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Does parental origin-country culture affect the gender gap in sport participation? A study of immigrant youth in Italy

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ABSTRACT

This research delves into the gender disparities observed in sport participation among immigrant groups, aiming to enhance our understanding of the underlying factors contributing to these gaps. Specifically, the study examines the impact of parental origin-country gender inequality and Muslim majority ('cultural legacy') and the adaptation to host country norms across immigrant generations ('cultural dynamics'). Utilizing nationally representative survey data encompassing 28,000 first- and second-generation immigrant youth from 32 distinct origin groups in Italy, we uncover evidence regarding the influence of parental origin-country culture on sport participation. Notably, immigrant youth with parents hailing from more conservative countries exhibit wider gender gaps in sports involvement. Additionally, we observe heightened gender differences in sport participation among youth whose parents were born and raised in Muslim-majority nations. Furthermore, our findings underscore the presence of cultural dynamics, as second-generation immigrant boys and girls display a significantly greater likelihood of engaging in sports compared to their first-generation counterparts. Notably, girls experience the most substantial gains in sport activity across generations. The results suggest that second-generation immigrant youth, particularly those with mixed heritage, assimilate the cultural practices of their host society while diminishing the impact of the parental origin country on sport participation choices.

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Introduction

Sport is one of the most popular leisure activities among youth (Makarova and Herzog 2014). Participation in sports activities has positive outcomes for health and well-being (Lubans et al. 2016), lowers depression and stress (Rodriguez-Ayllon et al. 2019), and reduces the risk of overweight and obesity (Grasdalsmoen et al. 2019). In addition, sports provide opportunities for establishing intergroup contact, thereby potentially reducing negative attitudes towards ethnic minority groups (Allport 1954; Lowe 2021;

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Makarova and Herzog 2014; Mousa 2020), and fostering the integration of minority groups in society (Buser et al. 2022; Makarova and Herzog 2014). In the context of an increasingly ethnically diverse Europe, a key theme of investigation is therefore the linkage between migration background and sport participation – particularly among youth.

Existing work in this field reports that ethnic minorities[1] in European societies generally have lower levels of sport participation than ethnic majority populations (Higgins and Dale 2013; Nielsen et al. 2013; Strandbu, Bakken, and Sletten 2020; Van Haaften 2019b), thereby contributing also to health issues among minorities (Ross et al. 2012). Field-experimental studies provide evidence that shows discrimination against ethnic minorities in amateur football clubs in Europe, when asking to join a training session (Gomez-Gonzalez, Nesseler, and Dietl 2021; Storm et al. 2023) and when trying to join a sports club (Nobis et al. 2022). Additionally, research findings indicate that the gap between ethnic minority and majority groups in sports participation is affected by social class differences, as sports participation is more common in upper- and middle-class and among children with higher educated parents (Strandbu, Bakken, and Sletten 2020). Hence, findings suggest that the lower level of sport participation among ethnic minorities is driven by discrimination and ethnic inequality.

However, at the same time, studies also consistently show that gender gaps in sport participation are particularly marked within minority groups (Higgins and Dale 2013). For example, Higgins and Dale (2013), using nationally representative survey data from England, find that regular sports participation among White males is 6 percentage points higher than among White females, whereas among Pakistanis, the gender gap is 13 percentage points. Strandbu, Bakken, and Sletten (2020), drawing on a large-scale survey from Oslo (Norway), report a 15 percentage point gender difference in participating in a sports club among the ethnic majority population. Among ethnic minorities, the gender gap is 26 percentage points. To date, there is little consensus about why gender gaps in sport participation are so pronounced in ethnic minority groups (Strandbu, Bakken, and Sletten 2020).

The aim of this paper is to improve our understanding of the marked gender gap in immigrant sports participation. Focusing on immigrant youth, we theorize that the strong underrepresentation of migrant girls (compared to migrant boys) is affected by culturally transmitted patterns of gender inequality. We elaborate on the growing literature on cultural legacies and intergenerational transmission of culture among immigrant groups (Drouhot and Nee 2019; Friberg and Jahanlu 2023; Ng 2022; Polavieja 2015; Soehl 2017) and speculate that the marked gender gap in sports is not a universal phenomenon among the ethnic minority population, but rather varies across immigrant groups. We hypothesize that children of immigrants who originate from countries with traditional cultures, as well as from dominant Muslim societies, show pronounced gender gaps in sport participation in the host society. Children of immigrants from more progressive and non-Muslim societies are hypothesized to show less pronounced gender gaps in sports. We also argue that these cultural legacies erode with increasing exposure to host-country norms and values. Drawing on the literature on assimilation and immigrant incorporation (Alba and Foner 2015b; Alba and Nee 2003; Gordon 1964), we theorize that gender gaps in sport participation among ethnic minority groups change across immigrant generations.

To test our hypotheses, we use survey data from Italy. Italy is an ideal testing case for the hypotheses developed in this study, given its large ethnic diversity. After having been an emigration country for decades, Italy witnessed massive migration inflows since the 2000s from both within and outside Europe. Between 2002 and 2022, the share of the population that is foreign born increased from 2.3% to 8.5% (ISTAT 2023). Sizable groups include Romanians (N = 1,083,771), Moroccans (420,172), Albanians (419,987) and Chinese (300,216). On 1st January 2018, the number of minors with a migration background reached 1 million (ISTAT 2020), of which the vast majority (74.7%) are second-generation immigrants.

The data in our study are from 'Integration of the Second Generation' (ISG), a large-scale, nationally-representative survey that was carried out by ISTAT in 2015 among ethnic minority and majority youth (aged 11–19) in lower- and upper-secondary schools in Italy (ISTAT 2015). We analyze sport participation among 18,142 first-generation immigrant youth (i.e. those born abroad) and 9,555 second-generation immigrant youth (i.e. born in Italy with at least one foreign-born parent). We compare gender gaps among youth from 32 origin countries, which include both Muslim and non-Muslim countries, and which range from countries with more traditional cultures like Pakistan and Nigeria to more progressive countries such as Switzerland and Denmark.

Theory and hypotheses

A multilevel framework of cultural legacies

The theoretical model we develop in this study is based on the role of cultural legacies and intergenerational transmission in immigrant groups (Greeley and McCready 1975). The *cultural legacy theory* hypothesizes that the country-of-origin culture in which immigrants have been socialized has affected their norms, values, and opinions (Polavieja 2015; Soehl 2017). Theoretically, we embed this idea in a multilevel framework and decompose the country-of-origin legacy of immigrants into two nested components: micro level ('within-origin') and macro level ('between-origin').

At the micro level, we assume that within origin countries and immigrant groups,[2] there are significant differences in people's norms, values, and attitudes. There are individuals with progressive gender norms in predominantly traditional societies, for example, and these cultural orientations may vary across demographics such as gender, age, and education. Furthermore, when it comes to immigrant groups, it is important to emphasize that they are not a random sample of the population in their country of origin (Lee 1966). It has long been recognized that, for example, immigrants are a selective group with respect to education, age, and gender (Spörlein et al. 2020). In addition, migration decisions might also be driven by personality traits, motivational orientations, and personal values (Polavieja, Fernández-Reino, and Ramos 2018). Indeed, some refugees might have escaped from their origin country precisely because their personal norms and values did not align with the mainstream culture in their society. The result of these migration selectivity processes might be that the origin-country culture is less strongly 'mirrored' in the immigrant group than in the group who did not migrate.

Despite within-origin variation in culture and migrant selectivity (i.e. micro-level variation), we argue that the mainstream culture in the country of origin plays an enduring

role, even among children of immigrants. Specifically, we posit that the mainstream culture of parents' origin country affects their children's sports behavior in the host country. We argue that two processes bring about this long-term cultural legacy.

First, we assume that *parental transmission and control* play a role. Immigrant parents pass on their norms, values, and attitudes, which then shape the internalized preferences of their children. At the same time, even when children do not internalize the norms of their parents, they may comply with the parental norms as deviations from these norms can result in social sanctions. Second, we theorize that *in-group transmission and control* is important as well. By the 'in-group' we refer to those who originate from the same origin country, such as co-ethnic friends, peers, and acquaintances. These 'third party' co-ethnics may also transmit the mainstream culture of parents' origin country, and they can also sanction behavior that is not compliant with the norms and values of that origin country culture. These third parties may act independently of migrant parents. Consequently, even in the absence of parental socialization processes, the norms and values that are dominant in parents' country of origin can be consequential, as the co-ethnic group to which children belong may also reinforce these norms.

Based on the 'between-origin' variation in culture, and the underlying processes of transmitting culture within immigrant groups, we argue that gender gaps in sport activities among immigrant groups can be driven by such cultural legacies. We now specify two key dimensions of culture that can bring about this gender gap: gender norms and religion.

Cultural legacies: gender inequality in origin country

A key aspect by which cultures differ is gender roles and the inequalities they bring in the expectations of men and women. There are pronounced differences across countries in mainstream gender norms, which range from 'traditional' to 'progressive' (Inglehart and Norris 2003). Societies with more traditional gender norms are characterized by 'tight' norms (Gelfand et al. 2011) and conservative attitudes towards gender roles. In such societies, norms prescribe for example that women should take care of household chores and take care of the children, while men are expected to participate in the labor market and earn money. More progressive countries, by contrast, are characterized by a loose culture (Gelfand et al. 2011), and more egalitarian attitudes towards gender roles.

Prior work shows that immigrant groups – including children of immigrants – which originated from more traditional origin countries are less supportive of gender equality than immigrants who were socialized in countries with more progressive gender norms (Friberg and Jahanlu 2023; Röder and Mühlau 2014). Moreover, findings indicate that such cultural orientations have behavioral consequences. Specifically, research shows that immigrants from countries with traditional gender norms have marked gender gaps in labor force participation in their destination countries (Antecol 2000; Khoudja and Fleischmann 2015; Polavieja 2015; Tibajev and Nygård 2023; Van Tubergen, Maas, and Flap 2004).

Norms about gender roles include informal rules about the appropriateness of sports for men and women (Strandbu, Bakken, and Sletten 2020). The family-oriented role for women can be a restrictive factor in becoming engaged in sport activities, as women are more strongly expected to take care of household tasks. Sports has been an activity for men in many countries, and especially so in more traditional societies (Hargreaves

2002). Traditional norms on gender and sports that prevail in parents' country of origin can still be consequential for their children, even when these younger students grow up in an environment with entirely different gender norms. Through parental socialization and peer reinforcement from co-ethnics, such cultural patterns can persist across immigrant generations. Based on the cultural legacy theory, we hypothesize that:

> **H1**. The higher the gender inequality in the country of origin of the parents, the larger the underrepresentation of immigrant girls in sport participation within that origin group in Italy (*gender roles origin country*).

Cultural legacies: muslim origin country

The second social force we examine is the dominant religion in parents' country of origin, specifically focusing on the role of Muslim religion. Research indicates that traditional gender roles are more widespread in Muslim majority countries (Inglehart and Norris 2003), and that Muslim immigrants in Europe have more conservative gender norms than other minority groups (Kogan 2018; Ng 2022). One would therefore expect to see that, due to having more conservative norms, the gender gap in sports is larger in Muslim majority origin groups.

However, we hypothesize that, over and beyond such inherited gender norms, originating from Muslim majority countries additionally affects gendered sport practices (Strandbu, Bakken, and Sletten 2020). One argument advanced in the literature for such a 'Muslim effect' is that gender segregation in daily interactions and activities is emphasized in Islamic religion (Strandbu, Bakken, and Sletten 2020) and that these norms are particularly enforced among women (Alba and Foner 2015a; Foner and Dreby 2011; Kalmijn 1998). Such segregation norms could therefore be a prohibitive force for sports participation for Muslim girls in European countries like Italy, in which such cultural practices are uncommon. Also, interactions with out-group members (e.g. in leisure time, sports, dating) are more strongly disapproved for Muslim girls than boys (Wachter and de Valk 2020), which makes it more difficult for Muslim girls to engage in sports. In addition, there is a strong concern in Muslim cultures with codes of female body modesty and coverage. Muslim minority girls who engage in sport activities with boys, particularly with respect to sports such as swimming (Dagkas, Benn, and Jawad 2011), might face disapproval and social sanctions from their parents and co-religious migrant groups. Based on these arguments, we test the following hypothesis:

> **H2**. Among immigrant youth whose parents originate from a predominantly Muslim country (compared to those whose parents originate from non-Muslim societies), there is stronger underrepresentation of girls in sport participation within that origin group in Italy (*Muslim origin country*).

Cultural dynamics: immigrant generation and assimilation

The theoretical expectations so far present a rather static view of culture, as if the impact of parents' country of origin culture remains unchanged, or that it is subject only to forces within the ethnic minority group (i.e. parents, co-ethnic peers). However, *assimilation theory* (Alba and Foner 2015b; Alba and Nee 2003; Gordon 1964) brings in culture

dynamics explicitly, arguing that immigrants' norms, values, and behavior are also affected by the mainstream society and its dominant culture. It posits that, as a gradual process that takes time, immigrant groups will become more socially, culturally, and structurally similar to the ethnic majority population (Waters and Jiménez 2005). Consequently, over time, immigrants' origin culture will play less of a role. One way such changes are expected to unfold is through intergenerational change: the second generation ('2G', i.e. those who are born in the host society with one or two foreign-born parents) are more assimilated in the host society than the first generation ('1G', i.e. those born abroad).

In the present context, this means that assimilation theory expects that the level of sport activities among immigrant boys and girls changes across immigrant generations. As in many immigrant-origin countries sport levels are lower than in European countries like Italy (Hargreaves 2002), cultural legacies could contribute to the below-level engagement in sports among the foreign born. This means that we expect to see changes between 1G and 2G immigrant youth, such that in successive immigrant generations both boys and girls increasingly become active in sports in Italy.

Several factors can bring about this generational change. One is that 1G youth have just arrived in the country, adjustment after migration takes time, and engagement in sport activities might not be highly prioritized. In addition, 1G are less proficient in the official language (Stevens 1999), which makes it more difficult for them to play team sports with ethnic majority peers and join Italian sport clubs. By contrast, 2G immigrant youth are born and raised in Italy, which means they speak the language well, have more Italian friends than their 1G peers, and have adopted more strongly the Italian cultural practices – including the mainstream norms of the ethnic majority about sport activities. Based on assimilation theory, we expect to see the following:

H3. In Italy, 2G immigrant boys and girls have higher levels of sport participation than 1G boys and girls (*assimilation*).

There are, however, also arguments that bring in more nuance with respect to generational changes. One is that there is considerable heterogeneity of family formation among 2G which may have consequences for the transmission of immigrant cultures and sport participation among 2G boys and girls. Specifically, some children who are born and raised in the host country have two foreign-born parents ('2G-foreign'), whereas other second-generation immigrant youth are born in families with one native-born parent ('2G-native'). Assimilation theory posits that mixed marriages can amplify changes across generations (Alba and Foner 2015a; Lee and Bean 2004). Children with one foreign-born parent and one native-born parent are hypothesized to integrate more rapidly in the host country than children from mono-ethnic foreign-born couples as via the native-born parent, children are more strongly exposed to the host-country culture (Alba and Nee 2003). Cultural practices that are mainstream in the host society, including sport activities, are then expected to be adopted earlier among children from such ethnically mixed couples. We derive the following testable hypothesis:

H4. In Italy, 2G-native boys and girls have higher levels of sport participation than 2G-foreign born boys and girls (*mixed marriage*).

The formulated hypotheses predict that immigrant boys and girls will be equally affected by generational change. In other words, dissimilation from the parental origin culture and

assimilation into the host-country culture is expected to work out equally for both. It is, however, also possible that the immigrant generation differently affects immigrant boys and girls. One reason to predict such a change is that the gender gap among ethnic majority youth in sport participation is significantly smaller in Italy than they are in the countries from which immigrant youth originate. One would therefore expect to see that, among 1G, the ethnic majority-minority difference in sport activity is particularly large for girls – much more so than for boys. When, in 2G, both immigrant boys and girls assimilate to the level of Italian boys and girls, the immigrant girls can make a bigger 'jump' than the boys. Based on this line of reasoning we hypothesize that:

H5. Increases in sport participation across immigrant generations in Italy (i.e. from 1G to 2G) are stronger for girls than boys (*accelerated assimilation*).

Data, measures and methods

Data

The analysis is based on the 'Integration of the Second Generation' (ISG) survey, carried out by the National Institute of Statistics in 2015 (ISTAT 2015). The sample was randomly drawn from a population of 9386 Italian schools, which were stratified by region, type of municipality, type of school (lower and upper secondary), and share of foreign students. The survey was implemented in a sample of 1427 schools, which had at least five students with a migration background. Within each school, all ethnic minority students were interviewed, and an additional sample of ethnic majority students was randomly drawn from the same classes. To all these students, an electronic questionnaire comprising six main sections (migratory history, language, school performance, relationship with classmates and family members, social interactions, and household conditions) has been administered and filled in during school hours.

We perform a two-step cleaning process in the dataset. First, we drop all respondents coming from countries for which we have less than 100 respondents of each gender (N = 4040), to have sufficiently reliable estimates per country of origin. Second, we listwise delete respondents with missingness on one or more independent variables (N = 5442). This leaves us with 58,618 valid respondents from 33 origin countries (Italy included): 30,921 students belonging to the ethnic majority, 9555 second-generation students and 18,142 first-generation students (see Online Appendix A1 for N students per origin country, and origin country characteristics).

Dependent variable

The dependent variable, *practicing sports,* is based on answers to the question 'Do you practice any sport or physical activity, such as swimming, football, dancing, aerobics, basketball, outside school hours?' Respondents could simply answer 'Yes' (1) or 'No' (0).

Independent variables

The first set of independent variables relates to the characteristics of parents' country of origin. With respect to children with one foreign-born parent and one native-born

parent (i.e. 2G-native), we use the country of birth of the foreign-born parent to construct these measures. We created an index of *gender inequality* in parents' country of origin, drawing on data from the Human Development Report (UNDP 2023). The gender inequality index (GII) is a composite metric of gender inequality using three dimensions: reproductive health, empowerment, and the labor market. The GII ranges from 0 (min) to 1 (max), and we use data from 2015. Although the GII does not directly capture the concept of (traditional-progressive) gender norms, it is strongly correlated with such norms. Among the immigrant groups in our data, origin countries with lower GII values (i.e. who are the most egalitarian) are Switzerland (0.04) and Germany (0.07). The most gender-conservative origin groups are those from Nigeria (0.68) and Egypt (0.56).

In addition to this measure of gender inequality, we also used three others for robustness checks. First, we relied on the Global Gender Gap Index (GGGI), which is proposed by the World Economic Forum (WEF 2015), and which captures gender parity across four key dimensions (economic participation and opportunity; educational attainment; health and survival; political empowerment). The scale ranges from 0 (maximum disparity) to 1 (maximum parity) and we use figures from 2015. The other two are attitudinal measures derived from the World Value Survey/European Value Study data (EVS 2022; Haerpfer et al. 2022). We created a gender inequality index, based on the percentages of people in a country who agreed or strongly agreed with these two statements: 'Men should have more right to a job than women when jobs are scarce' and 'Men make better political leaders than women do'. We used averages from the post-2000 rounds and waves. Results from models using these alternative measures of gender inequality in the origin country (presented in Online Appendix A4) lead to the same conclusions as the models we present in the main text.

We also included a measure capturing whether parents originate from a *predominantly Muslim* country. Data on the share of Muslims per country was taken from the 'Religious characteristics of states data project' (Brown and James 2019) and refers to the year 2015. We followed the definition of 'supermajority' used by the authors of this dataset and used as cut-off point 66%, i.e. those countries in which at least 66% of the population were affiliated with Islam in 2015, were coded as predominantly Muslim societies (1) and contrasted with all other countries (0). Our data includes eight Muslim majority origin groups and 24 non-Muslim groups (See Online Appendix A1 for details).

To capture *immigrant generations*, we differentiate between those born abroad (1G) and those born in Italy with at least one foreign-born parent (2G). We compare both groups to those born in Italy with two native-born parents (ethnic majority, 'natives'). To test the hypothesis on parental *intermarriage* among second-generation migrants, we differentiate between youth with one parent born in Italy and one born abroad ('2G-native') and two foreign-born parents ('2G-foreign').

Control variables

We take into account several control variables, to account for selection effects. We include a dummy variable for *school grade,* which differentiates between students in lower-secondary education (age 11–14) and those in upper-secondary education (age

15–19). To capture possible regional effects and the role of urbanization, we include five dummy variables with the ISTAT *macro-areas* (North-West, North-East, Centre, South, Islands), and a dummy variable for *living in a large municipality* (i.e. with more than 250,000 inhabitants). To account for the role of socioeconomic background and resources, we include measures of *employment mother* (yes, no), *education father* (primary or less, lower secondary, upper secondary, tertiary, don't know) *number of siblings* (0, 1, 2 or more), and *parental resources,* which is captured by the possession in the home of some specific objects such as a dishwasher, a personal computer, a car, or a motorbike. This measure ranges from 0 (they own none of them) to 8 (they own all of them). Unfortunately, the publicly released data do not contain school (or classroom) identifiers, so we cannot control for the influence of shared school environment. Summary statistics for the dependent and independent variables are presented in Online Appendix A2.

Empirical strategy

Regarding the postulated effects of gender inequality and Muslim presence in parents' country of origin on gender differences in practising sports (H1 and H2), we employ a 2-step meta-regression approach (Liefbroer and Zoutewelle-Terovan 2021). An advantage of this methodology, compared with traditional multilevel-modelling with random slopes and cross-level interactions, is that it allows for a closer inspection and better visualization of model fit and country-level outliers because it does not 'force' the random effects into a normal distribution. The approach entails two steps. First, for each immigrant group N_j, we use logistic regression models to estimate Average Marginal Effects (AMEs) for gender differences in sport participation, conditional on immigrant generation and control variables, such as parental resources and region of living (see full list of control variables above). Second, we perform a meta-regression with random effects using the *metan* command in Stata (Harbord and Higgins 2008). Specifically, we regress the AMEs of gender gaps per origin country on the two key country-of-origin variables: gender inequality and predominantly Muslim.

To test hypotheses H3, H4 and H5, we estimated logistic regression models, include control variables, and also added fixed effects to account for country-of-origin heterogeneity.

Results

Cultural legacy: parents' country of origin gender inequality and muslim religion

Figure 1 presents the gender gap in youth sport participation per migrant group in Italy, while taking control variables into account. It appears that in each of the immigrant groups, girls less often do sports than boys. The average gender gap in sport participation among immigrant youth in Italy is 0.25, i.e. boys have 25 percentage point (p.p.) higher probability to participate in sports than girls. To compare: the gender gap in sports among the native majority (i.e. those born in Italy with two parents born in Italy) is 0.12. Hence, our data on Italy replicate a well-established pattern in the literature:

gender gaps in sports are much more pronounced in ethnic minority youth than in ethnic majority youth. However, according to the theoretical model developed in this paper, we expect to see that there are strong differences between minority groups in the magnitude of the gender gap.

This is, indeed, what our study finds. There is considerable heterogeneity across migrant groups in the gender gap in sport participation, ranging from 0.07 among Russian boys and girls to 0.46 among students of Pakistani origin. Except for those coming from Russia, all migrant groups have larger gender gaps than the ethnic majority. The I^2 measure indicates that 85.9% of the total variation in the gender gap is attributed to between-country heterogeneity (rather than to sampling error), which is very high. The I^2 is regarded as 'low' between 25 and 50, 'moderate' between 50 and 75 and 'high' above 75 (Higgins et al. 2003).

According to cultural legacy theory, we expect to see that the variation in gender gaps across origin groups can be explained by country-of-origin gender inequality (H1) and Muslim religion (H2). The findings of the meta-regression are shown in Figure 2. In line with H1, we find that the gender gap in sport participation is more pronounced

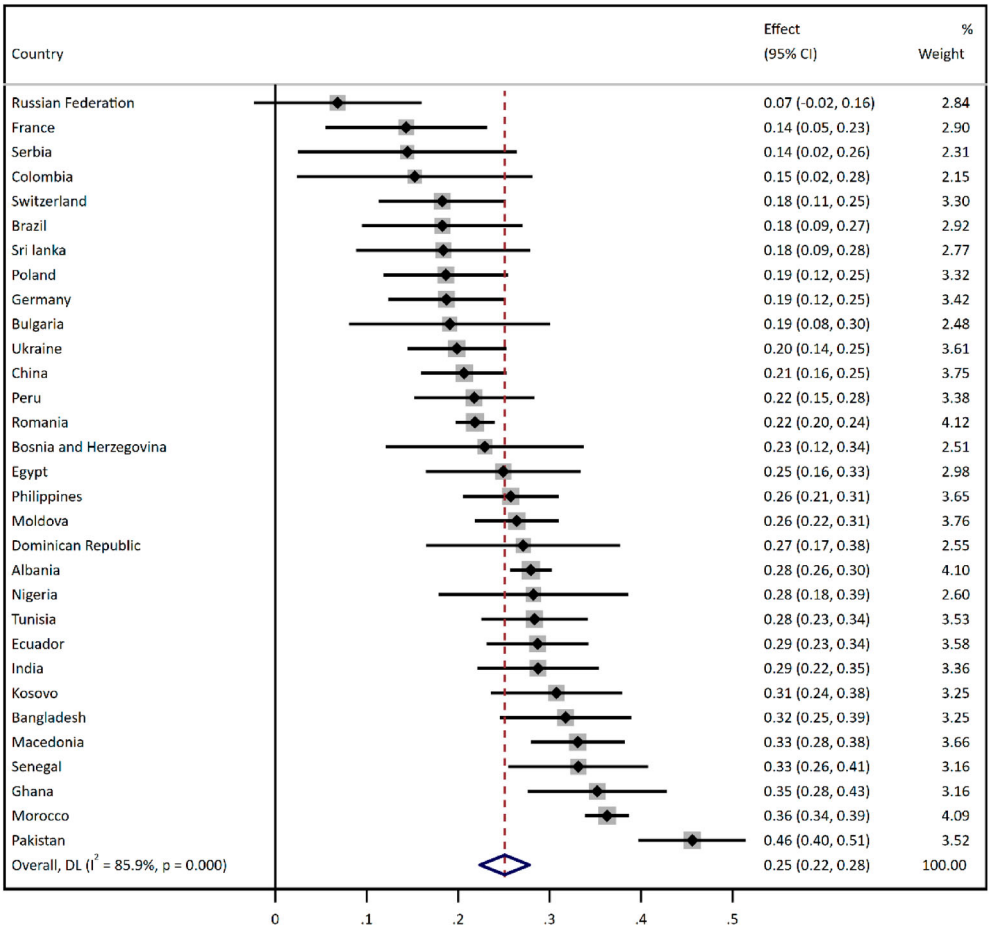

Figure 1. Meta-analysis results, gender gap in sport participation by origin group

among immigrant students whose parents come from countries with higher levels of gender inequality (b = 0.270, $p = 0.001$, two-sided test). In terms of effect size, our findings imply that moving from the most gender-equal origin country (Switzerland, GII = 0.04) to the least gender-equal origin country (Nigeria, GII = 0.68), the gender gap diminishes by 17 percentage points. This is a fairly large difference, especially when considering that these groups share the same destination environment. Although most origin groups closely fit the regression slope, some groups deviate from this general tendency. These are immigrants from Macedonia and Pakistan (which have larger gender gaps than predicted), and those with Russian roots (which have smaller gender gaps than predicted).

The findings of the meta-regression analyses also reveal that gender gaps are more pronounced among migrants from Muslim-majority countries (beta = 0.101, $p = 0.000$, two-sided test). Hence, the model predicts a difference in the gender gap between migrants coming from Muslim- and non-Muslim-majority countries of 10 p.p., which corresponds again to a quite large effect. When taking into account the gender inequality in the country of origin (which is higher in Muslim majority societies), the difference between Muslim and non-Muslim majority origin countries reduces to 7.6 p.p., yet remains statistically highly significant ($p = 0.008$). These findings support H2 and cultural legacy theory. At the same time, it is important to emphasize that there are also significant differences between Muslim countries. For example, the gender gap in sports participation is much stronger among youth whose parents originate from Pakistan and Morocco than among youth with parents from Egypt – whereas these are all dominant Muslim countries with similar levels of gender inequality.

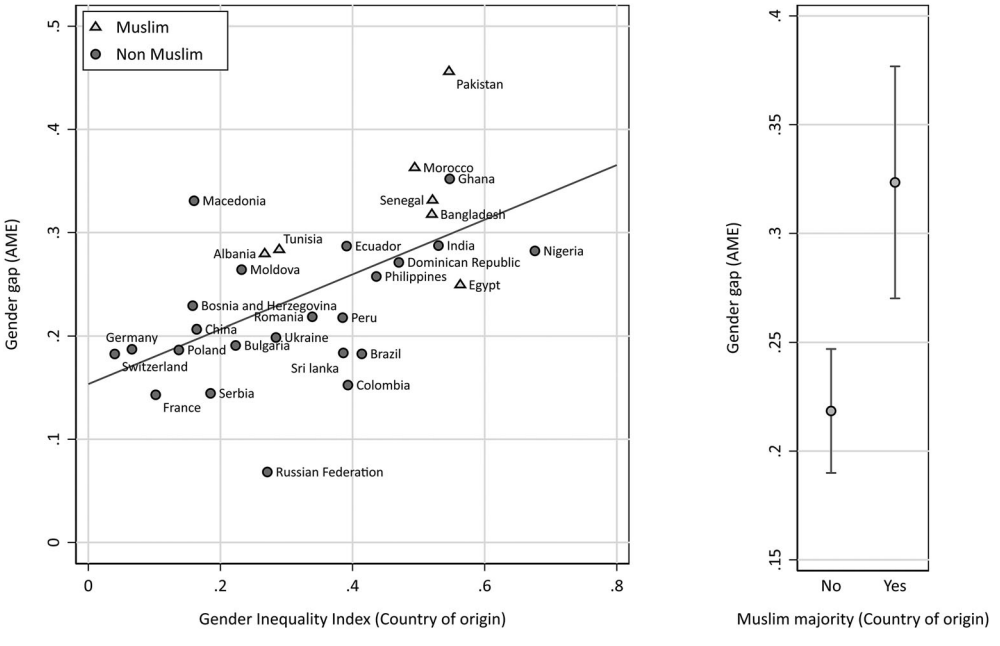

Figure 2. Meta-regression of gender gaps in sport participation on parental origin-country gender inequality and Muslim majority

Cultural dynamics: immigrant generation and assimilation

To examine cultural dynamics and processes of generational change and assimilation, we first take a descriptive outlook. Figure 3 presents the sport participation (%) for boys and girls for each migrant group and per immigrant generation. On average, we find that 2G immigrant youth more often participate in sports than their 1G counterparts. This is a pattern we observed among many origin groups. There are a few exceptions, however, particularly among boys. Boys in minority groups that showed high levels of sport participation in 1G (Senegal, France, Russia, Egypt) show little or no increase in sport participation and even some groups a decline in sports. It appears that in 1G these origin groups are around (or above) the level of sport participation of the ethnic majority youth. Overall, these descriptive findings seem to support the assimilation theory, with a stronger assimilation trend observed among females.

However, to test the hypotheses on cultural dynamics and assimilation more rigorously, and to examine the role of mixed marriage, we estimated logit models with control variables. The results for the variables of interest are presented in Table 1 (for full models see Online Appendix A3). We first verify that immigrant boys and girls, on average, engage in sports less often than the ethnic majority youth. Our results confirm this pattern (−9.9 p.p. for 2G and −14.3 p.p. for 1G, M1). According to assimilation theory, immigrant boys and girls are then predicted to increase their sports participation with successive generations. Results indeed suggest that 2G immigrant youth more often participate in sports than 1G (Table 1, M2). Specifically, 2G immigrant youth have a 4.7 p.p. higher probability to do sports than 1G, while keeping constant controls and including fixed effects for country of origin. These findings are in line with H3.

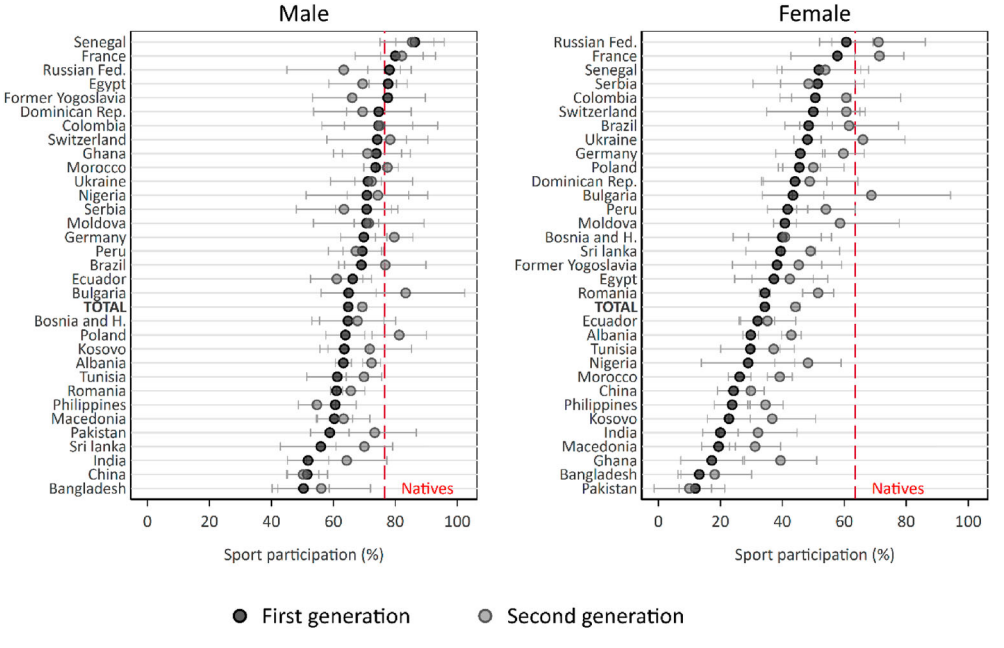

Figure 3. Sport participation by country of origin, immigrant generation, and gender

Table 1. Logistic regression models of sport participation on immigrant generation. Presented are average marginal effects.

	M1 *Full Sample*	M2 *2G + 1G*	M3 *2G*
2G (ref: Natives)	−0.099***		
1G (ref: Natives)	−0.143***		
2G (ref: 1G)		0.047***	
2G-native (ref: 2G-foreign)			0.043**
Country of origin F.E.	NO	Yes	Yes
Control variables	Yes	Yes	Yes
N	58,618	27,697	9,555

Note: ***p<0.001, **p<0.01, *p<0.05 (two-tailed tests). Control variables: gender, grade, urbanization, region, parental resources, employment mother, number of siblings, education father.

To test H4, on the role of a mixed marriage, we then separated the 2G into two groups: 2G-native (i.e. having one native-born parent, and one foreign-born parent) and 2G-foreign (i.e. having two foreign-born parents). In line with predictions, we find that 2G native boys and girls have higher levels of sport participation than 2G-foreign-born boys and girls (Table 1, M3). Specifically, the difference between the two groups is 4.3 p.p., which is comparable is size with that existing between 1G and 2G estimated from M2.

While these patterns confirm assimilation theory and reveal a gradual assimilation towards sports practices common among ethnic majority youth, we derived a hypothesis that specifically targeted gender gaps. Based on the idea that cultural legacies weaken with each immigrant generation, H5 predicted that the gender gap is smaller in 2G than in 1G. Or, even more precise: that the increase in sport participation across immigrant generations in Italy (i.e. from 1G to 2G) is stronger for girls than boys. To test this hypothesis, we included an interaction between immigrant generation and gender. The results are visualized in Figure 4 (see full model M4 in Online Appendix A3). Results show that,

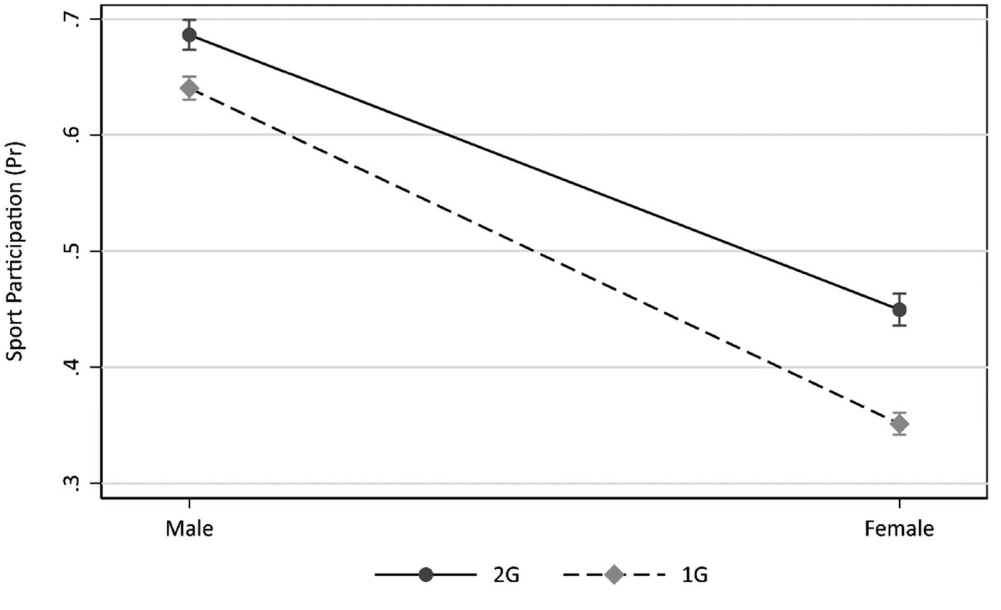

Figure 4. Predicted probability of sport participation by immigrant generation and gender.

indeed, the gains in sport activity across immigrant generations are significantly stronger in girls than boys. The difference between 2G and 1G in sports participation is 4.6 p.p. for males and more than double (9.8 p.p.) for females, which is a clear indication of their faster assimilation process (although starting from lower levels).

Conclusions

Sport has known positive health outcomes (Lubans et al. 2016) and the potential to mitigate negative intergroup relations when people of different groups play together (Mousa 2020). Sports can affect migrants' sense of belonging (Spaaij and Broerse 2019) and is one of the most popular leisure activities among youth (Makarova and Herzog 2014). Studies so far show that immigrants are underrepresented in sports and that gender differences are particularly strong among immigrant groups (Higgins and Dale 2013; Nielsen et al. 2013; Strandbu, Bakken, and Sletten 2020; Van Haaften 2019b). The aim of this study was to improve our understanding of the marked gender gap in sport participation among ethnic minority populations, examining the role of parental origin-country gender inequality and Muslim majority ('cultural legacy') and the adaptation and assimilation to the norms and practices of the host country across immigrant generations ('cultural dynamics'). We used nationally representative survey data on sport participation among 28,000 ethnic minority youth from 32 origin countries in Italy.

We find clear evidence for the role of parental origin-country culture in sport participation. Among the 32 origin groups studied, we find that those whose parents come from countries with higher gender inequalities, show larger gender gaps in sports in Italy. On top of this, we find more pronounced gender differences in sport participation in Italy among youth whose parents were born and raised in Muslim-majority countries. The evidence comes from 2-step meta-regression analyses, in which we estimated gender gaps for each origin group while considering an extensive set of potential confounders. Reassuringly, additional testing, using different measures for gender inequality in the country-of-origin led to the same conclusions. Overall, our findings add to the growing literature on cultural legacy effects on the integration trajectories of immigrant groups in Western societies (Antecol 2000; Friberg and Jahanlu 2023; Ng 2022; Polavieja 2015; Röder and Mühlau 2014; Soehl 2017; Van Tubergen, Maas, and Flap 2004). Our study, however, is the first to systematically show that parental origin-country culture affects sports participation of migrant youth.

Our findings, combined with insights from earlier work, suggest that migrant girls in some migrant groups face a double disadvantage. As a migrant, and particularly when coming from Muslim-majority countries, they are discriminated against by ethnic majority members when trying to join sport organizations (Gomez-Gonzalez, Nesseler, and Dietl 2021; Nobis et al. 2022; Storm et al. 2023). While this process of exclusion already lowers their odds of sports participation, girls from more traditional origin countries – characterized by strong gender inequalities – face an additional disadvantage. Presumably because of the gender-traditional social norms that prevail in their migrant group, which are enforced by parents, family members and other co-ethnic peers, migrant girls from these origin countries, such as Pakistan, Morocco, and Ghana, are even less likely to do sports in the host country. Given the significance of sports for the integration process and health of migrant youth, this is an important insight.

At the same time, our results provide evidence for cultural dynamics, and that the double disadvantages experienced by minority girls diminish over time. We find that both migrant boys and girls in the second generation, who are born and raised in Italy yet have at least one foreign-born parent, are significantly more likely to participate in sports than their co-ethnic peers who are born abroad (i.e. first generation). Interestingly, we find that the largest gains in sport activity across immigrant generations are made by migrant girls, who start off with low activity rates in the first generation, but make bigger jumps in the second generation than boys. When taking a closer look at the diverse group of second-generation immigrants, it appears that youth with one native-born parent more often engage in sports than second-generation immigrant youth with two foreign-born parents. Overall, these findings suggest that second-generation immigrant youth, particularly those with mixed parents, assimilate into the cultural practices of their host society while dissimilating from their parental origin country.

The present study is not short of limitations, which may also guide follow-up research. First, the survey data does not differentiate between informal sport participation and participation in clubs, an aspect that warrants further investigation. Some sports (e.g. football) can be practiced informally, while other types of sports are often done in clubs (e.g. dance, swimming, martial arts, volleyball). Club-related activities might not only imply financial restrictions, but might also be more strongly subject to processes of discrimination and exclusion (Lundkvist et al. 2020). Although it's less obvious to assume that gender gaps in minority groups would differ between informal and formal sport participation, it could be argued that, due to ethnic discrimination, it might be more difficult for migrant groups to catch up with participation in clubs.

Second, and relatedly, we have not studied patterns of segregation in sports, i.e. with whom immigrant youth are playing during sport activities. Prior work suggests that sport clubs and other civic organizations tend to be ethnically segregated (Van Haaften 2019a; Wiertz 2016), but it is unclear whether such patterns of segregation are also found among non-organized sport activities and whether cultural legacies might play a role therein. It is important to take into account that migrants themselves may also introduce informal sports into their country of resettlement. For example, Spaaij et al. (2023) show that the informal sport of sangarag, introduced by Hazara men in Australia, can be understood as a response to challenging circumstances they experience. Moreover, follow-up work could pay attention to consequences of the normative pressure in some more traditional Muslim groups for patterns of gender segregation in sports. As in some groups, there is a strong disapproval of girls playing sports with boys (Dagkas, Benn, and Jawad 2011), this may not only lower the odds of sports among girls but also sort those who do into sport activities in which they do not play together with boys.

Notwithstanding its limitations, this study makes a valuable contribution to the existing literature by demonstrating that sport participation among immigrant boys and girls are influenced by both the cultural legacy of their parental origin country and, progressively across generations, by the cultural norms and practices of the destination country.

Notes

1. In this paper, we use the concept of 'ethnic minorities' to refer to the population of first-generation immigrants (i.e., those who are born abroad) and second-generation immigrants

(i.e., those who are born in the host country and who have at least one foreign-born parent). It is used as a contrast with the ethnic majority population, i.e., those without a migration background.

2. The term 'origin country' refers to the country of birth of the parent. With 'immigrant group' we indicate the group of people who migrated from a specific country of origin (e.g., Pakistan). The concepts of 'host country population' or 'host-country culture' capture the population and culture of the ethnic majority population, in this case Italians without a migration background.

Disclosure statement

No potential conflict of interest was reported by the authors.

Data availability statement

The data underlying this article are available in UniData at https://www.unidata.unimib.it/?indagine=integration-of-the-second-generation-2015.

Code availability

The computer codes for data preparation and analyses are available at OSF: https://osf.io/83dmr/.

Ethical approval

Data has been collected by the National Statistical Office (ISTAT) in 2015. No information about ethical approval is available. In the publicly released data, certain variables have been omitted to ensure the confidentiality of the respondents. For more detailed information, please visit the official page: https://www4.istat.it/en/archive/210611.

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