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29 Differences in healthcare use between immigrant and local older individuals

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- ▶ This chapter studies the utilization of health services and the health-related expenditures of immigrants aged fifty or older among residents of Europe
 - ▶ The results suggest that immigrants' health-related behaviour differ with respect to that of locals
 - ▶ Specifically, the two groups do not have the same capacity to afford health-related expenditures, even when demographic controls and healthcare needs are considered
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29.1 Introduction

Immigration to Europe has increased dramatically during the past thirty years, and it is very unlikely that this trend will diminish or reverse in the near future. Although the literature includes extensive studies on the effect of immigration on many economically relevant dimensions (such as the labour market, politics, fiscal contributions and demography), scant rigorous evidence exists on how immigrants perform in host countries in terms of health.

Surprisingly, we know very little about health conditions, access to health services and health-related expenditures of immigrants relative to locals. Closing this gap is important from a public health perspective given that the immigration process might contribute to changing trends in health and health behaviours and that host countries need to handle the fiscal burden and the social cost of these changes (Moullan et al., 2014; Pace, 2010; Rechel et al., 2011).

In this chapter, we analyse the utilization of health services and the health-related expenditures of immigrants and assess how their health-related behaviours differ with respect to locals. We control for a rich set of need factors related to aspects of individuals' health status and other socio-demographic variables that may affect the use of healthcare services.

Data from SHARE are especially suitable for this scope because they represent a rich set of individual information on healthcare utilization and out-of-pocket expenditures for health-related services. In particular, the sixth and seventh waves gather information on polypharmacy (i.e. the concurrent use of multiple medications), which is considered an emerging public health issue, especially for older

people. By combining this specific information with demographic and socio-economic variables, we are able to compare immigrants' and locals' outcomes by controlling for factors that may influence both immigration status and health-related behaviours (i.e. among others, age, education and marital status and specific contemporaneous and past healthcare needs).

29.2 Healthcare utilization and health-related expenditures: Does immigration status matter?

To investigate whether immigration status may affect the utilization of healthcare services and health-related expenditures and behaviours, we pool observations from the 6th and the 7th Waves of SHARE. We estimate a set of *probit* models for health-related behaviours as a function of (i) demographics (such as age, gender and marital status), (ii) socio-economic characteristics (education and occupational status) and (iii) healthcare needs (self-assessed health, chronic conditions, presence of limitations in ADL and IADL). Regarding the dependent variables considered in the analysis, we focus on a set of dummies that approximate, respectively, (i) the utilization of health services (i.e., 'Postpone doctor's visits due to financial difficulties', 'Seen the dentist in the last twelve months', and 'Polypharmacy') and the (ii) out-of-pocket medical expenditures (i.e., 'Paid anything yourself for aid/appliances in the last 12 months', and 'Paid anything yourself for ambulatory in the last 12 months').

Our variable of interest, i.e., respondents' immigration status, is defined as a binary variable that assumes the value of 1 if the individual was born abroad and 0 otherwise.

The following figures present descriptive statistics on our sample.

Figure 29.1 shows that, on average, immigrants represent approximately 10 per cent of the surveyed population in destination countries. However, a significant heterogeneity exists across countries, with the lowest shares of immigrants at approximately 2 per cent in Italy and Hungary and the highest shares in Estonia and Luxembourg (respectively, approximately 20 per cent and 30 per cent). Israel is an extreme case because most of the actual population living in the country was born abroad. The presence of immigrants is balanced in terms of gender, with similar shares of immigrant men and women in each country (Figure 29.1).

Figure 29.2 plots the macro area of immigrants' origin by country of destination. Most of the immigrants in the SHARE sample come from Europe, with a

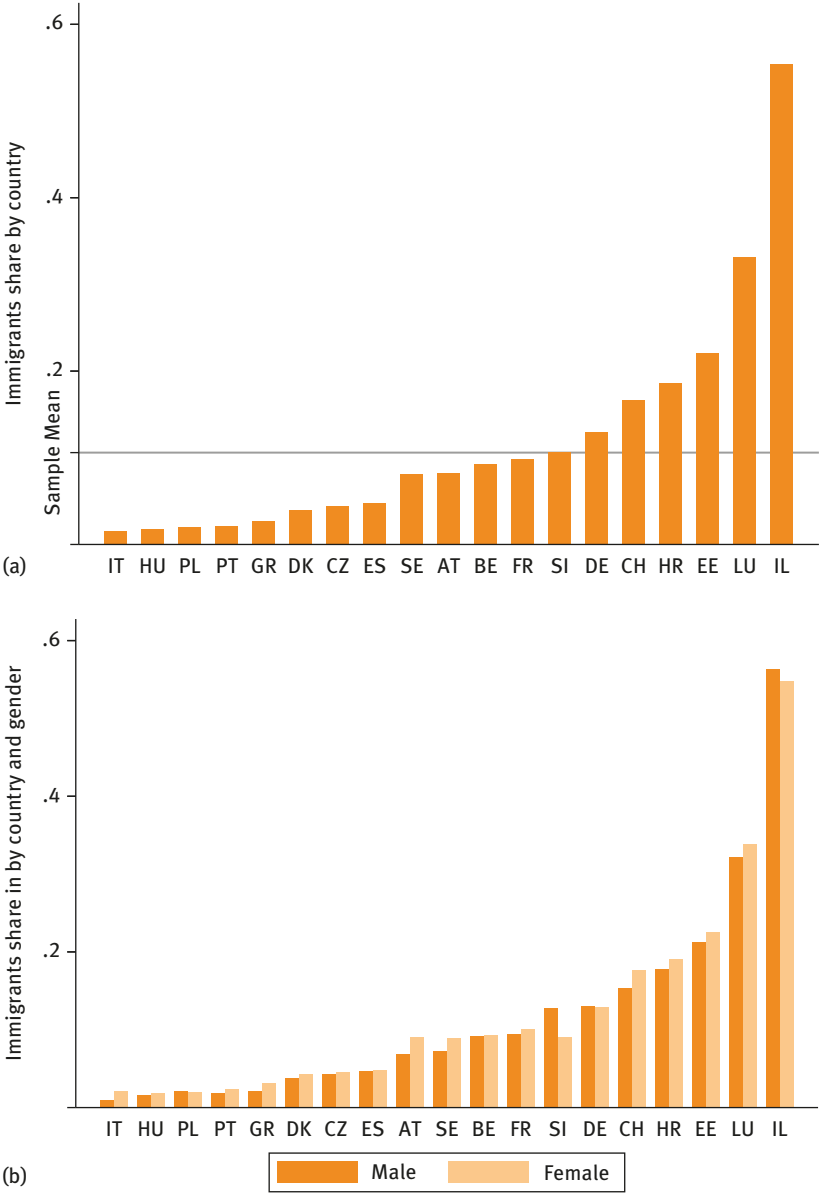


Figure 29.1: Immigrants' Share in Destination Countries.

Source: SHARE Wave 6, Wave 7 release 0.

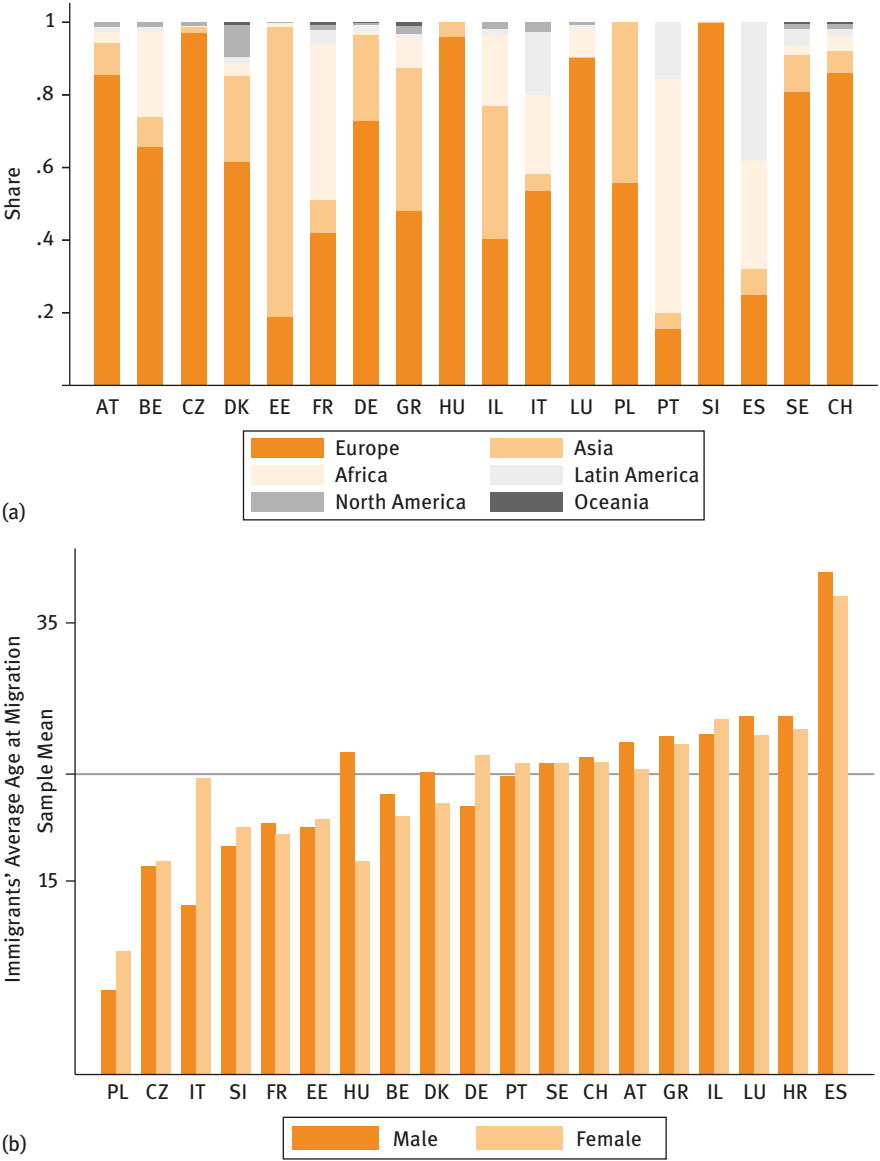


Figure 29.2: Immigrants' Origin and Age at Migration.
Source: SHARE Wave 6, Wave 7 release 0.

sizable share from Africa and Asia (in countries such as Portugal, Spain, France and Estonia). The average age at migration for the sample is approximately 23 years, with some heterogeneity across countries (Figure 29.2). Overall, most

immigrants spent many years in the country of destination and more than 70 per cent acquired citizenship in the country in which they reside, such that they can have access to the country-specific healthcare system.

In Panel A of Table 29.1, the average value of the control variables used in the regression are reported for locals and immigrants. reports the p-values associated with a t-test on the mean difference. Significant differences among the two groups of individuals are found with respect to age, share of females and the probability of being married. The difference between the two groups is small but statistically significant, suggesting that (i) immigrants are slightly

Table 29.1: Descriptive Statistics.

| PANEL A. Control Variables | Locals | Immigrants | P-value of the difference |
|--|---------------|-------------------|----------------------------------|
| Age (years) | 70.023 | 70.373 | 0.0001 |
| Female (dummy) | 0.566 | 0.584 | 0.0001 |
| Ever Married (dummy) | 0.845 | 0.832 | 0.0001 |
| High Edu (dummy) | 0.212 | 0.291 | 0.0000 |
| Low Edu (dummy) | 0.391 | 0.334 | 0.0000 |
| IADL ^(a) (discrete) | 0.965 | 1.063 | 0.0000 |
| ADL ^(b) (discrete) | 0.673 | 0.700 | 0.0016 |
| Chronic ^(c) (discrete) | 1.845 | 2.000 | 0.0000 |
| Self-perceived Health Status (discrete) | 3.176 | 3.332 | 0.0000 |
| PANEL B. Outcomes Variables (all dummies) | Locals | Immigrants | P-value of the difference |
| Polypharmacy ^(d) | 0.292 | 0.326 | 0.0000 |
| Doctor Cost ^(e) | 0.045 | 0.045 | 0.9691 |
| Dentist ^(f) | 0.510 | 0.507 | 0.5032 |
| Aid ^(g) | 0.049 | 0.055 | 0.0168 |
| Ambulatory ^(h) | 0.096 | 0.102 | 0.1161 |

Note: ^(a)Limitations with instrumental activities of daily living; ^(b)Limitations with activities of daily living; ^(c)Number of chronic diseases; ^(d)Taking at least 5 different drugs on a typical day; ^(e)Could not see a doctor because of cost; ^(f)Seen a dentist/dental hygienist in the last 12 months; ^(g)Paid anything yourself for aids/appliances in the past 12 months; ^(h)Paid anything yourself for ambulatory therapies in the past 12 months.

Source: SHARE Wave 6, Wave 7 release 0.

older, (ii) there are fewer women in the local population than in the local immigrant and (iii) immigrants are less likely to have ever been married than locals are. Moreover, immigrants in our sample have significantly higher levels of educational attainment with respect to locals. When observing the health status variables, the two groups are also significantly different: locals' self-perceived health status is better than that of immigrants and, indeed, immigrants experience more limitations in daily activities and suffer from more chronic diseases.

In Panel B of Table 29.1, the groups of immigrants and locals are compared with respect to utilization of health services and health-related expenditures (i.e., the outcomes variables used in the regression). A simple comparison of the mean does not reveal much difference among locals and immigrants. However, to assess whether significant differences exist between locals and immigrants in terms of the utilization of health services and health-related expenditures, a more rigorous analysis is needed because the two groups differ on a number of observable dimensions (Table 29.1, Panel A). In the next section, we compare immigrant and local health behaviours in a regression framework.

29.3 Results

The results of the regression analysis are provided in Table 29.2. The coefficients for our main variable of interest ('Immigrant') suggest that being an immigrant is positively associated with the probability of postponing doctor visits due to financial difficulties and is negatively correlated with out-of-pocket expenditures for medical aids and appliances. This evidence is interesting because immigrants significantly differ in terms of health services utilization and expenditures even when compared with locals with similar health profiles (defined in terms of healthcare needs). For instance, among individuals with similar self-assessed health conditions, chronic conditions and limitations in ADL and IADL, those born abroad are more likely to postpone doctor visits due to financial difficulties and less likely to sustain out-of-pocket medical expenditures. One could argue that the latter evidence may be due to relatively lower immigrants' income or wealth or to the relatively lower educational attainment of the immigrant population. However, the average level of education among immigrants is significantly higher relative to the local population (Table 29.1, Panel A) which, given that education is positively correlated with individual financial conditions, does not help explain the differences in health services utilization and expenditures. Indeed, the sign and the direction of the effects of

Table 29.2: Probit Model, Marginal Effects.

| Outcome | Polypharmacy | Doctor Cost | Dentist | Aid | Ambulatory |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Immigrant (d) | -0.002 (0.006) | 0.010*** (0.004) | -0.015 (0.013) | -0.010*** (0.003) | -0.005 (0.005) |
| Female (d) | -0.016*** (0.006) | 0.011*** (0.002) | 0.070*** (0.005) | 0.009*** (0.002) | 0.048*** (0.003) |
| Age | 0.002*** (0.000) | -0.002*** (0.000) | -0.005*** (0.000) | 0.001*** (0.000) | -0.002*** (0.000) |
| SAH | 0.087*** (0.004) | 0.015*** (0.001) | -0.024*** (0.003) | 0.017*** (0.001) | 0.018*** (0.002) |
| ADL | 0.002 (0.003) | -0.002 (0.002) | 0.028*** (0.003) | 0.006*** (0.001) | 0.009*** (0.002) |
| IADL | 0.017*** (0.003) | 0.001 (0.000) | -0.032*** (0.002) | 0.006*** (0.001) | -0.000 (0.002) |
| CHRONIC | 0.088*** (0.002) | 0.008*** (0.001) | 0.008*** (0.002) | 0.006*** (0.000) | 0.013*** (0.001) |
| Ever Married (d) | -0.006 (0.005) | -0.007** (0.003) | 0.057*** (0.005) | -0.004** (0.002) | 0.007** (0.003) |
| Low-Education (d) | 0.010* (0.006) | 0.013*** (0.002) | -0.099*** (0.005) | -0.007*** (0.002) | -0.034*** (0.005) |
| High-Education (d) | 0.005 (0.004) | -0.006** (0.003) | 0.082*** (0.006) | 0.004** (0.002) | 0.024*** (0.003) |
| Retired (d) | 0.057*** (0.007) | 0.004 (0.002) | 0.003 (0.011) | -0.006** (0.003) | -0.010** (0.005) |
| Unemployed (d) | 0.009 (0.009) | 0.041*** (0.009) | -0.096*** (0.018) | -0.009 (0.007) | -0.029*** (0.007) |
| Disabled (d) | 0.136*** (0.014) | 0.019*** (0.004) | -0.051*** (0.010) | 0.017*** (0.006) | 0.007 (0.010) |
| Homemaker (d) | 0.044*** (0.007) | 0.012** (0.005) | -0.054*** (0.012) | -0.013*** (0.003) | -0.027*** (0.005) |

Table 29.2 (continued)

| Outcome | Polypharmacy | Doctor Cost | Dentist | Aid | Ambulatory |
|------------------------|--------------|-------------|---------|-------|------------|
| <i>Country dummy</i> | Yes | Yes | Yes | Yes | Yes |
| <i>Continent dummy</i> | Yes | Yes | Yes | Yes | Yes |
| No. of observations | 100453 | 78942 | 129769 | 78849 | 78860 |

Note: All reported coefficients are marginal effects. Standard errors, reported in parenthesis, are clustered by country. Reference categories: Male, Never married and not in civil union, Medium Education, Employed.

Significance: *** = 1 %; ** = 5 %; * = 10 %.

Source: SHARE Wave 6, Wave 7 release 0.

education are correct: highly educated individuals have significantly higher health service expenditures and utilization.

In addition to healthcare needs and educational variables, we also control for an individual's occupational status. The coefficients suggest that unemployed individuals and homemakers have significantly lower healthcare utilization and expenditures. The effect of immigration status, even in the presence of these additional controls, remains significant in columns 2 and 4, indicating that immigrant and local populations may have different healthcare preferences and behaviour.

29.4 Concluding remarks

In this chapter, we analyse the use of health services and the health-related expenditures of immigrants and assess how their health-related behaviour differs from that of locals, after controlling for healthcare needs and socio-demographic variables. The study uses SHARE data from Waves 6 and 7 and exploits information on healthcare utilization and out-of-pocket expenditures for health-related services, along with the new variable on polypharmacy. The results reveal that foreign-born individuals are more likely to postpone doctor visits due to financial difficulties and display a lower probability to incur out-of-pocket expenditures for medical aids and appliances. These results are consistent with prior findings, suggesting that immigrants are more likely to use emergency care services and less likely to regularly visit general practitioners and specialists and use preventive care (see Devillanova et al., 2016). One plausible explanation may be that immigrants face specific barriers to accessing

doctors and specialists, which in turn may lead to a late diagnosis and/or care of acute and chronic disorders. A deeper investigation of these mechanisms would be desirable to introduce appropriate policy tools.

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