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Research Article

Gendering health differences between nonmigrants and migrants by duration of stay in Italy

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Gendering health differences between nonmigrants and migrants by duration of stay in Italy

Eleonora Trappolini¹

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Abstract

BACKGROUND

Gender and migrant status are important factors for health. A common finding is that women report poorer health than men and that migrants' health converges with nonmigrants' health as the duration of stay in the host country increases. However, little is known about whether gender differences in health persist within migrant groups and whether the migrant–native health convergence differs by gender, especially in the Italian context.

OBJECTIVE

This study aims to include the gender dimension in the analysis of the health differences between Italians and migrants by duration of stay, focusing on how gender interacts with duration of stay in determining migrants' health.

METHODS

We performed multivariate logistic regression on a sample of 70,154 residents in Italy aged 20–64, using the 2013 Italian Health Survey. We modelled the association between duration of stay and three health dimensions by gender and computed predicted probabilities to show the interaction effect of gender and duration of stay.

RESULTS

We found evidence of a migrant health advantage among recent migrant men and women that becomes weaker among long-term migrants. After a long duration of stay, differences in health between migrants and nonmigrants are slightly more pronounced among women than among men.

CONTRIBUTION

This is the first study in Italy that contributes to a more comprehensive understanding of the role played by gender in determining the health differences observed. The study

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highlights the need to consider migrant status and gender in tandem when looking at adult health inequalities.

1. Introduction

Migrant women have often been neglected in traditional migration research, and female migration has long remained an understudied phenomenon (Pedraza 1991; Zlotnik 2003). Within the sparse literature that includes women in the analysis, men are generally seen as pioneers of migration and ‘breadwinners’ for their families, while women are mainly relegated to the role of passive followers of other family members (Lutz 2010; Donato and Gabaccia 2015).

However, from the 1980s onwards, a growing number of studies began to highlight different determinants of male and female migration. Gender was thus increasingly recognised as one of the principal dimensions that shapes migration pathways, biographical decisions, and constraints and opportunities in the immigration context (Cerrutti and Massey 2001). In contemporary societies, female migration is ever more related to the structure of push and pull factors in sending and receiving countries. The growing rate of female enrolment and completion in school allows an increasing number of women to emigrate in order to access a qualified job market in the destination country or work in specific niches of the labour market, such as childcare, the care of the elderly, and domestic work.

Among the determinants of this new phenomenon, an important role is played by changes in the organisation of the labour market in the destination countries and by demographic and social evolution, i.e., the progressive ageing of the population, which has contributed to the increase in demand for female work in the tertiary sector, including for services to individuals and families.

In Italy, this scenario has been particularly visible through the emergence of a new category of migrant caregivers (the so-called ‘*badanti*’). As female labour market participation increased, migrant women started replacing Italian women in their role as carers of the elderly, maintaining the Italian tradition of family care for ageing parents.

In the increasingly important debate on migration and integration policies, major attention has been given to labour market outcomes. Nevertheless, the health and mortality of immigrants have also been investigated, and sex-stratified analyses of these two dimensions have been conducted in several studies (e.g., Boulogne et al. 2012; Khlal and Guillot 2017; Oksuzyan et al. 2019; Vanthomme and Vandenheede 2019; Ichou and Wallace 2019). However, most of these studies fail to discuss their results adopting a dedicated gender perspective to explain the healthy immigrant effect. Indeed, the few

existing studies that investigate gender differences by duration of stay focus on migrants' mortality rather than on their health status (Hammar et al. 2002; Vandenheede et al. 2015; Wallace, Khlat, and Guillot 2019).

If the health advantage of newly arrived immigrants is well documented in the literature (Darmon and Khlat 2001; Kennedy et al. 2015; Riosmena, Kuhn, and Jochem 2017; Wallace, Khlat, and Guillot 2019), a growing number of studies has also emphasised the health deterioration experienced by migrants with increasing duration of stay in the host country (e.g., Khlat and Darmon 2003; Newbold 2005; Antecol and Bedard 2006; Loi and Hale 2019; Lubbers and Gijsberts 2019; Wallace, Khlat, and Guillot 2019). This pattern has been explained mainly by the negative effect that the host society and the new living conditions may have on immigrants in terms of health behaviours and access to health services (Jasso et al. 2004; Beiser 2005).

There is no lack of evidence for the fact that migrant health is context-dependent (Warner and Brown 2011). To our knowledge, there are no studies that approach this issue in recent immigration countries. The existing studies have been carried out in countries with a long migratory history. They find generally worse health among women, although the results vary with ethnicity (Cooper 2002; Almeida-Filho et al. 2004; Read and Gorman 2006; Gerritsen and Devillé 2009); they also suggest that the health trajectories of immigrants might differ for men and women (Lopez-Gonzales, Aravena, and Hummer 2005; Gorman, Read, and Krueger 2010; Warner and Brown 2011; Read and Reynolds 2012; Khlat and Guillot 2017).

In the past few decades, Italy has experienced a rapid increase in migrant numbers, reaching more than five million in 2015. Despite the recent increase in the foreign population, knowledge of immigrants' health conditions is still limited. This has sparked a growing interest in the topic among researchers.

This work aims to include the gender dimension in the analysis of health disparities between Italians and migrants by duration of stay. First, we examine the persistence of gender health differences within the migrant population; second, we analyse whether, compared to recently arrived migrants, those with longer duration of stay in Italy are more likely to report a similar level of health to Italians; and, finally, we verify whether this pattern differs by gender.

2. Literature review

2.1 Gender differences in self-rated health, functional limitations, and chronic illnesses

Gender and migrant status are important and significant factors for health. In the native population, a common finding is that women tend to report higher morbidity and poorer health than men (Arber and Ginn 1993; Idler 2003; Crimmins, Kim, and Solé-Auró 2011; Revenson and Marín-Chollom 2015; Oksuzyan et al. 2015; Oksuzyan, Gumà, and Doblhammer 2018). Explanations of health differences between men and women are related not only to physiological, biological, and genetic factors but also to social factors (Artazcoz et al. 2004; Crawford and Unger 2004).

As regards gender differences in health within migrant groups, the few existing studies show generally worse health among women in terms of self-rated health (hereafter SRH) (Cooper 2002; Gerritsen and Devillé 2009; Wengler 2011; Ichou and Wallace 2019), functional limitations (Read and Gorman 2006; Ichou and Wallace 2019), chronic conditions (Gerritsen and Devillé 2009; Ichou and Wallace 2019), and mental health (Almeida-Filho et al. 2004). These studies also highlight that the magnitude of gender differences varies by ethnicity (Cooper 2002; Almeida-Filho et al. 2004; Song et al. 2006; Gerritsen and Devillé 2009; Read and Reynolds 2012; Ichou and Wallace 2019). Among migrants, differences in health between men and women may be linked to the characteristics of the migrant population itself. As argued by Llácer et al. (2007), explaining gender inequalities involves the recognition of different male and female experiences and behaviours and different actions according to gender. This is also true of the migrant population, where health differences between genders are the result of the different roles, tasks, and responsibilities that men and women have in terms of social structure, which in turn can affect and influence health risks (Rohlf, Borrell, and Fonseca 2000). Moreover, these disparities reflect gender differences in education and living and working conditions, as well as in health status and health behaviours (Kanaiaupuni 2000; Abraído-Lanza, Chao, and Flórez 2005).

When women enter destination countries for family reunification, as was the case in the past for both North America and Western Europe (Antecol and Bedard 2006; Gorman, Read, and Krueger 2010; Khlal and Guillot 2017), the selection hypothesis based on health might be weaker among women than among men (Read and Reynolds 2012). This may result in greater gendered health disparities within the migrant population. Nevertheless, today an increasing number of women migrate for reasons that are similar to men's; that is, to improve their quality of life and that of their families. This makes migrant women ever more selected in terms of health.

2.2 The loss of the migrant health advantage

Several studies show that migrants are more likely to report better health than the native population upon arrival in the host country (Darmon and Khlat 2001; Newbold 2005; Kennedy et al. 2015; Riosmena, Kuhn, and Jochem 2017; Lubbers and Gijsberts 2019; Wallace, Khlat, and Guillot 2019). Explanations of this pattern lie in the selection hypotheses (Lee 1966; McDonald and Kennedy 2004; Dornnich et al. 2012; Norredam et al. 2012), cultural factors (Hill et al. 2012; Lee et al. 2013), and migrants' healthy behaviours (Razum, Zeeb, and Rohrmann 2000; Ullmann, Goldman, and Massey 2011).

In high-income settings, substantial evidence of a mortality advantage in international migrants relative to the general population has also been observed across geographical regions of origin and most causes of death (for a systematic review and meta-analysis see Aldridge et al. 2018).

Nonetheless, in the European context, Nielsen and Krasnik (2010) find that most migrants and ethnic minority groups in Sweden and the United Kingdom have worse SRH than the majority population, even after controlling for age, gender, and socioeconomic status. Similarly, Moullan and Jusot (2014) compare the healthy immigrant effect in different European countries and find a north–south health gradient. They argue that in countries with a long migratory past (e.g., France, Belgium, and Sweden), migrants are more likely to have worse health than natives, while the opposite is true in recent immigration countries (e.g., Italy, Greece, Spain, and Portugal). However, these results might be an artefact of examining a heterogeneous group of recent and long-term migrants, as several of these European studies do not analyse migrants' health according to duration of stay. Indeed, some authors observe that migrant health deteriorates and converges with the health of natives the longer they stay in the host country (e.g., Khlat and Darmon 2003; Newbold 2005; Antecol and Bedard 2006; Wallace, Khlat, and Guillot 2019). In the literature, three models have been proposed to explain the major causes that drive the loss of the migrant health advantage and lead to migrant–native health convergence: the acculturation and negative assimilation model, the resettlement stress model, and the interaction model (Beiser 2005). The first model suggests that the deterioration of migrant health is due to exposure to new physical, social, and cultural influences in the new country. The second suggests that poor living and working conditions, such as unemployment, disadvantageous socioeconomic conditions, and a lack of social networks and access to health services can negatively influence the health of migrants. Finally, the interaction model suggests that pre-migration and post-migration stress and the strategies and behaviours adopted by migrants, families, and society to deal with the migration process can negatively affect migrants' health. It should be noted that none of these three models takes into account gender differences.

2.3 Gender differences in the health convergence pattern

Both migration background and gender are recognised as fundamental determinants of the opportunity structure, access to resources, and health-damaging exposures throughout life (WHO 2010). They also determine age trajectories of disability among older adults (Mullings and Schulz 2006; Borrell et al. 2008).

The added value of integrating a gender perspective to understand migrant health in epidemiological studies has been emphasised by Llacer et al. (2007). The contrast between the relative advantage enjoyed by male migrants and the disadvantage observed in female migrants has been recently stressed in France, Canada, and the United States (Lopez-Gonzales, Aravena, and Hummer 2005; Antecol and Bedard 2006; Warner and Brown 2011; Hamel and Moisy 2012, 2015; Vang et al. 2017; Khlat and Guillot 2017; Ichou and Wallace 2019).

In France, where a longer duration of stay has been associated with worse SRH (Khlat and Guillot 2017), several authors have detected gender differences. Hamel and Moisy (2012, 2015) find that male migrants who arrived within the past 5 years have significantly better health than native men, but this is not true for women.

Khlat and Guillot (2017) argue that migrant women traditionally arrive for family reunification rather than for work; they are thus less subjected to health selection of the 'healthy worker effect' type. Again, according to the authors, in the French context, migrant women originating from North Africa show insufficient recourse to prevention and screening for diabetes, metabolic diseases, and overweight and perinatal problems. By contrast, immigrant men show a lower prevalence of alcohol consumption relative to native men. Male migrants exhibit a comparatively high level of smoking, which is not found among female migrants.

An interesting insight into gender differences in the health convergence pattern in the French context is offered by Ichou and Wallace (2019) in their recent work on the role of educational selectivity in the good health of migrants. The authors use logistic regression to examine differences in SRH, chronic illnesses, and health limitations between migrants and nonmigrants, stratifying their sample by duration of stay and gender. They find clear evidence of a large healthy immigrant effect (HIE) for male migrants, which decreases with duration of stay, while the evidence among females is substantially lower: there is even marginal evidence of a slight disadvantage in SRH. Furthermore, adjusting for educational selectivity largely explains the (small) health advantage among women, while the percentage of HIE explained by educational selectivity is far lower among men.

In the Canadian context, Vang et al. (2017) systematically review the literature on the HIE. Concerning migrant women of childbearing age, they find that the protective effect of having been born in a foreign country varies by the type of pregnancy outcome examined, as well as the length of time spent in the receiving country. They thus conclude

that gender is important in the HIE for migrant women of childbearing age, who are particularly vulnerable to poor mental health compared to their Canadian-born counterparts.

In the United States, the studies of Lopez-Gonzales, Aravena, and Hummer (2005) and Antecol and Bedard (2006) suggest a different health convergence pattern for men and women. Analysing the association between acculturation and immigrant smoking and alcohol consumption, Lopez-Gonzales, Aravena, and Hummer (2005) find a migrant–native health convergence with longer stays only among migrant women, while length of stay does not seem to affect migrant men’s health behaviours. Similarly, in their study of the convergence to unhealthy American BMI levels, Antecol and Bedard (2006) observe gender differences in the migrant–native health convergence associated with longer duration of stay. They find that migrant women tend to converge to an unhealthy American BMI within ten years, while migrant men lose only a third of their advantage within fifteen years.

More recently, Warner and Brown (2011) use data from the US Health and Retirement Study to examine how race/ethnicity and gender jointly and simultaneously determine age trajectories of disability among older adults. They find the lowest disability levels at baseline for white men, intermediate disability levels for white women and racial/ethnic minority men, and the highest disability levels for Hispanic women. These health disparities remain stable with age, except among black women, who experience a trajectory of accelerated disablement.

2.4 The Italian context

The foreign population in Italy grew steadily during the 1990s and early 2000s, attracted by increasing demand for low-skilled workers in sectors such as domestic and personal care services, agriculture, retail and wholesale trade, hotels and catering, and construction (Reyneri 2010). In the early 2000s the number of permitted entries was based on annual quotas that continued to increase until the outbreak of the financial crisis in 2008, when they started to be reduced considerably (Caponio and Cappiali 2018). The period 2007–2008 also marked the point when Romanian nationals became the largest immigrant group in the country, growing from 342,000 to 625,000 individuals, 53% of whom are women. In 2008, Romanians accounted for 18% of the total foreign population, while in 2019 the figure was 23% (Istat 2020).

Resident permits indicate that most migrant women arrive for family reunification (Istat 2020). Nevertheless, it should be stressed that citizens from new EU-member Eastern European countries do not need a residence permit to enter the Italian labour market. This is the case for Romanian women, who are largely employed in the care and

domestic sectors and are likely to become the main income providers for their families in Romania (Boccagni and Ambrosini 2012; Del Boca and Venturini 2016).

Given this premise, there are two aspects of the Italian migratory context that may influence the health of migrant women in opposite directions: on the one hand, large gender disparities in health may be expected for those communities in which women entered mainly for family reunification, while on the other the migration of breadwinner women may result in stronger selection and weaker gender disparities for selected migrant groups.

In Italy, one of the first studies of migrants' health is that of Loi (2016). Using data from the Italian National Institute of Statistics (Istat), the author analysed migrant health in 2012. She found that migrants were more likely to report better health and lower chronic illnesses than Italians.

Subsequent studies confirm that migrants generally show better health than natives, with some changes over time (Caselli, Loi, and Strozza 2017; Petrelli et al. 2017; Loi et al. 2018; Campostrini et al. 2019; Loi and Hale 2019). They also exhibit lower mortality rates (Fedeli et al. 2015; Pacelli et al. 2016) and are less likely to report functional limitations and chronic illnesses (Caselli, Loi, and Strozza 2017). Moreover, a recent study shows that hospital emergency department use varies according to migrants' country of origin (Trappolini et al. 2020). Finally, studies of hospitalisation rates report mixed results (Cacciani et al. 2011; Casadei et al. 2016).

In their work on migration, health, and mortality in Italy, Caselli, Loi, and Strozza (2017) argue that the health status of foreigners seems to be better than that of the Italian population and that this advantage decreases over time. Recently, Loi and Hale (2019) have examined how material deprivation interacts with duration of stay to affect migrants' health convergence, suggesting that the health of immigrants living in conditions of material deprivation is more similar to the natives' health at shorter durations of stay than that of their nondeprived counterparts. Another study of the association between migrants' health by country of origin and duration of stay in Italy is that of Campostrini et al. (2019), who conclude that many migrant subgroups arrive with healthier behaviours than those of their adopted country. However, because they are likely to have a less favourable social position in the destination country, their situation might change towards less healthy behaviours. Nonetheless, the authors standardised only by age and gender and did not specifically address differences between men and women.

Since the migration phenomenon is relatively recent in Italy, little is known about gender differences in health within migrant subgroups. The few existing studies that looked at this issue generally highlight differences in hospitalisation rates (De Waure et al. 2015; Cacciani et al. 2019) and rarely in mortality (Pacelli et al. 2016). Cacciani et al. (2019) find that migrant men and women are mostly hospitalised for traumas and

reproductive health reasons respectively, while Pacelli et al. (2016) highlight the vulnerability of sub-Saharan men and women in terms of mortality risk.

As far as we know, gender differences in migrants' health by duration of stay have never been analysed in the Italian context.

3. Research hypotheses

In light of the specificities of immigration in Italy and drawing on the above literature, we formulated three research hypotheses to frame our research:

Hypothesis 1 (H1): In the Italian population, women are more likely to report worse health than men. Gender differences persist among migrants regardless of the health outcome analysed.

Hypothesis 2 (H2): Recently arrived migrants of both genders are healthier than Italians, while the levels of health of long-term migrant men and women are similar to those of Italians because of their longer duration of stay in the host country.

Hypothesis 3 (H3): The time spent in the destination country affects the health of migrant men and women differently due to the different demographic and social processes that influence them. The size of the gender difference in the migrant population is smaller among recently arrived migrants than among long-term migrants due to changes in the size and composition of migration flows, which in turn can influence the migrant selection process.

4. Data and methods

4.1 Data

We used the Italian Health Survey, Indagine multiscopo sulle famiglie - Condizioni di salute e ricorso ai servizi sanitari (IHS), carried out by Istat and released in 2013.³ The HIS offers a wide range of information on the accessibility of health services and the health status of the population in Italy, including the foreign component. Based on a

³ The first iteration of the survey dates back to 1993. From 2005, the survey includes information on migrants' health, allowing comparisons with the native population. However, only the 2013 edition contains information regarding migrants' duration of stay.

sample of about 60,000 families and a total of almost 120,000 individuals, the survey allows making comparisons between foreign citizens and Italians.

The data are representative of people residing in Italy who are older than 15 and living in private dwellings. Therefore, the survey only contains information about regular migrants and excludes both the undocumented and those who are regularly settled in the country but have not yet formalised their residence.⁴ The survey provides information on age, sex, citizenship according to origin area, length of residence in Italy (only for foreign nationals), education, and working status, as well as information on health and health service use.

We excluded from the analysis people under the age of 20 because, according to the literature, health is conceptualised during childhood and adolescence, making SRH at younger ages an unstable construct that can be influenced by parents (Wade and Vingils 1999; Breidablik, Meland, and Lydersen 2009). We also excluded people older than 64 since the migrant population is younger than the Italian one. Our final sample size was $n = 70,154$ individuals aged 20–64.

4.1.1 Health outcomes

We analysed three dependent variables: SRH, functional limitations, and chronic illnesses. SRH was derived from the question, ‘How is your health in general?’ There were five possible answers: ‘very good,’ ‘good,’ ‘fair,’ ‘bad,’ ‘very bad.’ For analytical purposes, we used a dichotomous variable, grouping the answers into two categories: 0 = good health (very good, good) and 1 = poor health (fair, bad, very bad). The information about functional limitations was derived from the question: ‘For at least the past six months, to what extent have you been limited in the activities people usually do because of a health problem?’ There were three possible answers to this question: ‘severely limited,’ ‘limited but not severely,’ ‘not at all limited.’ We treated functional limitations as a dichotomous variable: 0 = not at all limited and 1 = limited. Finally, concerning chronic illnesses, respondents were asked: ‘Do you have any long-standing illness or [long-standing] health problem?’ The possible answers were ‘yes’ and ‘no.’

We studied multiple health outcomes to better analyse migrants’ health profiles and capture different health aspects. SRH should capture the general perceptions of individuals’ health in the short term, while functional limitations and chronic illnesses should capture long-term health problems. Furthermore, it is also important to consider the nature of these health outcomes. SRH is one of the most commonly used measures to evaluate a population’s health and is also considered a good predictor of subsequent

⁴ For further details see <https://www.istat.it/it/archivio/7740> and <http://siqual.istat.it/SIQual/visualizza.do?id=0071201>.

health outcomes such as morbidity, the use of healthcare services, and mortality (e.g., Idler and Benyamini 1997; Jylhä 2009). However, evidence suggests that ethnic groups differ in their self-perceptions of health, their conceptualisation of what constitutes health, and the determinants of their SRH (Bombak and Bruce 2012). Thus, SRH may suffer from individual reporting heterogeneity (Bago d’Uva, O’Donnell, and Van Doorslaer 2008) and its comparability between native and immigrant populations may be questionable (Jürges, Avendano, and Mackenbach 2008). Initial investigations show that the predictive capacity of SRH is comparable for Latinos, African Americans, and Whites (Johnson and Wolinsky 1994; Finch et al. 2002). Furthermore, a study by Chandola and Jenkinson (2000) also validates its use by showing that across ethnic groups a poorer SRH is constantly associated with higher disease prevalence. However, the validity of SRH across gender, race, and ethnicity is still being debated. Some authors argue that caution is necessary when using SRH to examine ethnic health differences because health perception differs according to health norms and individual aspirations, which relate to culture. Migrants may thus rank their health differently (Assari, Lankarani, and Burgard 2016; Woo and Zajacova 2017; Cobb and Assari 2020). To limit this problem, we decided to also analyse functional limitations and chronic illnesses, which can be considered more objective measures for evaluating health differences between Italians and migrants.

Among the three health outcomes analysed there are moderately strong, positive pairwise correlations, varying between .47 and .55. This suggests that the three indicators belong to the same sphere of health. Nevertheless, there is room for investigating them separately.

4.1.2 Main predictor and control variables

We considered ‘migrants’ to be individuals without Italian citizenship. The main predictor variables were duration of stay and gender. Duration of stay was measured by the variable ‘years of residence in Italy’, which had five possible answers: 0–3, 4–6, 7–9, 10–12, and 12+ years. Based on migrants’ growth trends and the composition of migration flows (Caponio and Cappiali 2018; Istat 2020), we classified duration of stay into two categories, distinguishing between long-term migrants, i.e., those who arrived in Italy at least 7 years before the survey interview (before 2007, $n = 3,444$), and recent migrants, i.e., those who arrived less than 7 years before the survey interview ($n = 1,573$).

In all the analyses, we controlled our estimates for demographic, socioeconomic, and geographical factors. More precisely, the set of variables includes age as a continuous variable, marital status (0 = married, 1 = divorced, 2 = single, 3 = widow), educational level (0 = no education and primary, 1 = lower secondary, 2 = upper secondary, 3 = tertiary), employment status (0 = employed, 1 = homemaker, 2 = inactive,

3 = unemployed) and residence area (0 = North, 1 = Centre, 2 = South). Only among migrants, we also controlled for the area of origin (0 = Africa, 1 = Asia, 2 = America, 3 = European Union, 4 = non-European countries) to account for the heterogeneity of migration flows.

Before proceeding, we should point out a few limitations of the study. First, the reason for migrating, which is an important piece of information because it can influence the migration selection process, is not available. Second, the survey provides information on individuals' citizenship rather than their place of birth. Two considerations must be made regarding this issue. On one hand, the migration phenomenon is relatively recent in Italy: the main increase happened at the end of the 1990s and the beginning of the 2000s. On the other hand, Italy's citizenship policy (Law n. 91/1992) is considered to be among the most restrictive in Europe, requiring 10 years of residence for naturalisation (Paparusso 2019). Furthermore, the bureaucratic process may take up to 3 years, which means that the naturalisation rate reflects what happened 10–13 years previously. Before the year of the survey (2013) the naturalisation rate in Italy was negligible (0.9% in 2001 and 2.2% in 2013; Ismu 2015). On this basis, we believe that distinguishing between Italians and migrants according to citizenship does not affect our results.

4.2 Methods

We performed multivariate logistic regressions to model the association between SRH/functional limitations/chronic illnesses (the outcomes), gender, and duration of stay, controlling for a set of sociodemographic characteristics.

Models 1a (SRH), 1b (functional limitations), and 1c (chronic illnesses) refer to the first hypothesis and show the odds ratios (hereafter ORs) for gender differences in the three health outcomes analysed, separately for Italians and migrants (Table 1). In all the models, we adjusted for age, civil status, education, employment status, and area of residence. Moreover, in the models for the migrant population we also adjusted for migrants' area of origin to take into account the composition of migration flows. Models 2a–c (for men) and 2d–f (for women) refer to the second hypothesis and show the ORs for SRH, functional limitations, and chronic illnesses by migrants' duration of stay relative to the Italian population's (Figure 2), adjusting for the aforementioned covariates. Finally, models 3a–c relate to the third hypothesis: pooling men and women together, we examined the interaction between gender and duration of stay, taking into account all the controls (Figure 3). For the third hypothesis, we computed the predicted probabilities,

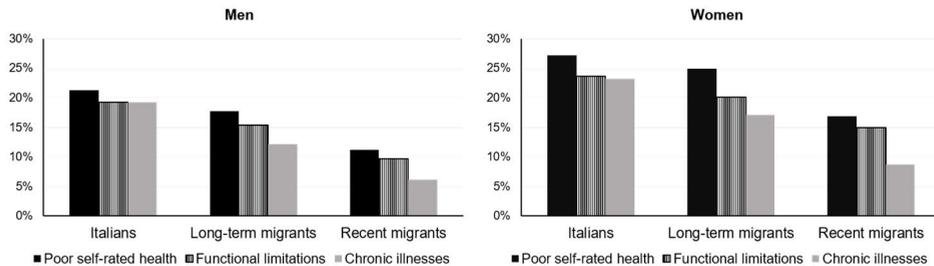
with 95% confidence intervals⁵ for pairwise comparisons, both to avoid the problem of the incomparability of the coefficients obtained by different logistic regression models and to improve the readability of the interaction effect between gender and duration of stay (Allison 1999).

In all the models we used robust standard errors clustered by household. The full models are shown in the Appendix.

5. Results

The sample was composed of 70,154 individuals aged 20–64 and was nationally representative. Sample weights were used to compute descriptive statistics. Migrants represented 9.1% of the total population. Among them, long-term migrants (those who had arrived in Italy more than 7 years before 2013) represented 69.6%. Women represented 50.5% of the total population, 50.1% among Italians and 53.9% among migrants. Migrants were younger than natives, with 39.3% vs. 26.5% of individuals aged 20–34 and 16.7% vs. 35.1% aged 50–64. Overall, women rated their health as fair or poor more frequently than men. Indeed, in both the Italian population and the long-term and recent migrant populations, a larger share of women than men had poor SRH, functional limitations, and chronic illnesses (Figure 1). Table A-1 in the Appendix shows detailed descriptive statistics for the sample and the three health outcome measures.

Figure 1: Share of men and women reporting poor SRH, functional limitations, and chronic illnesses, by migrant status



Note: Frequencies are weighted.

Source: Authors' elaboration on IHS data.

⁵ Confidence intervals are centred on the predictions and have lengths equal to $2 \times 1.39 \times$ standard errors. This is necessary to obtain an average level of 5% for Type I errors in pairwise comparisons of a group of means (Goldstein and Healy 1995).

Table 1 shows the ORs (for ease of interpretation) for gender differences in self-rated health, functional limitations, and chronic illnesses for Italians and migrants separately: this is net of age, civil status, education, employment status, and area of residence (full models are shown in Table A-2 in the Appendix). For the migrant population, the ORs are also adjusted for migrants' area of origin and duration of stay. We found that gender differences in health persist among migrants, as they do among Italians. On average, migrant women were far less likely than migrant men to score well in the three health outcomes analysed. Unsurprisingly, for both populations, the probability of declaring poor SRH, functional limitations, and chronic illnesses is lower if individuals are married and employed, while it is higher if they have no education or primary education. Among migrants the recently arrived are less likely to report poor SRH, functional limitations, and chronic illnesses than long-term migrants.

Table 1: Adjusted ORs for gender differences, by migrant status, in poor self-rated health, functional limitations, and chronic illnesses

	Italians	p-value	Migrants	p-value
Self-rated health ^a				
Women	1.41	0.000	1.44	0.000
Functional limitations				
Women	1.29	0.000	1.35	0.002
Chronic illnesses				
Women	1.27	0.000	1.37	0.003
<i>Observations (unweighted)</i>	<i>65,137</i>		<i>5,017</i>	

Notes: Models are weighted and adjusted for age, civil status, education, employment status, and area of residence. Migrants are also adjusted for area of origin and duration of stay.

^a ORs of declaring poor SRH.

Reference category: Men.

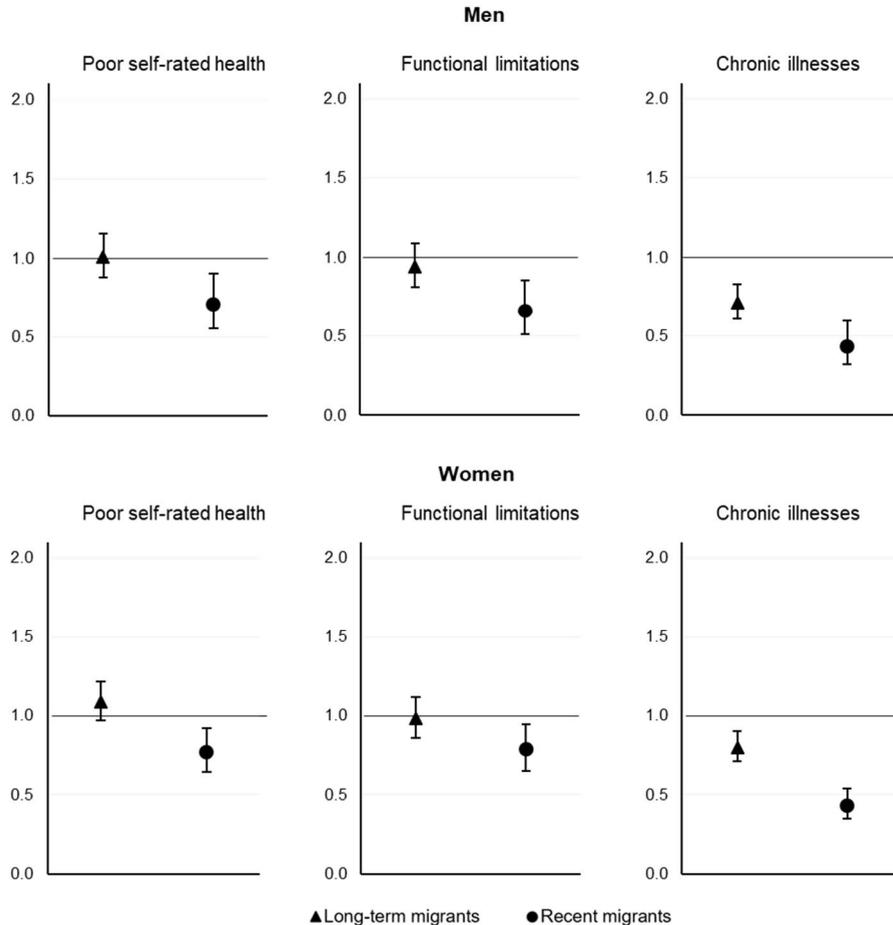
Source: Authors' elaboration on IHS data.

Regarding our second hypothesis, Figure 2 displays the ORs of the three health outcomes for migrants compared to Italians, stratified by gender and duration of stay. After accounting for age, civil status, education, employment status, and area of residence, the ORs of long-term migrants approach 1. This indicates that the migrant health advantage over Italians in the three outcomes was narrower among migrants who had arrived in Italy more than 7 years before the interview, for both genders.

Table A-3 in the Appendix reports detailed results on ORs and p-values, for both men and women. These data show that the health measures become more similar for migrants and Italians as migrants' duration of stay lengthens. Indeed, recent migrants displayed lower OR values for all the health outcomes, showing that they were healthier

than the reference group. Conversely, long-term migrants usually showed a level of SRH and functional limitations similar to that of nonmigrants, but not for chronic illnesses, where both migrant men and women were less likely to be affected than Italians.

Figure 2: Adjusted ORs [90% CIs] for migrants' poor self-rated health, functional limitations, and chronic illnesses, stratified by gender and duration of stay, compared to Italians



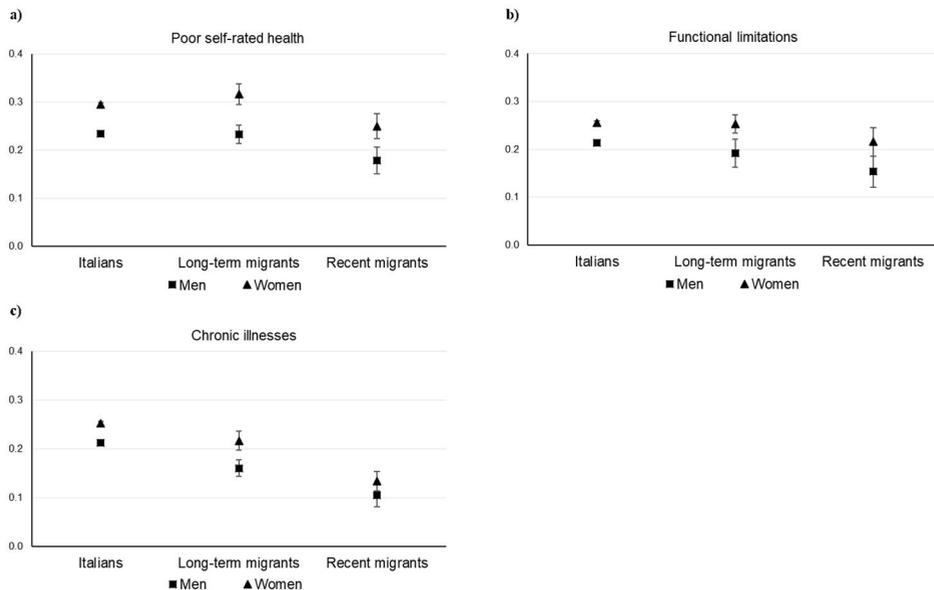
Notes: Models are weighted and adjusted for age, civil status, education, employment status, and area of residence. Reference category: Italians.
Source: Authors' elaboration on IHS data.

To examine our third hypothesis concerning the different health status of migrant men and women following increased time spent in the destination country, we estimated the interaction between gender and duration of stay. We computed the predicted probabilities for the three health outcomes, controlling for age, marital status, education, employment status, and area of residence.

The predicted probabilities suggest three main findings:

- 1) Women always fare worse than men. However, among recently arrived migrants the size of the gender difference is smaller than that detected among long-term migrants (for SRH) or nonexistent (for functional limitations and chronic illnesses) (Figure 3 a, b, c).
- 2) With increased duration of stay, migrant men and women show similar levels of health to Italian men and women, other than for chronic illnesses (Figure 3 a, b, c, see also Table A-4 in the Appendix).
- 3) In all the health outcomes analysed, long-term migrants (men and women alike) display poorer health than recent migrant men and women (Figure 3 a, b, c). However, looking at the size of the health disparity between the two groups of migrants, the differences in SRH and chronic illnesses are slightly more pronounced among women than among men (Table A-4 in the Appendix).

Figure 3: Predicted probabilities of poor self-rated health, functional limitations, and chronic illnesses, by gender and duration of stay



Notes: Results from logistic regressions. Models are weighted and adjusted for age, civil status, education, working conditions, and area of residence. Interaction term with gender and duration of stay added. 83.5% CI.
Source: Authors' elaboration on IHS data.

6. Robustness checks

First, we tested different thresholds to classify migrants (recent and long-term migrants) based on the duration of stay, namely 3 and 9 years. For 3 years' duration of stay, the sample of recent migrants was too small and the estimates were imprecise; for 9 years, the patterns of association between SRH/functional limitations/chronic illnesses (the outcomes), gender, and duration of stay remained very similar to those presented in the text. Second, when analysing or comparing health patterns by duration of stay, it is important to consider that changes in health status could be attributed to the older age of the migrants with longer duration of stay (health differences tend to decline with age) and that this issue is not necessarily overcome by controlling for age (see Houweling et al. 2007 and Eikemo, Skalická, and Avendano 2009 for further details). We fitted models dividing the population into individuals under and over 45 years of age to verify whether

the health patterns observed could be associated with the duration of stay, and found a positive result.

7. Discussion and conclusion

This study calls attention to the lack of empirical evidence on the link between gender, migration, and health at the national level in Italy. Using the 2013 Italian Health Survey, the study investigates how SRH, functional limitations, and chronic illnesses differ between men and women, between and within migrant groups and by duration of stay.

We tested three hypotheses. In the first we assumed that, similarly to the Italian population, gender differences in health exist among the migrant population for the three outcomes in question. The analysis confirms our expectation: overall, the health status of women is worse than that of men among both Italians and migrants for the three health measures. This finding confirms other international studies (Cooper 2002; Almeida-Filho et al. 2004; Read and Gorman 2006; Song et al. 2006; Gerritsen and Devillé 2009; Read and Reynolds 2012; Wallace and Darlington-Pollock 2020) and can be explained by physiological, biological, genetic, and social factors (Waldron and Johnston 1976; Benyamini, Leventhal, and Leventhal 2000; Rohlfs, Borrell, and Fonseca 2000; Idler 2003; Denton, Prus, and Walters 2004; Oksuzyan et al. 2015, Oksuzyan, Gumà, and Doblhammer 2018).

In the second hypothesis, we expected recent migrants (both men and women) to be healthier than Italian men and women, and long-term migrants to show levels of health similar to those of Italians. The results confirm that recent migrants (both men and women) are healthier than the reference group. The literature on the HIE usually explains this pattern in light of a strong positive selection in the origin country (Lopez-Gonzales, Aravena, and Hummer 2005; Antecol and Bedard 2006; Read and Reynolds 2012). Indeed, between 2007 and 2013, Italy experienced a decrease in migration flows from extra-EU countries and an increase in entries from Eastern European countries (Barbiano di Belgiojoso and Terzera 2018; Istat 2020). In particular, the accession of Romania to the EU in 2007 was followed by significant flows of migrants in the construction and manufacturing sectors and care sector, involving Romanian men and women respectively (Del Boca and Venturini 2016).

Regarding long-term migrants, their health status does not differ from that of Italians for SRH and functional limitations. Even though the analysis is cross-sectional and individuals were not followed over time, this pattern may be interpreted in light of the extensive literature on the loss of the migrant health advantage (e.g., Khlal and Darmon 2003; Newbold 2005; Antecol and Bedard 2006; Berchet and Jusot 2012; Campostrini et al. 2019; Ichou and Wallace 2019; Loi and Hale 2019; Wallace, Khlal, and Guillot 2019).

It should also be considered that with increased duration of stay, migrants may change how they rank their health or gradually modify their health standards and perceptions in the direction of those of the Italian population. Nevertheless, the weaker evidence for a health advantage among long-term migrants might also be related to their persistent low socioeconomic status and poor living and especially working conditions in the Italian context (migrants are employed mainly in unqualified and unskilled jobs in the informal economy; e.g., Fullin and Reyneri 2011), which may isolate migrants on the lower rungs of the social ladder (Hill et al. 2012; Ro 2014). Concerning chronic illnesses, our results show that even long-term migrants (men and women) report fewer chronic illnesses than Italians. This result could be explained by a persistent lower health literacy among the immigrant population (Berchet and Jusot 2012; Khlal and Guillot 2017), which may reflect a poorer understanding of health indicators and/or lesser awareness of their health compared to that of the nonmigrant population.

Finally, our third hypothesis assumes that the time spent in the destination country has a different effect on the health status of the two genders. This hypothesis is proven only in part: among recently arrived migrants, we found a small (for SRH) or nonexistent (for functional limitations and chronic illnesses) gender difference. Such a small health difference between men and women might be interpreted in light of the strong selection effect associated with more recent flows of female labour migration.

It should be considered that, especially for SRH, the small disadvantage observed among recent migrant women compared to recent migrant men might also be due to the subjective nature of this outcome (compared to the others), which may be enhanced by psychological factors related to the difficulties experienced in the migration context, such as social isolation, hardship, or discrimination (Berchet and Jusot 2012). Similarly, as emphasised by Llacer et al. (2007), women's poor SRH may also result from the double disadvantage they face in the new context, as both women and migrants.

Among long-term migrants, both genders showed poorer health in the three outcomes than recent migrants. Among females, the differences in SRH and chronic illnesses are slightly more pronounced than in males. This result is supported in two American studies discussed in the literature review (Lopez-Gonzales, Aravena, and Hummer 2005; Antecol and Bedard 2006). Looking at gender and duration of stay, Antecol and Bedard (2006) observe that recent migrant women have healthier behaviours than US-born women and long-term migrants. Conversely, they find that duration of stay seems to make very little difference for men.

Bearing in mind that our study is cross-sectional and that we cannot observe individual health variations over time, we can nevertheless advance some explanations for the health differences detected between the genders and between recent and long-term migrants. First, we can speculate that the gendered health difference between recent and long-term migrants, which seems to be more pronounced among women, could be due to

the greater discrimination women may experience before, during, and after migration, resulting in even poorer health in the long run. It could also be the case that men and women in the two migrant populations (recent and long-term) are characterised by different structures in terms of origin country and reasons for migration. However, our models control for a wide range of variables, including migrants' origin area, which should at least partially account for differences in the composition of migration flows over time.

In general, considering that long-term migrants have lived in Italy longer than recent migrants, we can surmise that the longer the duration of stay, the lower (or nonexistent) the migrant health advantage over Italians.

Although the Italian survey we used is the only one that allows making comparisons between migrants and Italians and that contains duration of stay information, our study comes with some limitations, which are mostly data-driven. The lack of longitudinal data limits our study because we cannot observe health variations over time and cannot interpret our results in a causal manner. Despite this, our results are robust to sensitivity analyses. First, we tested different duration-of-stay thresholds to define recent and long-term migrants; second, we verified whether the patterns observed in the health status were a result of a true duration-of-stay effect and not of the fact that older migrants have lived in Italy for longer on average. The latter robustness check allows overcoming another limitation of the data, i.e., the lack of information on migrants' age at arrival. It should also be noted that our results are consistent with previous international studies.

Other factors can influence migrants' health but are not included in the survey. Importantly, there is no information on migrants' health before and at the time of entry into the country. Also, we could not consider the reason for migration, which is an important piece of information because it can influence the selection process. Thus, we could explore neither whether nor to what extent health affects the selection process differently for migrant men and women; nor how the reason for migrating determines and contributes to health deterioration. Furthermore, the data do not include information on migrants' specific country of origin; they provide information on migrants' broad area of origin according to Istat classification types and the small sample size did not allow inferences at sub-population levels. On this matter, the survey provides information on citizenship rather than on birthplace, leading to a lack of direct comparability to other contexts. Nonetheless, as already described in section 4.1.2 (Main predictor and control variables), at the time of the survey the naturalisation rate in Italy was negligible; therefore, we can assume that using migrants' citizenship will likely not affect our results, allowing cautious comparability with other contexts.

Finally, we only have information regarding migrants who have lived in Italy; we thus cannot consider those who return to their country of origin, which may lead to an underestimation of effects (Wallace and Kulu 2014; Monti et al. 2020). Since we

excluded people older than 64 years in the study we reduced this negative health selection, as the occurrence of health problems is more likely in old age. In this regard, in a recent study of migrants' mortality in Sweden, Wallace and Wilson (2021) find that the data artefact could explain some, but not all, of the mortality advantage detected, thus demonstrating that such a pattern is real.

Despite these limitations, our results yield several interesting findings, many of which underscore the complexity of health determinants and highlight the need to consider gender and duration of stay in tandem when looking at migrants' health inequalities. In the future, new receiving countries like Italy will experience the ageing of their migrant population, which will progressively enter the age of high health frailties. When analysing both the HIE and the loss of this advantage among migrants, researchers should incorporate the gender dimension to design and implement gender-specific policies that address migrants' health. In Italy, a longitudinal survey on migration and health would allow for a deeper understanding of such a dynamic phenomenon.

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Appendix

Table A-1: Distribution of the population (20–64 years) by duration of stay and by gender, and distribution of the outcomes

	Italians		Long-term migrants (≥ 7 years)		Recent migrants (< 7 years)		Total
	M	W	M	W	M	W	
Mean age (in years)	43.2	43.6	39.5	40.2	34.3	35.6	42.9
Civil status							
Married	53.2	58.0	57.4	55.8	34.4	48.6	38,964
Divorced	7.9	9.7	12.2	15.5	16.6	18.0	6,561
Single	38.1	29.2	29.6	24.6	48.8	30.3	23,142
Widow	0.8	3.2	0.7	4.1	0.2	3.0	1,487
Education							
No education and primary	6.3	9.0	11.5	9.5	11.2	13.5	5,876
Lower secondary	40.4	35.0	48.9	41.7	53.6	42.2	27,502
Upper secondary	38.8	38.4	31.2	34.5	27.0	32.0	26,338
Tertiary	14.5	17.7	8.3	14.4	8.2	12.4	10,438
Working status							
Employed	70.4	49.4	77.4	52.0	75.3	45.2	41,400
Homemaker	0.1	22.4	0.0	23.5	0.0	28.4	8,396
Inactive	16.2	15.4	6.3	5.8	3.5	6.7	10,852
Unemployed	13.3	12.8	16.3	18.8	21.2	19.7	9,506
Area of residence							
North	44.2	43.3	63.8	58.3	52.8	59.9	29,332
Centre	19.0	19.2	24.7	28.0	24.1	22.9	12,306
South & Isles	36.8	37.5	11.6	13.8	23.1	17.2	28,516
Area of origin							
Italy	100.0	100.0	-	-	-	-	65,137
Africa	-	-	26.4	15.3	21.1	17.5	1,002
America	-	-	7.6	12.1	5.4	9.8	456
Asia	-	-	17.8	12.5	21.5	13.3	668
European Union	-	-	24.2	33.2	33.7	36.0	1,631
Non-European Union	-	-	24.1	26.9	18.3	23.5	1,260
Self-rated health							
Good	78.7	72.8	82.3	75.1	88.8	83.2	53,073
Bad	21.3	27.2	17.8	24.9	11.2	16.8	17,081
Functional limitations							
No	80.7	76.3	84.6	79.9	90.3	85.0	55,046
Yes	19.3	23.7	15.4	20.1	9.7	15.0	15,108
Chronic illnesses							
No	80.7	76.8	87.8	82.9	93.8	91.3	55,459
Yes	19.3	23.2	12.2	17.2	6.2	8.7	14,695
<i>Observations (unweighted)</i>	32,185	32,952	1,561	1,883	654	919	70,154

Note: Percentages are weighted and should be read in columns.
Source: Authors' elaboration of IHS data.

Table A-2: ORs of gender differences in poor SRH, functional limitations, and chronic illnesses, separately for Italians and migrants

	Italians					
	SRH ^a	p-value	FL ^b	p-value	CI ^c	p-value
Gender						
Men				ref.		
Women	1.41	0.000	1.29	0.000	1.27	0.000
Age	1.06	0.000	1.05	0.000	1.05	0.000
Civil status						
Married				ref.		
Divorced	1.14	0.001	1.07	0.085	1.02	0.691
Single	1.15	0.000	1.13	0.000	1.08	0.017
Widow	1.23	0.002	1.09	0.223	0.95	0.476
Education						
No education/primary				ref.		
Lower secondary	0.79	0.000	0.76	0.000	0.92	0.035
Upper secondary	0.53	0.000	0.55	0.000	0.83	0.000
Tertiary	0.36	0.000	0.47	0.000	0.84	0.000
Working status						
Employed				ref.		
Homemaker	1.07	0.082	1.11	0.006	1.05	0.222
Inactive	1.40	0.000	1.70	0.000	1.57	0.000
Unemployed	1.50	0.000	1.47	0.000	1.28	0.000
Area of residence						
North				ref.		
Centre	1.11	0.003	1.04	0.217	0.87	0.000
South and Isles	1.18	0.000	1.13	0.000	0.84	0.000

Table A-2: (Continued)

	Migrants					
	SRH	p-value	FL	p-value	CI	p-value
Gender						
Men				ref.		
Women	1.44	0.000	1.35	0.002	1.37	0.003
Age	1.05	0.000	1.03	0.000	1.04	0.000
Civil status						
Married				ref.		
Divorced	1.23	0.093	0.87	0.287	0.91	0.496
Single	1.14	0.275	0.91	0.471	0.88	0.329
Widow	1.23	0.360	1.13	0.614	0.81	0.419
Education						
No education/primary				ref.		
Lower secondary	0.70	0.012	0.81	0.184	0.73	0.068
Upper secondary	0.75	0.063	0.95	0.762	1.02	0.917
Tertiary	0.60	0.005	0.79	0.238	1.00	0.985
Area of citizenship						
Africa				ref.		
Asia	0.82	0.258	0.8543	0.443	0.86	0.413
EU	0.91	0.506	0.7211	0.066	0.87	0.416
America	1.24	0.287	0.9062	0.647	1.11	0.611
No-EU	1.00	0.991	0.8747	0.438	0.92	0.612
Working status						
Employed				ref.		
Homemaker	1.10	0.468	1.25	0.132	1.13	0.447
Inactive	1.71	0.001	2.70	0.000	3.02	0.000
Unemployed	1.48	0.000	1.30	0.025	1.59	0.000
Area of residence						
North				ref.		
Centre	0.95	0.675	0.90	0.434	0.63	0.002
South and Isles	0.98	0.879	0.53	0.000	0.50	0.000
Duration of stay						
Long-term migrants				ref.		
Recent migrants	0.71	0.001	0.79	0.036	0.56	0.000

Notes: Models are weighted. ^a Self-rated health; ^b Functional limitations; ^c Chronic illnesses.

Source: Authors' elaboration of IHS data.

Table A-3: ORs of poor SRH, functional limitations, and chronic illnesses, by gender and by duration of stay compared to Italians

	Men					
	SRH ^a	p-value	FL ^b	p-value	CI ^c	p-value
Migrant status						
Italians				ref.		
Long-term migrants	1.01	0.922	0.94	0.485	0.71	0.000
Recent migrants	0.71	0.020	0.66	0.008	0.44	0.000
Age	1.06	0.000	1.04	0.000	1.05	0.000
Civil status						
Married				ref.		
Divorced	1.05	0.425	0.95	0.364	0.91	0.094
Single	1.11	0.014	1.09	0.049	1.02	0.691
Widow	1.08	0.618	1.09	0.615	1.05	0.773
Education						
No education/primary				ref.		
Lower secondary	0.78	0.000	0.82	0.001	0.96	0.502
Upper secondary	0.54	0.000	0.60	0.000	0.88	0.055
Tertiary	0.38	0.000	0.47	0.000	0.92	0.267
Working status						
Employed				ref.		
Homemaker	2.76	0.019	1.23	0.643	1.22	0.656
Inactive	1.55	0.000	1.95	0.000	1.83	0.000
Unemployed	1.62	0.000	1.59	0.000	1.39	0.000
Area of residence						
North				ref.		
Centre	1.14	0.005	1.03	0.492	0.86	0.001
South and Isles	1.18	0.000	1.06	0.123	0.80	0.000

Table A-3: (Continued)

	Women					
	SRH	p-value	FL	p-value	CI	p-value
Migrant status						
Italians				ref.		
Long-term migrants	1.09	0.223	0.98	0.782	0.80	0.002
Recent migrants	0.77	0.016	0.78	0.033	0.43	0.000
Age	1.05	0.000	1.04	0.000	1.05	0.000
Civil status						
Married				ref.		
Divorced	1.22	0.000	1.10	0.055	1.07	0.167
Single	1.15	0.001	1.06	0.164	1.08	0.073
Widow	1.29	0.000	1.10	0.179	0.94	0.390
Education						
No education/primary				ref.		
Lower secondary	0.77	0.000	0.72	0.000	0.86	0.002
Upper secondary	0.55	0.000	0.55	0.000	0.81	0.000
Tertiary	0.37	0.000	0.50	0.000	0.79	0.000
Working status						
Employed				ref.		
Homemaker	1.05	0.187	1.11	0.011	1.03	0.495
Inactive	1.29	0.000	1.56	0.000	1.42	0.000
Unemployed	1.42	0.000	1.37	0.000	1.26	0.000
Area of residence						
North				ref.		
Centre	1.05	0.277	1.01	0.778	0.83	0.000
South and Isles	1.15	0.000	1.10	0.005	0.83	0.000

Notes: Models are weighted. ^a Self-rated health; ^b Functional limitations; ^c Chronic Illnesses.
Source: Authors' elaboration of IHS data.

Table A-4: Predicted probabilities of poor SRH, functional limitations, and chronic illnesses, by gender and duration of stay

Probability of declaring poor self-rated health			
	Predicted probability	83.5% CI	
		Lower	Upper
Italian M	0.21	0.207	0.215
Italian W	0.27	0.261	0.269
^a L.T. migrant M	0.21	0.193	0.227
L.T. migrant W	0.29	0.266	0.299
^b Rec. migrant M	0.16	0.136	0.186
Rec. migrant W	0.23	0.202	0.249

Probability of declaring at least one functional limitation in the last 6 months			
	Predicted probability	83.5% CI	
		Lower	Upper
Italian M	0.19	0.189	0.196
Italian W	0.23	0.226	0.234
L.T. migrant M	0.17	0.166	0.199
L.T. migrant W	0.23	0.210	0.245
Rec. migrant M	0.14	0.109	0.166
Rec. migrant W	0.19	0.167	0.221

Probability of declaring at least one chronic illness			
	Predicted probability	83.5% CI	
		Lower	Upper
Italian M	0.19	0.187	0.194
Italian W	0.23	0.223	0.231
L.T. migrant M	0.14	0.129	0.159
L.T. migrant W	0.19	0.177	0.212
Rec. migrant M	0.09	0.073	0.116
Rec. migrant W	0.12	0.102	0.138

Differences in the predicted probabilities of the health outcomes				
	Recent migrants	Long-term migrants	Difference	p-value
Men	^c PP	PP		
Self-rated health	0.16	0.21	-0.049	0.024
Functional limitations	0.14	0.17	-0.034	0.034
Chronic illnesses	0.09	0.14	-0.050	0.009
Women				
Self-rated health	0.23	0.29	-0.060	0.005
Functional limitations	0.19	0.23	-0.034	0.090
Chronic illnesses	0.12	0.20	-0.075	0.000

Notes: ^a L.T. migrants: Long-term migrants; ^b Rec. migrant: Recent migrants; ^c PP: Predicted probability. Results from logistic regressions. Models are weighted and adjusted for age, civil status, education, working conditions, and area of residence. Interaction term with gender and duration of stay added. 83.5% CI.
Source: Authors' elaboration of IHS data.