1. Lives of refugees in high-income countries

Since 2015, Germany has become home to significant numbers of refugees and asylum seekers which has led to it topping the ranking of European destination countries. German is now the fifth in the world for the number of accommodated refugees (UNHCR, 2021). The large influx of refugees during these last few years put great strain on German receiving system that struggled with offering full services to newly arrived refugees and asylum seekers (Hinger, 2016).

Despite the fact that the quality of life of refugees is expected to have been improving in the aftermath of their arrival to Germany, refugees and asylum seekers must still face several problems of integration and economic deprivation as well as concerns and worries for their lives (e.g., about 90% are unemployed and nearly 54% are worried that they will be unable to stay in Germany—own elaborations on data from the 2016 IAB-BAMF-SOEP1 Survey of Refugees in Germany).

Whereas academic research is traditionally devoted to examining the objective pillars of the integration of immigrants and refugees (their educational accomplishments, language skills, or labour market positioning), immigrants’ subjective evaluation of their life situation -and subjective well-being more in general- has only started to draw scholarly attention in recent years (Colic-Peisker, 2009; Kogan et al., 2018; Schiele, 2020). Nowadays, life satisfaction (LS) of refugees is still an under-explored theme. Amongst the main predictors of refugees’ well-being, we find mental and general health, family ties, and housing conditions, all widely reported in the literature (Phillips, 2006; Belau, 2019; Gambaro et al., 2018; Walther et al., 2020).

Issues of mental health (such as depression, anxiety, or post-traumatic distress) are reported in a recent and increasing strand of literature for refugees hosted also in highly developed countries (see, e.g., the Leiler et al. (2019) study on Sweden; Walther et al. (2020) and Georgiadou et al. (2018) in Germany).

Family ties strongly influence subjective well-being, especially in the case of refugees, whose family members often remain in their homeland or have died due to conflicts or during the migration (Gambaro et al., 2018; Busetta and Mendola, 2018).

Despite the clearly improved objective living conditions of the migrants, whether migration has significant and long-lasting effects on life satisfaction of those who have moved, is still debated in the scientific literature. Indeed, Hendriks (2015) underlined contradicting results in his review of cross-sectional studies on immigrants, that compared subjective well-being of “movers” to that of “stayers”.

The aim of this paper is to contribute to the ongoing literature on the quality of life of refugees in host nations. Using the first wave of the IAB-BAMF-SOEP survey of refugees (carried out in 2016), we estimate ordinal regression models for LS levels and offer some preliminary statistical investigations into life satisfaction and its components in the context of refugees who arrived in Germany between 2013 and 2016.

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1 The Institute for Employment Research (IAB), the Socio-Economic Panel (SOEP) at the German Institute for Economic Research (DIW Berlin), and the Research Centre on Migration, Integration, and Asylum of the Federal Office of Migration and Refugees (BAMF-FZ). See Brücker et al. (2016).
The following Section 2 presents in details data and methods; Section 3 proposes our statistical analyses, and Section 4 concludes discussing the main results from this study.

### 2. Data and methods

Data are from the IAB-BAMF-SOEP Survey of Refugees in Germany that is a survey of people who entered Germany between 2013 and 2016 and applied for asylum, whatever the result of the application. It includes information on individual socio-demographic characteristics and household level information. The survey is longitudinal and provides yearly interviews of household members aged 18 and over. In this study, we rely on the first wave of the survey (2016).

Using a sample of 3,408 individuals, we present some preliminary analyses on the life satisfaction of these vulnerable individuals. Life satisfaction is understood to be a subjective aspect of the quality of life (see Cummins, 2000); the main variable consists of people’s self-assessment of their overall life satisfaction (“How satisfied are you currently with your life in general?” arranged on an 11-point scale). LS answers show the usual negatively skewed distribution with a generally high mean (Q1 = 6, Q2 = 8, Q3 = 9, mean = 7.28, standard deviation = 2.31, skewness = -0.88). Given this, we arranged LS levels by quartile (slightly rounding the cut-points in order to guarantee about 25% of observations for each interval) and an ordinal regression model was estimated to focus on the association among levels of LS and main individual and household level characteristics.

Analyses include **sociodemographic control variables**: such as sex of the respondents, their education level (arranged in three ordinal levels, according to ISCED standards), nationality proxied by the country of origin (Syria, Afghanistan, Iraq, former USSR; Africa; Balkan region, other countries), and age (including a quadratic effect). Then a set of **post-migration personal factors** are considered: time in Germany (as the number of years passed between arrival in Germany and the time of the interview); legal residence permit (dummy variable in which we combined refugees, entitled to asylum and holder of subsidiary/humanitarian and other forms of international protection into one category, and placing into the other one those awaiting the response to asylum application ad those whose application was dismissed), concerns about their own economic situation (a lot, somewhat, not at all). **Post-migration family related factors** include family arrangements (household size, presence of a partner/spouse possibly cohabitant); kind of accommodation (shared with others or private).

In the end, we also considered a selected set of life domains for which satisfaction evaluations were available: satisfaction with current living arrangements, with the quality of the food, with the privacy that they have, with the safety of their neighbourhood and with their own current health. These were assumed to be post-migration subjective well-being factors.

### 3. Results

**Descriptives**

Our sample is made up of 3,408 adults, with a prevalence of men (62%), a mean age of 33.5 years, with four nationalities (Afghan, Eritrean, Iraqi, and Syrian) accounting for about 83% of the sample. Among them, 85.67% do not have any form of international protection, in part because their application was dismissed and partly because they still have a pending request; the others being granted by some form of international protection like refugee status (73.66%), international protection or status of tolerance.
Satisfaction with life was generally rated lower by men (average score is 7.15; IC95%: 7.05-7.25) than by women (7.50; IC95%: 7.38-7.61), by people without or with a pending legal status (7.01; IC95%: 6.88-7.15) than by refugees and holders of international protection (7.45; IC95%: 7.36-7.55).

Figure 1 shows a comparison among nationalities on the average LS score, along with 95% confidence intervals. Former USSR countries have the highest LS mean (7.95); neatly higher than the average LS of Africans, Iraqis, and Syrians.

**Figure 1:** Mean life satisfaction score (and 95% confidence intervals) by main nationalities

![Graph showing mean life satisfaction scores by nationalities](image)

**Multivariate analysis**

Ordinal regression model was estimated in order to provide possible explanations of different levels of LS through the sets of covariates presented above.\(^2\) Table 1 displays the ordinal regression model estimates for LS scores arranged in quartiles.

**Socio-demographic factors:** while there is not any difference between men and women on LS, age has an effect which is slightly non-linear: youngsters show higher values of LS than elderly. Education shapes life satisfaction too: highly educated respondents are less satisfied than those with low levels of education, other things being equal; instead, respondents with low and medium level of education experience the same LS.

The country of origin is significantly associated with life satisfaction: when compared to Syrians, Afghans people as well as Balkans, Iraqis, those from former USSR, or from “other countries” have a higher level of life satisfaction. No statistically significant differences emerge between Syrians and people coming from African countries.

**Post-migration personal factors:** As expected, even controlling for main socio-demographic characteristics, respondents’ LS is higher among those who obtained any kind of legal protection than among those who had not (yet) received their residence permit.

LS is negatively associated with the extent of financial concerns. Particularly, people partially concerned or not concerned at all with financial issues show higher level of LS.

**Post-migration family related factors:** the two covariates accounting for family arrangements are associated significantly with LS. Indeed, according to international studies (see, e.g., Busetta and Mendola, 2019), higher household size and having a cohabiting partner/spouse -which are both proxies of social support and, more in general, of social capital- increase refugees’ LS. Particularly, not having a partner or living separated from him/her (that is not in the same house nor in the same

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\(^2\) An ordinal logit model with parallel lines assumption was first estimated. The violation of this assumption, that was assessed via a Brant test (Brant 88.31, df=48, p=0.000), is due to the coefficients for higher education (odds ratios: 0.858; 0.727***, 0.578***), being with a legal residence permit (1.458***; 1.255**; 1.010), and not concerned at all about ones’ own economic situation (1.922***; 1.350***; 1.105). Since the other estimates were almost identical, we decided to present in table the PL model.
city) lowers the life satisfaction, even controlling for other personal and family characteristics. Unexpectedly, respondents who live in private houses have a lower level of satisfaction than those who live in shared ones, other things being equal. These last results could be related to the feeling of loneliness even if this hypothesis would need a further in-depth analysis.

Post-migration subjective well-being: As accounted for in many studies, also perceived well-being measures related to specific life domains are highly significantly associated with overall life satisfaction. Increasing levels of satisfaction with health, living arrangements, feeling safe with neighbourhood, and privacy in the current living arrangements, positively affect LS.

Table 1: Ordinal regression model for Life Satisfaction quartiles (odds ratio estimates)

| Covariates                      | Odds ratio | Sign. | Covariates                      | Odds ratio | Sign. |
|---------------------------------|------------|-------|---------------------------------|------------|-------|
| **SOCIO-DEMOGRAPHIC FACTORS**   |            |       | **POST-MIGRATION FAMILY FACTORS** |            |       |
| Gender (ref. male)              |            |       | Family arrangements             |            |       |
| Female                          | 1.097      |       | Household size                  | 1.076      | ***   |
| Age                             | 0.959      | **    | Partner or Spouse (ref. none)   |            |       |
| Age squared                     | 1.001      |       | cohab. partner/spouse           | 1.407      | ***   |
| **Nation group (ref. Syrians)** |            |       | not cohab. partner/spouse       | 0.969      |       |
| Afghans                         | 1.752      | ***   | Accommodation (ref. shared acc.)|            |       |
| Africans                        | 1.237      |       | private apartment               | 0.757      | ***   |
| Balkans                         | 1.603      | ***   | **POST-MIGRATION SUBJECTIVE WELL-BEING** |            |       |
| Former USSR                     | 1.617      | **    | Sat_Health                      | 1.173      | ***   |
| Iraqs                           | 1.211      | *     | Sat_Living arrangements         | 1.251      | ***   |
| Other nationalities             | 1.236      | *     | Sat_Safety neighbourhood        | 1.063      | ***   |
| **Education (ref. low)**       |            |       | Sat_Quality of Food             | 1.081      | ***   |
| middle school                   | 0.900      |       | Sat_Privacy                     | 1.055      | ***   |
| high school or more             | 0.694      | ***   | Cut-points                      | 16.18      | ***   |
| **POST-MIGRATION PERSONAL FACTORS** |          |       |                                 | 70.81      | ***   |
| With a legal residence permit   | 1.251      | ***   |                                 | 210.80     | ***   |
| Years in Germany                | 1.080      |       |                                 |            |       |
| Economic concerns (ref. a lot)  |            |       |                                 |            |       |
| somewhat concerned             | 1.428      | ***   |                                 |            |       |
| not concerned at all            | 2.384      | ***   |                                 |            |       |
| Adj. R²                         | 0.829      |       | N = 3,408                       |            |       |
| Bic                             | 394.8      |       | *** p<0.001; ** p<0.05; * p<0.10|            |       |

4. Discussion and conclusions

When they arrived in highly developed host nations, refugees face new challenges for their integration and successful settlement, and often experience material deprivation, isolation, uncertainty, and bad quality of life. However, life satisfaction of refugees in the post-migration phase, in high-developed hosting countries, is an under-investigated theme.

Using the results from the first wave of the German survey of refugees, we provide preliminary analyses of the determinant of their life satisfaction.

Our estimates pointed out how lower life satisfaction levels are associated with the condition of being older, Syrian, alone or with few family members, highly educated, without a partner or a spouse or without a cohabiting ones, and without a legal permit to stay in Germany.

Furthermore, our analyses highlight the fact that those factors addressing a greater stability in people lives (e.g., the status of refugee or the international protection, as well as living as a couple and without financial concerns) appear to be correlated with greater life satisfaction (Nesterko et
al., 2012; Colic-Peisker, 2009). Hence, to foster social integration and increase LS of refugees and asylum seekers, it stands out as crucial to shorten the process for the issue of the status of refugees or of the international and humanitarian permits (which are also related to the possibility of family reunification) and foster opportunities for economic independence (pre-requisite for the formation of new family unions).

As expected, LS is positively associated with satisfaction with some specific life domains, which hence play an important role in shaping the overall life satisfaction (Amint, 2010). Not trivially, being satisfied with these specific life domains (such as safety, privacy, food), related to the new life conditions in Germany, tell us about the process of acculturation (Berry, 2017) which involves changes in social structures and institutions and in people’s behaviours, towards an integration pathway that accounts for cultural traits of both the origin and host country. It is indisputable that satisfied immigrants have a much better integration in society and can give a greater contribution to its development. Thus, understanding and fostering life satisfaction is widely seen as a central goal.

Among the limitations of this contribution, we acknowledge the lack of a deeper analysis of the migratory history. Indeed, since immigrants, and refugees in particular, are a heterogeneous group with a great variety of immigration-related experiences, their past experiences can affect current evaluation of life satisfaction both in terms of inertia of negative feelings accumulated during the travel phase of their migration, and in terms of resilience.

Moreover, the cultural dimensions of the acculturation process, mentioned above and herein accounted for by means of subjective well-being proxies, could be better argued including some other or additional descriptors of the quality of life in Germany.

From a methodological point of view, given the practice to assimilate 11-point scale variables to numerical ones, models for skewed variables (e.g., using a Gamma link) could be tested for a better prediction of LS scores, allowing for parsimony in the number of estimated coefficients.

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