## Disparities in Health between Natives and Migrants by Duration of Stay: A Gender Perspectives in Italy

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## Introduction

Given the relevance of international migrations all over Europe, studying and analyzing migrants' health has become more and more important due to the challenges that European countries have to deal with. In Italy, migration should be considered as a structural component of our society, rather than a transient phenomenon as in the 1970s: the number of migrants has continued to increase from 2.4 million (4.1% of the total population) in 2005, to 4,387,721 (7.4%) in 2013, reaching a pick of 5,144,440 (8.5%) in 2018 (Istat, 2019).

In literature, disparities in health between migrants and natives have been widely studied. The general hypothesis is that migrants tend to report better health (Mc Donald and Kennedy, 2004; Newbold, 2005; Wallace and Kulu, 2014), lower physical disability (Elo et al., 2011; Mehta et al., 2013), and lower chronic illnesses (Buja et al., 2013) than natives. This paradox is due to selection hypotheses as healthy migrant effect, salmon bias and data artefact. Nevertheless, it has been observed that with increasing length of stay in the destination country migrants' health deteriorates and converges to natives' health (the so called exhausted migrant effect) (Bollini and Siem, 1995; Hill et al., 2012). Acculturation, negative assimilation and poor socioeconomic status are considered the main explanations of this pattern, which can lead to a loss of the health advantage (Goldman et al., 2014; Moullan and Jusot, 2014; Loi and Hale, 2019). This pattern seems to vary across countries and migrant populations (Kennedy et al., 2006). However, most studies on ethnic differences in health do not take into account to differentiate experiences of men and women, but they often adjust for gender. In all western countries, several studies have looked at the gender gap in health and mortality, known in literature as "the male-female health-survival paradox" (Oksuzyan et al., 2009). Although women live longer than men, overall they experience poorer self-rated health (Verbrugge, 1985; Olsen and Dahl, 2007; Oksuzyan et al., 2009), report more functional limitations (Scott et al., 2012) and chronic illnesses (Turabian, 2018) than men.

Due to the increase in the share of migrants in Italy, and in particular given the significant share of migrant women and different migratory behaviors, which are gender-specific (Llácer et al., 2007; Lutz, 2010), there is the need to integrate a gender perspective into research studies on migration and health.

As far as we know, in Italy, there are no studies which analyze gender disparities in health between natives and migrants by duration of stay and which explore whether the health deterioration or convergence is different by gender.

This study contributes to the published research on migrants' health in Italy answering to the following questions: 1) Do gender differences in self-rated health, functional limitations and chronic illnesses persist within migrants? 2) Is there a migrants' health convergence to natives' health by duration of stay? 3) Does this convergence pattern differ by gender?

The importance of our study lies in helping to develop policy focusing on the health status of specific groups according to gender and ethnicity.

## **Data and Methods**

We use the latest Italian survey on health "Italian Health Condition Survey" (2013) carried out by the Italian National Institute of Statistics. The first wave of such survey appeared in 1993, but only the 2013 edition reports information about the duration of stay.

Data are nationally representative of people living in private dwellings older than 15 years. The survey provides demographic, socio-economic and health information and information on years of residence in Italy (only for foreigners). We restrict the analysis to the adult population aged 20-64. For young people we choose age 20 because health begins to be conceptualized during childhood and adolescent (Breidablik et al., 2009), thus self-rated health is not very accurate for children; we use age 64 as limit due to the young structure of the migrant population.

Our final sample size is n = 70,154.

We use 3 dependent variables. The first one is the self-rated health which derives from a single question "How is your health in general?" with 5 possible answers, ranging from "Very good" to "Very bad". We used a dichotomous variable (0 = Good and Very Good; 1 = Fair, Bad and Very bad). The second one refers to functional limitations which derives from a single question "For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do?" with 3 possible answers: "Severely limited", "Limited but not severely" and "Not limited at all". We treat functional limitations as a dichotomous variable (0 = Not limited at all; 1 = Limited but not severely and severely limited). Finally, we measure the probability of declaring chronic illnesses which derives from the question "Do you have any longstanding illness or [longstanding] health problem?" with 2 possible answers: "Yes" and "No". We consider migrants those individuals without the Italian citizenship. The main predictor variables are: the duration of stay (only for foreigners), which is measured by the variable "years of residence in Italy", and gender (men vs. women). We distinguish between long-term migrants, those arrived in Italy more than 7 years before the interview (2013), and recent migrants, those arrived less than 7 years before the

interview. In all analyses we control for demographic (*age* – continuous variable), socio-economic (*marital status* – married vs. divorced/single/widow - *education* – low education vs. university/primary or no education/high school - and *employment status* – employed vs. homemaker/inactive/unemployed) and geographical (North vs. Centre/South) factors.

We perform multivariate logistic regression to model the association between self-perceived health/functional limitations/chronic illnesses (outcomes) and duration of stay and gender, controlling for age, marital status, education, employment status and residence area. We use robust standard errors clustered by household. We compute predicted probabilities of the outcomes for avoiding the problem of the incomparability of the coefficients obtained by different logistic regression models and to show interactions between gender and duration of stay in a more intuitive way.

## **Results**

The sample is composed by 70,154 individuals aged 20-64 (9.1% migrants). Women represent the 50.5% of the total population and the 53.9% among migrants. The migrant population is younger than the Italian one with a share of 39.3% vs. 26.5% of individuals aged 20-34 and 16.7% vs. 35.1% of individuals aged 50-64. We observed that gender differences in self-rated health, functional limitations and chronic illnesses persist within migrants. Women have worse health outcomes than men. However, for recent migrants, gender health gap is not significant, which can be due to the stronger selection hypothesis for recent migrants than long-term migrants (Tab.1).

We also found a migrant-native health convergence. Starting from a condition of better health than natives, migrants' health deteriorates with the increase in the duration of stay regardless of gender (Fig.1). Results seem to suggest a different pattern by gender in the migrant-native health convergence which is stronger among women than men. This pattern can be due to the fact that generally women experience poorer health than men, and women migrants' health could be affected in a different or stronger way than men, before, during and after the migration process.

Table 1. Adjusted ORs [90% CIs] for gender differences in Self-Rated Health, Functional limitations and Chronic Illnesses

|                                | Italians<br>(N=63,771) | Long-term migrants<br>(N=4,440) | Recent migrants (N=1,943) |
|--------------------------------|------------------------|---------------------------------|---------------------------|
| Self-rated health <sup>a</sup> |                        |                                 |                           |
| Women                          | 1.41*** [1.35-1.46]    | 1.44** [1.20-1.73]              | 1.52* [1.11-2.08]         |
| Functional limitations         |                        |                                 |                           |
| Women                          | 1.29*** [1.24-1.34]    | 1.38** [1.15-1.66]              | 1.38 [0.98-1.95]          |
| Chronic Illnesses              |                        | -                               |                           |
| Women                          | 1.27*** [1.22-1.32     | 1.51** [1.24-1.84]              | 1.09 [0.71-1.68]          |

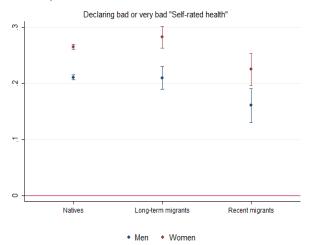
a ORs of declaring Bad and Very Bad Self-rated health

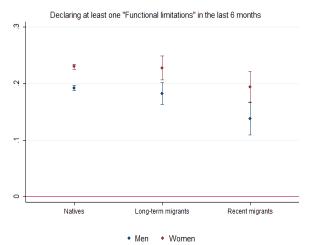
Men are the reference category

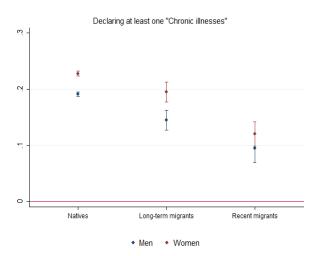
Adjusted for age, civil status, education, employment status and area of residence. Long-term migrants and Recent migrants only are also adjusted for area of origin.

*Note: The asterisks indicate significance* +p < 0.1, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

Figure 1. Adjusted predicted probabilities [90% CIs] for gender differences in Self-Rated Health, Functional Limitations and Chronic Illnesses







Note: Adjusted for age, civil status, education, employment status and area of residence. Long-term migrants and Recent migrants only are also adjusted for area of origin.

This study calls the attention to the lack of empirical evidence on the link among gender, migration and health. Furthermore, it contributes to a better understanding of the role of gender both on health and on the migrant-native health convergence process. Using a gender prospective is needed to improve or develop health policies for migrants.