Life Expectancy among Immigrants in Sweden pre and during COVID-19: A Consideration of Different Origins and Types of Residence Permits.

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In recent studies, international migrants have been found to contribute positively to national levels of life expectancy in the United States, Denmark, Finland and Norway (Ho & Hendi, 2018; Wallace et al., 2022). This reflects the ”migrant mortality advantage” phenomenon and the idea that immigrants live longer lives than the native-born of their host country.

In Sweden, however, it was found that overall immigrants contributed negatively to the life expectancy of the general population until very recently (Wallace et al., 2022). In the recent review of Shor and Roelfs (2021), the immigrant mortality advantage in high-income countries appears to be strictly related to the origin countries of the immigrants that come from non-Western countries. This is not the case in Sweden because, up until the end of the 1990s, the majority of Sweden’s migrant population was born in other Nordic and/or other European countries (Karlsdottir et al., 2018). Only from the beginning of this century, have non-European immigrants—and particularly migrants arriving for humanitarian reasons—become a much more prevalent group in Sweden. Wallace & Drefahl (2022) found, for Sweden, that first-generation non-Western immigrants contributed positively to national life expectancy, while Western immigrants contributed negatively. However, the explicit role of migrants arriving as refugees was never explored.

Nonetheless, studies about the impact of immigrants on national life expectancy have yet to consider different subgroups of migrants. The results should not be applied automatically to refugees, that are a large part of the most recent Swedish immigrants (Aldridge et al., 2018). Refugee health is more at risk than that of other migrants since the entire migration process—including leaving the country, travelling, and requesting asylum in the destination country— is associated with stressful and risky circumstances (Oostrum et al., 2011).

In Sweden, the immigrant negative effect on life expectancy started to change in 2019 when migrants began to positively contribute to annual increases. The authors theorised that this was driven by the changes in the composition of the immigrant population in Sweden and predicted that this positive impact of immigrants would continue (Wallace et al., 2022), but in 2020 the COVID-19 pandemic changed the situation.

In Sweden, during the first COVID-19 wave, there was an increase in mortality and a reduction in both male and female life expectancy, especially at older ages (Andersson et al., 2021; Kolk et al., 2022). Compared to native Swedes, immigrants from low and middle-income countries were twice as likely to die of Covid-19 even when controlling for socio-economic status (Drefahl et al., 2020). Another study found that individuals in intermarriages between foreign- and Swedish-born spouses were more likely to die due to Covid-19 than Swedish-Swedish spouses (Aradhya et al., 2021). Additionally, a study found that immigrants from Somalia, Lebanon, Syria, Turkey, Iran, and Iraq had a higher risk of dying from COVID-19 than other residents in Stockholm (Rostila et al., 2021). A high number of refugees come from these countries. This study investigates two aims of life expectancy in immigrants during 2010-2021, considering groups by the origins of the immigrants and the type of permit.

Our first aim is to understand whether the recent emergence of a positive impact of immigrants on national life expectancy in Sweden can be attributed to refugees.

Our second aim is to understand how much the COVID-19 pandemic and its disproportionate impact upon international immigrants, interrupted the positive contribution that migrants started to make to national life expectancy levels.

Materials and Methods

Data

The Nordic countries offer unique possibilities to explore heterogeneity within the migrant population due to the population register system that these countries have constructed over the years (Ludvigsson et al., 2016). In particular, in Sweden, it is possible to identify the migrants not only by their country of origin but also by the type of permit they obtain upon their arrival in the country.

We used data through the collection of register project REFU-GEN, "A Better Life for the Children of Exile: The Adaptation of Refugees, their Children and their Grandchildren". The project is coordinated at Stockholm University, and it is composed of several registers that allow to obtain personal information about the Swedish population as gender, birth date, eventual death date and also, for the immigrants, the date of arrival to Sweden, the country of birth and the type of the residence permit during their life in Sweden. The available data with all the information for our analysis are from 1961 to 2020. We will focus on our estimate of the last twelve years.

We divided individuals into four origin groups: Swedish (people that are born in Sweden), Nordic (people who were born in other Nordic countries: Norway, Denmark, Finland and Iceland), Other European (those who were born in Europe, but not in the Nordic countries, including Sweden) and Non-European (people who were born in the rest of the world).

Method

Period life expectancy is the average number of additional years a person would live if he or she experienced the age-specific mortality rates of the given area and time period for the rest of their life (Wallace et al., 2022). It is widely used to assess and compare the mortality situation of countries and separate clusters of the population.

To compute period life expectancy, we created the mid-year estimates for different groups determined by the year (from 2010 to 2021), gender, age (from 1 year old to 95+), origin groups (Swedish, Nordic, Other European, and Non-European), and resident permit. For the same groups, we also calculated age-standardised death rates.

We also plan to use the Arriaga method to decompose the life expectancy of the population resident in Sweden for different types of birth countries and/or refugee permits to better understand the total contribution.

Results

We reported in Figure 1 the life expectancy at age one, for the years from 2010 to 2021 for four groups of origin (Swedish, Nordic, Other European and Non-European) and in Table 1 the estimates of the life expectancy for the years from 2018 to 2021 for the same groups.

Figure 1. Life expectancy at age 1, years 2010-2021, by origin groups and gender

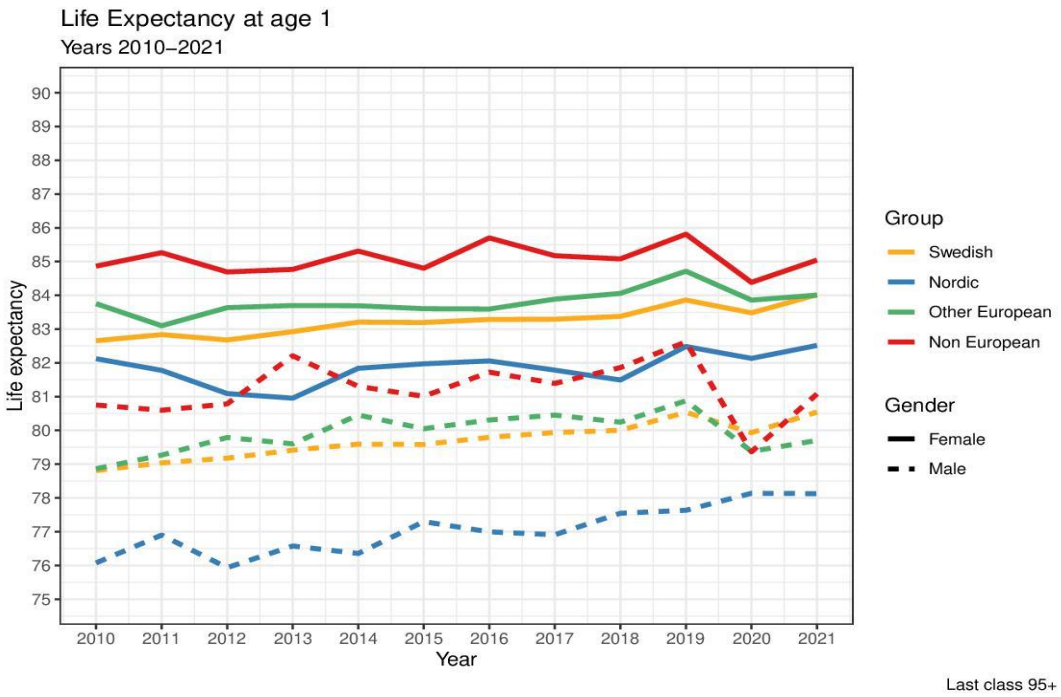

Table 1. Life expectancy at age 1, years 2010-2021, by origin groups and gender

	Female				Male			
Year	**Swedish**	**Nordic**	**Other European**	**Non-European**	**Swedish**	**Nordic**	**Other European**	**Non-European**
2018	83.38	81.49	84.06	85.08	80.00	77.55	80.24	81.86
2019	83.86	82.48	84.71	85.81	80.54	77.63	80.88	82.62
2020	83.48	82.13	83.86	84.38	79.93	78.14	79.38	79.37
2021	84.02	82.52	84.01	85.05	80.54	78.13	79.70	81.08

For the Swedish group, we observe from Figure 1 that in the last twelve years, the life expectancy rose for females and males. Both genders had an increase in 2019, and a decrease in 2020. We see from Table 1, that the female in 2021 reported a higher level of life expectancy than the period previous to the pandemic, and for the males, the life expectancy is the same as for 2019. This seems to suggest that for this group the effect of the pandemic is just restricted to the year 2020.

For the Nordic group, Figure 1 shows that life expectancy is the lowest among the considered groups, both for females and males. In 2020, the female group has a smaller decrease than the other groups as we see from Table 1 and have a higher life expectancy than the pre-pandemic years in 2021. On the other hand, the life expectancy of Nordic men does not decrease after 2019. Instead, it increases both in 2020 and 2021.

For the other European group, both male and female life expectancy was affected by the COVID-19 pandemic in 2020. In particular, we observe that the male life expectancy was slightly higher than the Swedish male one between 2010 and 2019, but it shifted in 2020 and remained lower than for Swedish males in 2021. For other European females, the life expectancy was higher than Swedish females in the years prior to the pandemic. It decreased in 2020, but it remained higher than the Swedish female group. In 2021, the other European and Swedish female life expectancies converge.

For the non-European group, we observe from Figure 1 that in the years between 2010 and 2019, they always had higher life expectancy than the other groups. Both genders were affected by the COVID-19 pandemic in 2020, but the drop as we see from Table 1 is larger for the males. In 2020, there was a recovery for both groups, but they did not reach the pre-pandemic levels. Among non-European men in particular, life expectancy in 2021 has only recovered to similar levels in 2012—almost a decade earlier. Among the non-European women, levels of life expectancy in 2021 broadly equate to their level of life expectancy in 2018.

Before the conference, we plan to decompose the total population life expectancy for the type of residence permits. We expect to find that the group with a refugee permit contribute most positively to national life expectancy leading up to 2020 but contributes most negatively to drops in life expectancy during COVID-19.

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