	657	47	15	8	727
		Percent	90.4	6.5	2.1	1.1	100

France	Native	Frequency	4577	369	77	51	5074
		Percent	90.2	7.3	1.5	1	100
	Second-Generation	Frequency	452	19	12	7	490
		Percent	92.2	3.9	2.4	1.4	100
Germany	Native	Frequency	3786	535	111	46	4478
		Percent	84.5	11.9	2.5	1	100
	Second-Generation	Frequency	555	93	23	5	676
		Percent	82.1	13.8	3.4	0.7	100
Netherlands	Native	Frequency	3990	432	70	31	4523
		Percent	88.2	9.6	1.5	0.7	100
	Second-Generation	Frequency	379	34	4	2	419
		Percent	90.5	8.1	1	0.5	100

I got hit or pushed around by other students.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	4891	380	120	113	5504
		Percent	88.9	6.9	2.2	2.1	100
	Second-Generation	Frequency	766	38	14	8	826
		Percent	92.7	4.6	1.7	1	100
Belgium	Native	Frequency	6705	566	121	95	7487
		Percent	89.6	7.6	1.6	1.3	100
	Second-Generation	Frequency	668	37	11	10	726
		Percent	92	5.1	1.5	1.4	100
France	Native	Frequency	4635	292	74	68	5069
		Percent	91.4	5.8	1.5	1.3	100
	Second-Generation	Frequency	451	20	11	8	490
		Percent	92	4.1	2.2	1.6	100
Germany	Native	Frequency	4224	153	52	37	4466
		Percent	94.6	3.4	1.2	0.8	100
	Second-Generation	Frequency	639	24	10	5	678
		Percent	94.2	3.5	1.5	0.7	100
Netherlands	Native	Frequency	4248	197	54	27	4526
		Percent	93.9	4.4	1.2	0.6	100
	Second-Generation	Frequency	398	20	3	2	423
		Percent	94.1	4.7	0.7	0.5	100

Other students spread nasty rumours about me.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	4193	896	256	160	5505
		Percent	76.2	16.3	4.7	2.9	100
	Second-Generation	Frequency	634	129	50	10	823
		Percent	77	15.7	6.1	1.2	100
Belgium	Native	Frequency	5178	1666	419	218	7481

France	Second-Generation	Percent	69.2	22.3	5.6	2.9	100
		Frequency	530	142	29	23	724
		Percent	73.2	19.6	4	3.2	100
	Native	Frequency	3890	797	259	118	5064
		Percent	76.8	15.7	5.1	2.3	100
		Frequency	393	51	27	16	487
Germany	Second-Generation	Percent	80.7	10.5	5.5	3.3	100
		Frequency	3357	813	197	103	4470
		Percent	75.1	18.2	4.4	2.3	100
	Native	Frequency	519	103	41	16	679
		Percent	76.4	15.2	6	2.4	100
		Frequency	3588	722	152	64	4526
Netherlands	Native	Percent	79.3	16	3.4	1.4	100
		Frequency	331	72	15	4	422
	Second-Generation	Percent	78.4	17.1	3.6	0.9	100
		Frequency					

Appendix C

Students' report on teachers' attitudes.

Table 10

Students' report on teachers' attitudes by country and immigration status.

Country	Immigration Status	Teachers called on me less often than they called on other students.					
			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	1973	1513	1232	796	5514
		Percent	35.8	27.4	22.3	14.4	100
	Second-Generation	Frequency	239	208	190	182	819
		Percent	29.2	25.4	23.2	22.2	100
Belgium	Native	Frequency	3431	1699	1228	1099	7457
		Percent	46	22.8	16.5	14.7	100
	Second-Generation	Frequency	282	146	139	144	711
		Percent	39.7	20.5	19.5	20.3	100
France	Native	Frequency	1723	1061	1364	828	4976
		Percent	34.6	21.3	27.4	16.6	100
	Second-Generation	Frequency	145	103	132	89	469
		Percent	30.9	22	28.1	19	100
Germany	Native	Frequency	1382	1449	970	693	4494
		Percent	30.8	32.2	21.6	15.4	100
	Second-Generation	Frequency	189	203	169	123	684
		Percent	27.6	29.7	24.7	18	100
Netherlands	Native	Frequency	2684	922	549	375	4530
		Percent	59.2	20.4	12.1	8.3	100
	Second-Generation	Frequency	198	97	64	65	424
		Percent	46.7	22.9	15.1	15.3	100
Teachers graded me harder than they graded other students.							
			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	3339	1336	542	283	5500
		Percent	60.7	24.3	9.9	5.1	100
	Second-Generation	Frequency	387	229	134	70	820
		Percent	47.2	27.9	16.3	8.5	100

Belgium	Native	Frequency	4228	1754	935	544	7461
		Percent	56.7	23.5	12.5	7.3	100
	Second-Generation	Frequency	365	156	123	76	720
		Percent	50.7	21.7	17.1	10.6	100
France	Native	Frequency	2839	1157	764	257	5017
		Percent	56.6	23.1	15.2	5.1	100
	Second-Generation	Frequency	242	102	93	37	474
		Percent	51.1	21.5	19.6	7.8	100
Germany	Native	Frequency	2390	1335	564	198	4487
		Percent	53.3	29.8	12.6	4.4	100
	Second-Generation	Frequency	295	224	102	64	685
		Percent	43.1	32.7	14.9	9.3	100
Netherlands	Native	Frequency	3233	717	336	236	4522
		Percent	71.5	15.9	7.4	5.2	100
	Second-Generation	Frequency	266	74	44	36	420
		Percent	63.3	17.6	10.5	8.6	100

Teachers gave me the impression that they think I am less smart than I really am.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	2915	1375	733	468	5491
		Percent	53.1	25	13.3	8.5	100
	Second-Generation	Frequency	346	190	146	131	813
		Percent	42.6	23.4	18	16.1	100
Belgium	Native	Frequency	4312	1651	934	544	7441
		Percent	57.9	22.2	12.6	7.3	100
	Second-Generation	Frequency	376	154	98	87	715
		Percent	52.6	21.5	13.7	12.2	100
France	Native	Frequency	2629	1056	769	542	4996
		Percent	52.6	21.1	15.4	10.8	100
	Second-Generation	Frequency	224	101	68	76	469
		Percent	47.8	21.5	14.5	16.2	100
Germany	Native	Frequency	2471	1118	541	346	4476
		Percent	55.2	25	12.1	7.7	100
	Second-Generation	Frequency	303	174	123	79	679
		Percent	44.6	25.6	18.1	11.6	100

Netherlands	Native	Frequency	3128	912	347	140	4527
		Percent	69.1	20.1	7.7	3.1	100
	Second-Generation	Frequency	264	80	55	24	423
		Percent	62.4	18.9	13	5.7	100

Teachers disciplined me more harshly than other students.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	3306	1234	586	369	5495
		Percent	60.2	22.5	10.7	6.7	100
	Second-Generation	Frequency	402	199	126	87	814
		Percent	49.4	24.4	15.5	10.7	100
Belgium	Native	Frequency	4942	1372	694	436	7444
		Percent	66.4	18.4	9.3	5.9	100
	Second-Generation	Frequency	433	132	97	52	714
		Percent	60.6	18.5	13.6	7.3	100
France	Native	Frequency	3678	713	358	260	5009
		Percent	73.4	14.2	7.1	5.2	100
	Second-Generation	Frequency	314	73	47	37	471
		Percent	66.7	15.5	10	7.9	100
Germany	Native	Frequency	2725	1016	439	279	4459
		Percent	61.1	22.8	9.8	6.3	100
	Second-Generation	Frequency	329	176	103	54	662
		Percent	49.7	26.6	15.6	8.2	100
Netherlands	Native	Frequency	3278	722	330	191	4521
		Percent	72.5	16	7.3	4.2	100
	Second-Generation	Frequency	269	77	46	32	424
		Percent	63.4	18.2	10.8	7.5	100

Teachers ridiculed me in front of others.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	3979	970	347	216	5512
		Percent	72.2	17.6	6.3	3.9	100
	Second-Generation	Frequency	544	157	75	44	820
		Percent	66.3	19.1	9.1	5.4	100
Belgium	Native	Frequency	5099	1579	506	260	7444

		Percent	68.5	21.2	6.8	3.5	100
	Second-Generation	Frequency	465	135	68	46	714
		Percent	65.1	18.9	9.5	6.4	100
France	Native	Frequency	3485	981	334	198	4998
		Percent	69.7	19.6	6.7	4	100
	Second-Generation	Frequency	324	72	44	33	473
		Percent	68.5	15.2	9.3	7	100
Germany	Native	Frequency	3398	737	215	132	4482
		Percent	75.8	16.4	4.8	2.9	100
	Second-Generation	Frequency	482	128	46	28	684
		Percent	70.5	18.7	6.7	4.1	100
Netherlands	Native	Frequency	3545	753	167	61	4526
		Percent	78.3	16.6	3.7	1.3	100
	Second-Generation	Frequency	310	77	24	12	423
		Percent	73.3	18.2	5.7	2.8	100

Teachers said something insulting to me in front of others.

			Never or almost never	A few times a year	A few times a month	Once a week or more	Total
Austria	Native	Frequency	4343	706	254	202	5505
		Percent	78.9	12.8	4.6	3.7	100
	Second-Generation	Frequency	605	134	37	43	819
		Percent	73.9	16.4	4.5	5.3	100
Belgium	Native	Frequency	5564	1257	374	232	7427
		Percent	74.9	16.9	5	3.1	100
	Second-Generation	Frequency	524	104	45	44	717
		Percent	73.1	14.5	6.3	6.1	100
France	Native	Frequency	3882	722	242	162	5008
		Percent	77.5	14.4	4.8	3.2	100
	Second-Generation	Frequency	358	62	28	26	474
		Percent	75.5	13.1	5.9	5.5	100
Germany	Native	Frequency	3814	450	125	84	4473
		Percent	85.3	10.1	2.8	1.9	100
	Second-Generation	Frequency	545	80	25	29	679
		Percent	80.3	11.8	3.7	4.3	100
Netherlands	Native	Frequency	3827	508	121	59	4515
		Percent	84.8	11.3	2.7	1.3	100

Second-Generation	Frequency	330	64	16	12	422
	Percent	78.2	15.2	3.8	2.8	100

Appendix D

Students' report on parental support.

Table 11

Students' report on parental support by country and immigration status.

Country	Immigration Status		<this academic year>: My parents are interested in my school activities.				
			Strongly disagree	Disagree	Agree	Strongly agree	Total
Austria	Native	Frequency	41	167	1177	4200	5585
		Percent	0.7	3	21.1	75.2	100
	Second-Generation	Frequency	11	35	182	608	836
		Percent	1.3	4.2	21.8	72.7	100
Belgium	Native	Frequency	103	301	3380	3830	7614
		Percent	1.4	4	44.4	50.3	100
	Second-Generation	Frequency	23	42	327	362	754
		Percent	3.1	5.6	43.4	48	100
France	Native	Frequency	71	153	2080	2858	5162
		Percent	1.4	3	40.3	55.4	100
	Second-Generation	Frequency	11	20	218	252	501
		Percent	2.2	4	43.5	50.3	100
Germany	Native	Frequency	35	148	1257	3191	4631
		Percent	0.8	3.2	27.1	68.9	100
	Second-Generation	Frequency	8	31	214	478	731
		Percent	1.1	4.2	29.3	65.4	100
Netherlands	Native	Frequency	29	87	2120	2312	4548
		Percent	0.6	1.9	46.6	50.8	100
	Second-Generation	Frequency	6	14	204	204	428
		Percent	1.4	3.3	47.7	47.7	100
<this academic year>: My parents support my educational efforts and achievements.							
			Strongly disagree	Disagree	Agree	Strongly agree	Total
Austria	Native	Frequency	94	346	1701	3432	5573
		Percent	1.7	6.2	30.5	61.6	100
	Second-Generation	Frequency	12	55	250	513	830
		Percent	1.4	6.6	30.1	61.8	100
Belgium	Native	Frequency	91	282	3018	4215	7606
		Percent	1.2	3.7	39.7	55.4	100
	Second-Generation	Frequency	12	31	280	427	750

France	Native	Percent	1.6	4.1	37.3	56.9	100
		Frequency	42	135	1737	3234	5148
		Percent	0.8	2.6	33.7	62.8	100
	Second-Generation	Frequency	13	16	164	309	502
		Percent	2.6	3.2	32.7	61.6	100
		Frequency	53	270	1425	2875	4623
Germany	Native	Percent	1.1	5.8	30.8	62.2	100
		Frequency	13	56	226	432	727
		Percent	1.8	7.7	31.1	59.4	100
Netherlands	Native	Frequency	27	122	2061	2337	4547
		Percent	0.6	2.7	45.3	51.4	100
		Frequency	4	15	172	236	427
	Second-Generation	Percent	0.9	3.5	40.3	55.3	100

<this academic year>: My parents support me when I am facing difficulties at school.

			Strongly disagree	Disagree	Agree	Strongly agree	Total
Austria	Native	Frequency	83	271	1203	4013	5570
		Percent	1.5	4.9	21.6	72	100
		Frequency	33	76	210	517	836
	Second-Generation	Percent	3.9	9.1	25.1	61.8	100
		Frequency	115	449	3096	3943	7603
		Percent	1.5	5.9	40.7	51.9	100
	Second-Generation	Frequency	22	48	297	385	752
		Percent	2.9	6.4	39.5	51.2	100
		Frequency	104	391	2206	2447	5148
France	Native	Percent	2	7.6	42.9	47.5	100
		Frequency	20	41	194	250	505
		Percent	4	8.1	38.4	49.5	100
Germany	Native	Frequency	71	261	1244	3048	4624
		Percent	1.5	5.6	26.9	65.9	100
		Frequency	25	83	210	406	724
	Second-Generation	Percent	3.5	11.5	29	56.1	100
		Frequency	29	111	1902	2491	4533
		Percent	0.6	2.4	42	55	100
Netherlands	Native	Frequency	3	25	174	224	426
		Percent	0.7	5.9	40.8	52.6	100

<this academic year>: My parents encourage me to be confident.

			Strongly disagree	Disagree	Agree	Strongly agree	Total
Austria	Native	Frequency	147	357	1381	3682	5567
		Percent	2.6	6.4	24.8	66.1	100
	Second-Generation	Frequency	30	65	232	507	834
		Percent	3.6	7.8	27.8	60.8	100
Belgium	Native	Frequency	187	547	3203	3652	7589
		Percent	2.5	7.2	42.2	48.1	100
	Second-Generation	Frequency	24	55	272	394	745
		Percent	3.2	7.4	36.5	52.9	100
France	Native	Frequency	102	351	2005	2685	5143
		Percent	2	6.8	39	52.2	100
	Second-Generation	Frequency	18	35	172	273	498
		Percent	3.6	7	34.5	54.8	100
Germany	Native	Frequency	131	368	1393	2716	4608
		Percent	2.8	8	30.2	58.9	100
	Second-Generation	Frequency	36	71	208	405	720
		Percent	5	9.9	28.9	56.3	100
Netherlands	Native	Frequency	41	173	2091	2231	4536
		Percent	0.9	3.8	46.1	49.2	100
	Second-Generation	Frequency	4	11	172	240	427
		Percent	0.9	2.6	40.3	56.2	100

Appendix E

Correlation analysis across all selected host countries.

Table 12

Correlation analysis of all variables by country.

Country	Variable	Correlation with Sense of Belonging	Corelation with Bullying	Correlation with Parental Support	Correlation with Teachers' Attitudes
Austria	Sense of Belonging	1,000	-0,215	0,156	-0,115
	Bullying	-0,215	1,000	-0,153	0,341
	Parental Support	0,156	-0,153	1,000	-0,158
	Teachers' Attitudes	-0,115	0,341	-0,158	1,000
Belgium	Sense of Belonging	1,000	-0,27	0,196	-0,087
	Bullying	-0,27	1,000	-0,144	0,296
	Parental Support	0,196	-0,144	1,000	-0,147
	Teachers' Attitudes	-0,087	0,296	-0,147	1,000
France	Sense of Belonging	1,000	-0,263	0,213	-0,138
	Bullying	-0,263	1,000	-0,075	0,259
	Parental Support	0,213	-0,075	1,000	-0,155
	Teachers' Attitude s	-0,138	0,259	-0,155	1,000
Germany	Sense of Belonging	1,000	-0,288	0,19	-0,126
	Bullying	-0,288	1,000	-0,163	0,333
	Parental Support	0,19	-0,163	1,000	-0,154
	Teachers' Attitudes	-0,126	0,333	-0,154	1,000
Netherlands	Sense of Belonging	1,000	-0,231	0,188	-0,065
	Bullying	-0,231	1,000	-0,083	0,238
	Parental Support	0,188	-0,083	1,000	-0,129
	Teachers' Attitudes	-0,065	0,238	-0,129	1,000
Table Average	Sense of Belonging	1,000	-0,253	0,188	-0,106
	Bullying	-0,253	1,000	-0,123	0,293
	Parental Support	0,188	-0,123	1,000	-0,149
	Teachers' Attitude	-0,106	0,293	-0,149	1,000

Appendix F

Regression analysis results for students' self-reported sense of belonging.

Table 13

Regression analysis results on students' self-reported sense of belonging.

Country	Index Immigration Status	Model	<i>b</i>	<i>SE b</i>	β	<i>t</i>	Sig
Austria	First-Generation	(CONSTANT)	1,128	0,182			
		Bullying	-0,565	0,089	-0,253	-6,298	0,000*
		Parental Support	0,090	0,061	0,079	1,477	0,140
		ESCS	0,101	0,056	0,089	1,723	0,085
		Teachers' Attitudes	-0,014	0,017	-0,051	-0,815	0,415
		Gender	-0,098	0,136	-0,040	-0,725	0,468
	Native	(CONSTANT)	1,143	0,066			
		Bullying	-0,505	0,041	-0,186	-12,523	0,000*
		Parental Support	0,152	0,021	0,109	7,252	0,000*
		ESCS	0,098	0,021	0,061	4,568	0,000*
		Teachers' Attitudes	-0,012	0,005	-0,036	-2,555	0,010*
		Gender	0,039	0,029	0,015	1,350	0,177
	Second-Generation	(CONSTANT)	0,990	0,160			
		Bullying	-0,467	0,130	-0,148	-3,312	0,000*
		Parental Support	0,175	0,050	0,132	3,486	0,000*
		ESCS	0,039	0,057	0,026	0,684	0,494
		Teachers' Attitudes	0,004	0,015	0,012	0,241	0,809
Belgium	First-Generation	(CONSTANT)	0,409	0,111			
		Bullying	-0,394	0,083	-0,209	-5,753	0,000*
		Parental Support	0,167	0,035	0,187	5,161	0,000*
		ESCS	0,013	0,029	0,016	0,457	0,647
		Teachers' Attitudes	-0,006	0,010	-0,026	-0,564	0,572
		Gender	0,208	0,052	0,112	4,131	0,000*

R²=.113	Native	(CONSTANT)	0,622	0,041			
		Bullying	-0,523	0,028	-0,262	-21,678	0,000*
		Parental Support	0,140	0,011	0,159	13,012	0,000*
		ESCS	0,039	0,013	0,040	3,001	0,002*
		Teachers' Attitudes	0,000	0,003	-0,002	-0,158	0,874
		Gender	0,093	0,020	0,056	4,589	0,000*
R²=.049	Second-Generation	(CONSTANT)	0,557	0,158			
		Bullying	-0,436	0,108	-0,180	-4,480	0,000*
		Parental Support	0,107	0,035	0,110	2,968	0,003*
		ESCS	0,033	0,028	0,034	1,168	0,243
		Teachers' Attitudes	0,006	0,009	0,027	0,643	0,520
		Gender	0,040	0,058	0,021	0,682	0,495
France	First-Generation	(CONSTANT)	0,478	0,139			
R²=.093		Bullying	-0,349	0,093	-0,239	-3,123	0,002*
Parental Support		0,076	0,052	0,096	1,641	0,102*	
ESCS		0,007	0,060	0,009	0,123	0,902	
Teachers' Attitudes		-0,024	0,019	-0,119	-1,347	0,179	
Gender		0,047	0,096	0,030	0,499	0,618	
R²=.121	Native	(CONSTANT)	0,545	0,036			
		Bullying	-0,429	0,024	-0,238	-17,565	0,000*
		Parental Support	0,143	0,011	0,176	13,996	0,000*
		ESCS	0,099	0,016	0,097	6,278	0,000*
		Teachers' Attitudes	-0,009	0,003	-0,042	-2,688	0,007*
		Gender	0,041	0,025	0,026	1,637	0,101
R²=.120	Second-Generation	(CONSTANT)	0,567	0,116			
		Bullying	-0,314	0,082	-0,174	-4,171	0,000*
		Parental Support	0,150	0,041	0,196	3,831	0,000*
		ESCS	0,156	0,047	0,157	3,344	0,000*
		Teachers' Attitudes	-0,013	0,008	-0,067	-1,620	0,105

		Gender	-0,039	0,062	-0,025	-0,627	0,530
Germany	First-Generation	(CONSTANT)	0,805	0,344			
R²=.043		Bullying	-0,439	0,205	-0,179	-2,137	0,033*
		Parental Support	0,014	0,092	0,013	0,153	0,878
		ESCS	0,117	0,098	0,104	1,215	0,225
		Teachers' Attitudes	-0,007	0,024	-0,024	-0,292	0,770
		Gender	0,091	0,192	0,038	0,467	0,641
	Native	(CONSTANT)	1,104	0,067			
R²=.114		Bullying	-0,694	0,053	-0,262	-15,977	0,000*
		Parental Support	0,155	0,018	0,138	8,984	0,000*
		ESCS	0,062	0,016	0,053	3,887	0,000*
		Teachers' Attitudes	-0,007	0,005	-0,024	-1,500	0,133
		Gender	0,142	0,026	0,067	5,359	0,000*
	Second-Generation	(CONSTANT)	1,307	0,151			
R²=.127		Bullying	-0,723	0,104	-0,267	-7,687	0,000*
		Parental Support	0,170	0,037	0,156	4,855	0,000*
		ESCS	0,000	0,045	0,000	0,003	0,997
		Teachers' Attitudes	-0,020	0,011	-0,072	-1,872	0,061
		Gender	0,110	0,090	0,050	1,207	0,227
Netherlands	First-Generation	(CONSTANT)	0,792	0,314			
R²=.190		Bullying	-0,593	0,183	-0,217	-3,170	0,002*
		Parental Support	0,294	0,069	0,325	4,854	0,000*
		ESCS	-0,140	0,076	-0,160	-1,850	0,067
		Teachers' Attitudes	-0,002	0,020	-0,010	-0,118	0,906
		Gender	-0,043	0,158	-0,025	-0,271	0,786
	Native	(CONSTANT)	0,763	0,057			
R²=.081		Bullying	-0,576	0,034	-0,220	-17,521	0,000*
		Parental Support	0,160	0,013	0,162	12,977	0,000*
		ESCS	0,030	0,019	0,025	1,589	0,112
		Teachers' Attitudes	0,001	0,006	0,004	0,207	0,836

R ² =.118	Second-Generation	Gender	0,072	0,027	0,041	2,657	0,007*
		(CONSTANT)	0,837	0,209			
		Bullying	-0,647	0,137	-0,184	-4,734	0,000*
		Parental Support	0,252	0,053	0,247	4,491	0,000*
		ESCS	-0,107	0,050	-0,100	-2,103	0,036*
		Teachers' Attitudes	0,004	0,013	0,019	0,360	0,719
		Gender	0,116	0,088	0,061	1,265	0,206
Table Average	First-Generation	(CONSTANT)	0,722	0,106			
R ² =.106		Bullying	-0,468	0,063	-0,219	-7,668	0,000*
		Parental Support	0,128	0,029	0,140	5,061	0,000*
		ESCS	0,020	0,030	0,011	0,371	0,710
		Teachers' Attitudes	-0,010	0,008	-0,046	-1,367	0,172
		Gender	0,041	0,061	0,023	0,765	0,444
R ² =.099	Native	(CONSTANT)	0,835	0,025			
		Bullying	-0,545	0,017	-0,234	-37,364	0,000*
		Parental Support	0,150	0,007	0,149	24,453	0,000*
		ESCS	0,066	0,008	0,055	8,636	0,000*
		Teachers' Attitudes	-0,006	0,002	-0,020	-2,762	0,005*
R ² =.092	Second-Generation	Gender	0,077	0,011	0,041	6,729	0,000*
		(CONSTANT)	0,852	0,072			
		Bullying	-0,517	0,051	-0,190	-10,611	0,000*
		Parental Support	0,171	0,019	0,168	8,637	0,000*
		ESCS	0,024	0,021	0,023	1,294	0,196
		Teachers' Attitudes	-0,004	0,005	-0,016	-0,813	0,416
		Gender	0,047	0,036	0,022	1,244	0,213

* $p < .05$, two tailed.

Appendix G

Regression analysis results with immigration interactions.

Table 13

Regression analysis results with immigration interactions on students' self-reported sense of belonging.

Country	Model	<i>b</i>	<i>SE b</i>	β	<i>t</i>	Sig
Austria R ² =.068	(CONSTANT)	1,155	0,062			
	Bullying	-0,506	0,040	-0,187	-13,242	0,000*
	Immig*Bullying	0,038	0,135	0,004	0,280	0,389
	Teachers' Attitudes	-0,014	0,005	-0,045	-2,752	0,005*
	Immig*Teachers' Att	0,019	0,016	0,023	1,213	0,225
	Parental Support	0,146	0,018	0,108	8,021	0,000*
	Immig*Parental Sup	0,030	0,052	0,008	0,576	0,564
	ESCS	0,109	0,020	0,074	5,350	0,000*
	Immig*ESCS	-0,071	0,061	-0,019	-1,157	0,247
	Gender	0,026	0,029	0,011	0,926	0,354
	Immig*Gender	-0,018	0,104	-0,003	-0,174	0,861
	Immigration Status (Dummy)	0,044	0,058	0,011	0,749	0,453
Belgium R ² =.104	(CONSTANT)	0,584	0,039			
	Bullying	-0,496	0,027	-0,248	-21,084	0,000*
	Immig*Bullying	0,060	0,110	0,008	0,521	0,602
	Teachers' Attitudes	-0,001	0,003	-0,005	-0,353	0,724
	Immig*Teachers' Att	0,008	0,010	0,011	0,807	0,419
	Parental Support	0,142	0,010	0,160	13,847	0,000*
	Immig*Parental Sup	-0,036	0,036	-0,012	-0,988	0,323
	ESCS	0,037	0,011	0,039	3,227	0,001*
	Immig*ESCS	-0,003	0,029	-0,001	-0,105	0,916
	Gender	0,106	0,019	0,062	5,719	0,000*
	Immig*Gender	-0,067	0,059	-0,012	-1,129	0,258
	Immigration Status (Dummy)	0,080	0,048	0,026	1,655	0,097
France R ² =.120	(CONSTANT)	0,543	0,035			
	Bullying	-0,421	0,022	-0,238	-18,625	0,000*

Germany		Immig*Bullying	0,110	0,085	0,018	1,266	0,205
		Teachers' Attitudes	-0,010	0,003	-0,048	-3,264	0,001*
		Immig*Teachers' Att	-0,002	0,008	-0,002	-0,188	0,850
		Parental Support	0,140	0,011	0,174	13,694	0,000*
		Immig*Parental Sup	0,006	0,043	0,002	0,148	0,882
		ESCS	0,096	0,015	0,098	6,055	0,000*
		Immig*ESCS	0,063	0,047	0,024	1,328	0,184
		Gender	0,041	0,024	0,027	1,694	0,090
		Immig*Gender	-0,083	0,067	-0,015	-1,217	0,223
		Immigration Status (Dummy)	0,096	0,047	0,034	2,007	0,044
		(CONSTANT)	1,067	0,058			
	R ² =.111	Bullying	-0,674	0,048	-0,257	-16,387	0,000*
		Immig*Bullying	-0,045	0,128	-0,006	-0,362	0,717
		Teachers' Attitudes	-0,006	0,005	-0,019	-1,212	0,225
		Immig*Teachers' Att	-0,016	0,013	-0,020	-1,262	0,207
		Parental Support	0,150	0,016	0,135	9,248	0,000*
		Immig*Parental Sup	0,020	0,046	0,006	0,425	0,670
		ESCS	0,065	0,017	0,057	3,860	0,000*
		Immig*ESCS	-0,070	0,051	-0,022	-1,379	0,167
Netherlands		Gender	0,134	0,025	0,063	5,348	0,000*
		Immig*Gender	-0,019	0,098	-0,003	-0,195	0,845
		Immigration Status (Dummy)	0,021	0,056	0,006	0,377	0,706
		(CONSTANT)	0,775	0,055			
	R ² =.086	Bullying	-0,575	0,032	-0,213	-19,615	0,000*
		Immig*Bullying	-0,078	0,146	-0,007	-0,530	0,596
		Teachers' Attitudes	-0,001	0,005	-0,002	-0,096	0,923
		Immig*Teachers' Att	0,005	0,014	0,006	0,360	0,718
		Parental Support	0,163	0,013	0,164	12,998	0,000*
		Immig*Parental Sup	0,091	0,056	0,027	1,620	0,105
		ESCS	0,023	0,018	0,020	1,256	0,209
		Immig*ESCS	-0,132	0,051	-0,042	-2,428	0,015*
		Gender	0,073	0,026	0,041	2,815	0,004*

	Immig*Gender	0,041	0,089	0,007	0,458	0,646
	Immigration Status (Dummy)	0,039	0,044	0,012	0,885	0,376
Table Average	(CONSTANT)	0,825	0,023			
R ² =.098	Bullying	-0,535	0,016	-0,229	-38,872	0,000*
	Immig*Bullying	0,017	0,055	0,003	0,526	0,598
	Teachers' Attitudes	-0,006	0,002	-0,024	-3,269	0,001*
	Immig*Teachers' Att	0,003	0,006	0,004	0,520	0,603
	Parental Support	0,148	0,006	0,148	25,446	0,000*
	Immig*Parental Sup	0,022	0,021	0,006	0,947	0,343
	ESCS	0,066	0,007	0,058	8,801	0,000*
	Immig*ESCS	-0,043	0,022	-0,012	-1,716	0,086
	Gender	0,076	0,011	0,041	6,992	0,000*
	Immig*Gender	-0,029	0,038	-0,005	-0,855	0,392
	Immigration Status (Dummy)	0,056	0,023	0,018	2,571	0,010*

* $p < .05$, two tailed.