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Prevalence and risk factors of psychological distress among foreign-born population in Finland: A population-based survey comparing nine regions of origin

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Abstract

Aims Previous research indicates that foreign-born populations experience more psychological distress than general populations. However, it remains unclear how prevalence varies between regions of origin. The role of socio-demographic and migration-related factors also needs to be further investigated. We aimed to (a) compare the prevalence of psychological distress in foreign-born and general Finnish populations, (b) investigate differences in prevalence between nine regions of origin and (c) examine which socio-demographic and migration-related factors are associated with distress among foreign-born populations.

Methods The study used data from the Survey on Well-Being among Foreign Born Population (FinMonik), a population-based survey (n=6312) of foreign-born populations living in Finland collected between 2018 and 2019 by the Finnish Institute for Health and Welfare. Psychological distress was measured using the Mental Health Inventory-5 (MHI-5), with a cut-off point of 52. Logistic regression was used to adjust analyses by age and sex to determine the prevalence of psychological distress and the associated socio-demographic factors.

Results Psychological distress was more prevalent among those who were foreign born (17.4%) than among the general population (12.9%). Migrants from the Middle East and North Africa had the highest prevalence (29.7%) compared to other regions of origin. Unemployment or economic inactivity, international protection as a reason for migration and beginner-level language proficiency were the main factors increasing the odds for distress among foreign-born populations.

Conclusions Foreign-born populations experience more psychological distress than the general population, but prevalence varies between regions of origin. Future efforts should aim at a better understanding of the mental health risk factors and the development of targeted interventions for these subpopulations.

Key words: foreign-born population, migrant, migration, psychological distress, depression, anxiety, mental health, population-based study, prevalence, monitoring

Background

Despite the fact that migration has frequently been identified as a risk factor for mental health problems, research findings also demonstrate opposite results [1]. Especially North American studies demonstrate the ‘healthy immigrant effect’ which indicates better mental health for recently arrived migrants compared to native population [2]. Additionally, a recent systematic review found no significant differences between depression prevalence of migrant and native populations [3]. However, in general, majority of studies comparing native and migrant populations indicate more depressive and anxiety symptoms among migrant populations [4,5] Studies conducted in Nordic countries have reported similar results [6,7,8,9].

One reason for inconsistent results may be the lack of population-based studies examining migrants as heterogeneous subpopulations. Migrant subpopulations in studies are often diverse for instance in terms of socio-demographic and migration-related factors which complicates the comparison of studies [7]. Different socio-demographic and psychological characteristics (e.g. optimism, personal resilience, self-esteem) and socio-economic factors can have an influence on the mental health of migrants similarly to general populations [10]. Additionally, mental health is dependent on experiences prior to migration [11], perceived discrimination [10,12,13], acculturation stress [10,14] as well as entry and integration policies in the host country [15]. Moreover, different migration-related factors are found to be associated with mental health such as region of origin [16], reason for migration [1,17], length of stay in host country [3] and language competency [7]. However, the findings of the relation between migration-related factors and psychological distress remain inconsistent.

Aims

This study aims to 1) compare the prevalence of psychological distress in foreign-born and general

Finnish populations, 2) investigate differences in prevalence between nine regions of origin and 3) examine which socio-demographic and migration-related factors are associated with psychological distress among foreign-born population.

Methods

The present study used data from the Survey on Well-Being among Foreign Born Population (FinMonik) which is a population-based survey of foreign-born population living in Finland conducted by the Finnish Institute for Health and Welfare [18]. The data were collected between March 2018 and January 2019 primarily by an electronic questionnaire. More detailed information of the FinMonik study is provided elsewhere [18]. Data from the FinSote National Survey of Health, Well-Being and Service Use (FinSote 2018) was used as a reference group giving information on the health and well-being of the general Finnish population. The reference group dataset was collected between 2017 and 2018 by an online questionnaire or by post.

Sample and study participants

The target population of the FinMonik study consisted of working-aged (18–64-year-olds) foreign-born population currently living in all regions of mainland Finland (thus Finland excluding Åland) who had lived in Finland at least for 12 months and whose parents were also born abroad. All immigrants, regardless of the reason for migration, were included in the study. A stratified random sample was obtained from the population register maintained by the Digital and Population Data Service Agency in March 2018. The strata ($n=24$) consisted of 18 counties and the six largest cities, covering all of mainland Finland. The stratum sizes varied from 250 to 1100. After removing the over-coverage ($n=774$), the sample size in total was 12,877. Of them, 6,836 responded to the survey. In the present study, the responses of 20–64-year-olds were included ($n=6,312$) to match the age range of FinSote data. Altogether, the overall response rate was 53.1%. Examinees responded to either electronic survey (35.9%, $n=4,618$), paper questionnaire (14.6%, $n=1,878$) or telephone interview (2.6%, $n=340$). The questionnaire was translated into 17 most common languages spoken in Finland and telephone interviews were conducted in ten languages. The FinSote survey was conducted in Finnish adult population aged 20–99 years. The sample size was 59,440 with 3,300

persons selected from each county. The overall response rate in this study was 45% (n=26,422) of which the responds of 20–64-year-olds were used in the present study (n=11,378).

Measures

Psychological distress

Psychological distress may involve a broad spectrum of psychological suffering, such as symptoms of depression and anxiety. In the present study psychological distress was measured by the five item Mental Health Inventory (MHI-5) which is a subscale of the Medical Outcomes Study (MOS) Short Form Health Survey (SF-36) [19]. Originally MHI was developed by Veit and Ware in 1983 [20] involving 38 items. MHI-5 includes five questions about the occurrence of depressive and anxiety symptoms during the past four weeks. Out of the five questions, two are aimed at depressive symptoms (feeling down, downhearted, and blue), two at anxiety symptoms (feeling nervous, calm, and peaceful) and one at more general psychological well-being (happiness). Each of the five questions are answered on a scale from 1 (all of the time) to 6 (none of the time) and responses are combined and re-scaled to lie on a range of 0 (poor mental health) and 100 (good mental health). The cut-off point for clinically significant symptoms was 52 so that the ones scoring under 52 were defined as psychologically distressed since previous studies have shown that individuals scoring 52 or less are more likely to suffer from depression [21].

Socio-demographic and migration-related variables

The chosen background variables were age, gender, marital status, geographical region, educational level, and employment status. The variables were selected based on previous literature. To enable regional comparison, the classification of ‘‘catchment areas for highly specialized medical care’’ was used. This classification divides Finland into five regions in which university hospitals are located. We used abbreviations such as Helsinki region and Turku region based on the biggest city of every region. The migration-related variables used in this study were region of origin, age at moving to

Finland, years lived in Finland, reason for moving to Finland and Finnish or Swedish language proficiency. All background variables were collected by combining self-reported and register-based information [18] except for reason for migration and Finnish or Swedish language proficiency which were self-reported. It is noteworthy that because the information of reason for migration is self-reported, our results may not be comparable to other studies. Unlike other background variables, migration-related questions were only asked from foreign-born population. All questions asked in FinMonik study can be found elsewhere in Finnish [22].

Statistical analysis

The analyses were carried out using SAS 9.4 and SUDAAN 11.0.3 statistical software. Weights were used in all analyses, reducing non-response bias and accounting for the unequal sampling probabilities. The calculation of the weights is described in more detail elsewhere [18]. The stratification of the sample was accounted for in the variance estimates using Taylor linearization method. Finite population correction was also applied because a large proportion of the total population was included in the sample in some regions [23]. In Tables 2 and 3, logistic regression was used to adjust analyses by age and sex. Table 3 consisted of a series of logistic regression models for each single predictor variable controlling for age and sex. In table 2, model-adjusted estimates were calculated using predicted marginals [24]. Statistical significance was assessed with 95% confidence intervals and Satterthwaite-adjusted F-value.

Ethical consideration

The FinMonik study was approved by the Institutional Review Board (IRB) of the Finnish Institute for Health and Welfare (THL). Informed consent was obtained from the respondents to participate in the survey.

Results

Table I shows the main characteristics of the study population. Prevalence rates of psychological distress among different subpopulations are presented in Table II. The prevalence was significantly higher in foreign-born (17.4%) than in general population (12.9%). A similar result was found for both men (17.9% vs. 12.8%) and women (16.9% vs. 13.1%). Comparing the age groups of foreign-born and general populations, distress was significantly more prevalent among foreign-born population in the age groups of 40–49 and 50–64-year-olds. In younger age groups prevalence rates were similar between the populations. Compared to the general population, distress was more prevalent in foreign-born population in all five geographical regions.

Table 1 here

Among the different regions of origin, the highest prevalence of distress was observed in migrants from Middle East and North Africa (MENA) (29.7%). Additionally, East Asian migrants had significantly higher prevalence compared to the general population (20.5%). In men, distress was more prevalent for migrants from MENA and East Asia and less prevalent for migrants from Latin America compared with the general population. In women, only migrants from MENA had significantly higher prevalence than women in the general population. Between genders, difference was found only in Latin American migrants in which men had significantly lower prevalence than women. Migrants from MENA had a higher prevalence of distress in every age group compared to the general population. In addition, significantly higher prevalence rates were found among 30–39-year-old migrants from East Asia, 40–49-year-old migrants from North America, Oceania and Europe (excluding Finland and Estonia) and 50–64-year-old migrants from Russia or former Soviet Union. Instead, lower prevalence rates were found in 20–29-year-old migrants from Africa (excluding North Africa) and Latin America. Among migrants from MENA, distress was more prevalent in all

geographical regions compared with the general population. Otherwise, prevalence rates varied widely between geographical regions.

Table 2 here

As to how socio-demographic and migration-related factors related to psychological distress, married men in the sample had increased odds for distress (odds ratio OR 1.42, 95% confidence interval CI 1.06–2.00) compared with single, divorced, or widowed men. In women, there was no association found between marital status and distress. Being unemployed or economically inactive (meaning other employment status than employed or unemployed) increased the odds of distress in both men (OR 1.81, 95% CI 1.25–2.62) and women (OR 2.06, 95% CI 1.48–2.87). Additionally, women with the lowest educational level had significantly increased odds for distress (OR 1.65, 95% CI 1.05–2.62) compared to women with higher educational level.

Migrants whose reason for migrating to Finland was international protection, demonstrated a significantly higher likelihood for distress in both men (OR 1.59, 95% CI 1.03–2.46) and women (OR 1.79, 95% CI 1.07–2.99) compared to those who had moved to Finland due to work or studies. Men who had migrated at the age of 30 or older had increased odds for distress (OR 2.15, 95% CI 1.14–4.08) compared with men who migrated at the age of 15 or younger. This association was not found among women. For both genders, there was no association found between distress and years lived in Finland. Compared with those speaking Finnish or Swedish on an excellent level, migrants with a language proficiency of a beginner had significantly higher odds for distress in both men (OR 1.96, 95% CI 1.26–3.05) and women (OR 1.97, 95% CI 1.32–2.94). The odds ratios of different associated factors can be seen in detail in Table III.

Table 3 here

Discussion

Findings from our study are largely consistent with previous research from Nordic countries suggesting that migrant populations experience more psychological distress than general or native populations [6,7,8,9]. This finding is somewhat contradictory to a Finnish register-based study suggesting that depressive disorders and anxiety are less common in migrants than Finns [25]. The gap between symptoms and diagnoses may be explained by the finding that migrant population is underrepresented in mental health services in Finland [26,27]. Future research should aim at further investigating the gap and factors underlying it. Also, the possible cultural and structural barriers to mental health care should be identified.

Our study extends the knowledge about the mental health of migrants from different regions of origin. Among migrants from MENA, distress was more prevalent in both genders, all age groups and geographical regions compared to the general population. This corresponds with previous studies conducted in Finland [7,25,26,27] and other Nordic countries [16,9,28]. We also demonstrate heterogeneity in the distress of migrants from different regions of origin which highlights the need for further investigation of these subpopulations. Additionally, these differences should be taken into consideration in the implementation of interventions targeted at migrants. Previous studies have reported a higher risk of depression and anxiety for migrants from low-income countries [6] and for Russian and other Eastern European migrant women [7,16] and a higher risk of depression for migrants arriving from outside Europe [4]. Several factors may make these migrant subpopulations vulnerable to psychological distress. Traumatic experiences prior to migration [11,28], different cultural perceptions about mental health and low levels of acculturation are found to be important factors explaining this result [28]. In addition, cultural differences can influence the experience and expressions of mental health problems [29]. Also, in Finland discrimination experiences have found

to be associated with mental health symptoms among Kurdish, Somalian, and Russian migrants [12,13].

In our study, female gender was not found to be a risk factor for psychological distress in foreign-born population which is opposite to previous findings [5,6,28]. A previous Finnish study highlights the distress of Kurdish and Russian women compared to men and considers this to be due to the vulnerability or lower level of acculturation of women or greater willingness of women to report symptoms [7]. Other underlying reasons for the gender differences may be high disparity between cultures in gender roles [28] or family values or different risk factors affecting their mental health [10]. As a conclusion, gender differences should be addressed in future studies since they may differ between regions of origin.

In Finland, a half of all migrants live within the metropolitan area and a quarter in the capital city, Helsinki [30]. In our study, the prevalence of distress among foreign-born and general populations in Helsinki region was similar to other regions. Overall, distress rates varied between five geographical regions. The difference between regions may be caused by small sample sizes and low participation rates among some migrant subpopulations. The large confidence intervals reflect these uncertainties.

The suggestion that being single, divorced, or widowed is a risk factor for mental health was not supported in our study since we found that married men had increased odds for psychological distress. This is not in line with previous migrant studies [5,10] and is contrary to the general notion of marriage being a protective factor against poor mental health. However, a Swedish study also found that unmarried Iraqis and Iranians had better mental health than those who were married [28]. This may be explained by family separation and the lack of social support since men are usually the first ones to reside in a new country and family reunification may appear as a difficult and prolonged process [31]. In general, social support has been found to be a protective factor against mental health problems [5,10].

Our study adds to the existing evidence on the role of socio-economic and migration-related factors in the prevalence of psychological distress [5,6,28,32]. Psychological distress was associated with unemployment or economic inactivity among both genders and low educational level among women. Sidorchuk and colleagues [32] assumed that the role of unemployment in mental health is more significant than gender-specific and migration-related factors. Additionally, Foo and colleagues [3] suggested that unemployment leads to social and financial instability which in turn exacerbates the acculturative stress migrants already face. The role of educational level in the literature has remained unclear since many studies demonstrate that highly educated migrants suffer more often from depression and anxiety compared to migrants with a lower educational level because of the lack of jobs corresponding to education due to for example language difficulties [3,5].

The mental health of refugees has been widely investigated. In correspondence with previous studies [1,33], refugee background was observed to be associated with psychological distress in our study. Lindert and colleagues [1] found that in affluent host countries the rates of distress were similar between labor migrants and general population, but significantly higher among refugees. Henkelmann and colleagues [33] suggested that it is not only the exposure to conflict or war itself but also post-migration factors such as life-threatening journeys to a new host country, long asylum procedures, family separation and discrimination that underlie the poor mental health of refugees. The importance of awareness of the post-migration factors is highlighted since they can be influenced in host societies [33].

We observed that foreign-born men who had migrated to Finland at the age of 30 or older had increased odds for psychological distress. Abebe and colleagues [6] mentioned age at migration to be an important moderator between social status and mental health. However, this factor has not been widely investigated and it remains unclear whether it has an influence on the levels of distress. Our study revealed no association between years lived in Finland and distress which is similar to a finding from Norway [16]. In contrast, a recent review reported that the acculturative stress of migrants may

peak in the early post-migration state due to mental health improvements over time [3]. Conversely, Blackmore and colleagues [17] found in their review that the prevalence of depression among refugees and asylum seekers was persistent many years after displacement. However, anxiety symptoms were more prevalent in refugees and asylum seekers whose residency had been less than four years [17]. These findings are contrary to the ‘healthy immigrant effect’ that is recognized and investigated widely in North America [2] but may not be generalizable to the Nordic countries. Similar to the results reported previously in a Finnish study [7], our study revealed beginner-level Finnish or Swedish language proficiency to be associated with psychological distress. Also, a recent review found that language barriers are associated with acculturation stress [34] which in turn can affect the mental health of migrants. These associations highlight the importance of successful integration in which language skills play an important role.

Strengths and limitations

Population-based approach with a register-based random sample and relatively high participation rate are important strengths of our study. Also, we analyzed as many as nine regions of origin and compared their results with the general population to receive information about different migrant subpopulations. Moreover, we included various socio-demographic and migration-related factors to identify the migrant subpopulations vulnerable to poor mental health. To improve the response rate and to ensure a representative foreign-born population sample, respondents were given a chance to participate by online survey, paper questionnaire or telephone interview. Questionnaires and interviews were translated into numerous languages. Also, MHI-5 has been found to be a valid tool in detecting depressive and anxiety symptoms in population-based studies [19].

The results should be interpreted with caution considering several limitations. Cross-sectional nature of the study did not allow us to establish causality between migration and psychological distress. Also, FinMonik and FinSote studies were partly collected in different years and by different means.

This may have had an impact on the comparability of the results. Additionally, the cross-cultural validity of the MHI-5 remains unclear. It also needs to be acknowledged that the response rates were remarkably low in some subpopulations which may cause major bias, even with the analysis weights applied. We also did not investigate the mental health of newly arrived or foreign-background populations, so conclusions about their mental health cannot be drawn.

Conclusions

Our finding that foreign-born population, especially migrants from MENA, has significantly higher prevalence of psychological distress than the general population, underlines the importance of interventions targeted at them. These interventions could aim to address not only mental health issues in a narrow sense, but also to improve the overall integration of migrants by addressing issues such as acculturation, language skills, and employment that seem to be associated with psychological distress. Future research should focus on identifying the mental health risk factors of migrants from different regions of origin to achieve better understanding of these diverse subpopulations.

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