Differences in Cognitive Functioning and Mortality Transitions among Older Migrants and Non-Migrants

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Introduction

Studies on health and migration often indicate that migrants' health is better than that of non-migrants, especially when looking at mortality or life expectancy outcomes (Elo et al., 2004; Palloni & Arias, 2004). Some studies report more mixed results, when analysing non-Western contexts, and when accounting for origin and length of residence of migrants (Kohler & Preston, 2011; Buckley et al., 2011). Studies looking at other health outcomes besides mortality, or including middle-aged and older people, have found worse health for the foreign-born than the native populations (Crimmins et al., 2008; Reus-Pons et al., 2018; Solé-Auró & Crimmins, 2008; Walkden et al., 2018).

Often, selectivity of migrants has been proposed as one of the main explanations to these health differentials. Such selectivity may refer to different aspects regarding differences between migrants and non-migrants (Lee, 1966). Migrants may have been a positively or negatively selective group by some (observable or unobservable) characteristics compared to the origin as well as the host country population at the time of the move. This characteristic may refer to health status or some other factor (eg age, education), affecting health also in the long-term. Additionally, according to the "salmon bias" assumption, migrants may return to their home country in old age, and thus health outcomes for migrants may be underestimated in older age groups.

In this paper, we focus on the Estonian context, which has one of the largest proportions of foreign-origin populations in Europe (Eurostat, 2024). The majority of these migrants and their descendants are of Russian origin, having been in formation already since the post-World War II decades as Estonia was occupied by the Soviet Union. By now, migrant population has aged, creating an opportunity to compare the ageing process of different origin populations. For decades, the age structure of migrants was younger than that of non-migrants in Estonia while the educational structure was equivalent or slightly higher for migrants (Katus et al., 2002; Sakkeus, 2007). Despite similar education levels, the foreign-origin population was often employed in fields that were better paid, but required fewer qualifications (Puur & Sakkeus, 1999), due to the Soviet specificity of working-class preferences (e.g., wage differences were in the favour of industrial and agricultural workers). Unlike many Western contexts, the health and life expectancy of the migrant population in Estonia has been consistently worse than that of the native population (Sakkeus & Karelson, 2012; Statistics Estonia, 2024). Cross-sectional comparisons of cognitive functioning among middle-aged and older populations by origin in Estonia indicate no health differences between migrant as well as the origin and host populations when migrant population groups were defined based on age at migration (Abuladze et al., 2023).

We contribute to the literature on migrant selectivity by analysing whether cognitive functioning outcomes by different origin groups may reflect selective survival of these groups. Since more recent mortality and health estimates by migrant background have been lacking for Estonia, we analyse cognitive functioning and mortality during the period of 2010-2022. Selective survival, and hence lower life expectancy in one group compared to another, may result in better cognitive

functioning for the group with lower life expectancy. Comparing the development of mortality and cognitive functioning dynamically over time would give insights as to whether and how selective survival by population origin might affect and explain health disparities.

Data and methods

We use the SHARE Estonia data collected in Waves 4-9 during 2010 – 2022, double-checked with death information from the Estonian population register of the same period. For that we include people aged 50 and above at the start of the survey in 2010, without cognitive functioning impairment at the baseline. The data includes a representative sample of the population in the same age groups and migrant origin in Estonia, with around 25% of the sample being foreign-born at the baseline of SHARE Wave 4. Estonia is one of the few SHARE countries that has included a representative and large enough sample of the country's foreign-origin population, and also conducts interviews in two languages – Estonian and Russian. We define two groups – migrants and non-migrants based on country of birth.

For cognitive functioning, we include a combined indicator for immediate and delayed verbal recall. We estimate prevalence rates of cognitive functioning impairment for both observation groups at all waves. We will present descriptive findings on the health status at each wave as well as change across waves, including descriptive information on attrition and mortality of both migrant and non-migrant population groups. Next, we estimate health transitions using a person-wave format where respondents can occur in the data multiple times with their respective cognitive functioning outcomes as well as death across all the waves. For that, we use multinomial logistic regression models to estimate health deterioration, improvement and mortality risks for both population groups.

Expected results

Since cognitive functioning affects more older age groups, and becomes a health concern once life expectancy improvements happen, we expect the higher mortality of migrant population during the first half of the observation period to result in lower or similar cognitive functioning impairment prevalence rates compared to non-migrant population. Therefore, we expect individual risks of mortality to be higher during the same first half of the observation period. For the second half of the observation period, in line with the general life expectancy improvements of migrant origin population in Estonia, mortality risks are expected to equalise between the groups. Hence, cognitive functioning impairment risks are expected to equalise among the groups as well by the end of the observation period.

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