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The association between discrimination and health: findings on Russian, Somali and Kurdish origin populations in Finland

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Background: The Second European Union Minorities and Discrimination Survey recently demonstrated widespread discrimination across EU countries, with high discrimination rates observed in countries like Finland. Discrimination is known to negatively impact health, but fewer studies have examined how different types of perceived discrimination are related to health. **Methods:** This study examines (i) the prevalence of different types of perceived discrimination among Russian, Somali and Kurdish origin populations in Finland, and (ii) the association between different types of perceived discrimination (no experiences; subtle discrimination only; overt or subtle and overt discrimination) and health (self-rated health; limiting long-term illness (LLTI) or disability; mental health symptoms). Data are from the Finnish Migrant Health and Wellbeing Study ($n = 1795$). Subtle discrimination implies reporting being treated with less courtesy and/or treated with less respect than others, and overt discrimination being called names or insulted and/or threatened or harassed. The prevalence of discrimination and the associations between discrimination and health were calculated with predicted margins and logistic regression. **Results:** Experiences of subtle discrimination were more common than overt discrimination in all the studied groups. Subtle discrimination was reported by 29% of Somali origin persons and 35% Russian and Kurdish origin persons. The prevalence of overt discrimination ranged between 22% and 24%. Experiences of discrimination increased the odds for poor self-reported health, LLTI and mental health symptoms, particularly among those reporting subtle discrimination only. **Conclusions:** To promote the health of diverse populations, actions against racism and discrimination are highly needed, including initiatives that promote shared belonging.

Introduction

Discrimination can be defined as the unequal treatment of individuals or a socially defined group. It can be conceptualized as systemic unfair treatment that seeks privileges for members of dominant groups at the expense of other groups.[1] The mechanisms by which discrimination can harm health are multiple, with major pathways including e.g. economic and social deprivation, social trauma, health-harming responses to discrimination and inadequate medical care.[2] Although research shows that discrimination is associated with health,[1,3–6] few epidemiological studies have examined the association between different types of discrimination and health.[7] Particularly European research on the association between ethnic discrimination and health has been lacking.[8]

The Second European Union Minorities and Discrimination Survey and its predecessor (EU-MIDIS) demonstrated widespread discrimination across EU countries.[9,10] The prevalence of discrimination towards different groups ranged between 4% and 50%,[9] with notably high discrimination rates observed in Finland (45%). Also Finnish studies have demonstrated ethnic discrimination e.g. in labour market recruitment.[11] Experiences of discrimination are shown to impact psychological stress among various immigrant groups in Finland.[12] Perceived discrimination is shown to be associated with feelings of unsafety, low trust towards institutions in society, mental health symptoms and poor quality of life.[13] Perceived discrimination in health services is also associated with higher odds for seeking health care abroad.[14]

This study examines (i) the prevalence of different types of perceived discrimination among Russian, Somali and Kurdish origin populations in Finland, and (ii) the association between different types of perceived discrimination (no experiences; subtle discrimination only; overt or subtle and overt experiences) and selected indicators of health [self-rated health (SRH); limiting long-term illness (LLTI) or disability and mental health symptoms].

Methods

Study participants

Data from the Migrant Health and Wellbeing Study (Maamu, 2010–2012) are from a randomly selected sample from the National Population Registry including 3000 adults from six Finnish cities (1000 per population group). Categorized based on birthplace and mother tongue, the sample is considered to comprise three population groups: persons of Russian, Somali and Kurdish origin. The inclusion criteria for Russian origin persons were birthplace in the former Soviet Union or Russia and mother tongue Russian or Finnish, for Somali origin persons birthplace in Somalia and for Kurdish origin persons birthplace in Iraq or Iran and mother tongue Kurdish. The study population was restricted to persons aged 18–64 years who had resided in Finland for at least 1 year. The sample did not include persons still seeking for asylum. In 2008, 93% of Somali, 67% of Kurdish and 47% of Russian origin persons meeting the inclusion criteria lived in the studied municipalities.[15]

A structured interview (ca. 1–1.5 h), health examination and short interview/questionnaire were conducted by trained multi-lingual personnel. Invited persons were contacted by mail, phone and

personal visits (Supplementary figure S1). The participants of this study included 1795 persons comprising 69% of the invited Russian origin persons ($n = 692$), 49% of Somali origin persons ($n = 489$) and 61% of Kurdish origin persons ($n = 614$).

The Maamu Study was approved by the Co-ordinating Ethical Committee of HUS, Finland. Written informed consent was obtained from each participant.

Explanatory variables

Perceived discrimination was examined using four items from The Everyday Discrimination Scale,[16] a widely used measure of perceived discrimination in various population groups.[17] The question (yes/no) was formulated as 'Have you experienced the following things in your everyday life in Finland', and the items included: 'You are not treated as politely as other people', 'You are not treated as respectfully as other people', 'You have been called names or insulted verbally' and 'You have been threatened or harassed'. A variable with three categories was created: (i) no experiences of discrimination, (ii) only subtle discrimination, (iii) overt discrimination or subtle and overt discrimination. Subtle discrimination refers to reporting being treated with less courtesy than others and/or treated with less respect than others; overt discrimination to being called names or insulted and/or threatened or harassed, as used previously.[7]

Selected socio-demographic characteristics were included: age (continuous), gender, education, time lived in Finland (continuous) and region in Finland. Education was examined using a dichotomous variable of completing high school (or part of it). Region in Finland was divided into the capital city area (Helsinki, Espoo and Vantaa) and other cities (Turku, Tampere and Vaasa).

Outcome measures

SRH is a widely used measure of health, which is shown to predict mortality.[18] SRH was examined by asking: 'Would you describe your current health status as good, fairly good, average, fairly poor or poor?'. Those reporting less than fairly good health were coded as having poor SRH.

LLTI or disability was assessed with the question: 'Do you have any permanent or chronic illness or any defect, trouble or injury, which reduces your working capacity or functional ability?' (yes/no). Similar questions have been used previously [e.g. Refs. (19, 20)].

The Hopkins Symptom Checklist-25 (HSCL-25) was included in the health examination to measure symptoms of depression and anxiety.[21] The scale ranges from 1 ('not at all') to 4 ('extremely'). Responses were summed and divided by the number of answered items to generate a symptoms mean score (1.0–4.0). Participants who had responded to at least 20 items were included in the analysis. A mean score of >1.75 was considered as clinically significant symptoms.[22]

Analysis

Age-adjusted prevalence rates were calculated using predictive margins, an appropriate method for comparing groups using complex survey data.[23] Logistic regression was used for categorical variables and linear regression for continuous variables. Satterthwaite adjusted F-statistic was used to assess the differences in the characteristics. A P values of <0.05 was considered statistically significant. Logistic regression was applied to calculate the associations between discrimination and the indicators of health in tables 2–4. Supplementary tables S2–S4 present these results by gender. Potentially important explanatory variables were identified from literature and examined using manual assessment. Forward selection was then applied in the model-building process. Model 1 with perceived discrimination, age and gender was used as the baseline model for our variable selection. Model 2 additionally adjusts for education, time lived in Finland and region. Associations between the confounding variables 'age' and 'length of stay' and each of the outcome variables in all population groups were assumed to be linear, based on results of the fractional polynomials approach.[24] There were too few observations for statistical analysis in the Somali origin group reporting mental health symptoms.

All analyses were conducted using SAS 9.3/SUDAAN 11.0.1 software. Inverse probability weights calculated with age group, gender, ethnic group, municipality and marital status were used to reduce bias due to non-response and different sampling probabilities and to produce estimates for means and percentages that are representative of populations of Russian, Somali and Kurdish origin in Finland. The population sizes were moderate, and a significant proportion of the total population was included in the sample, hence finite population correction[25] was applied in all analyses.

Results

Prevalence of subtle and overt discrimination

The main characteristics of the study populations are presented in table 1. The prevalence rates of different types of discrimination by group and region are presented in Supplementary table S1. No experiences of discrimination were reported by 59% of Russian origin persons, 62% of Kurdish origin persons and 63% of Somali origin persons. Perceived subtle discrimination was more common than perceived overt discrimination in all three groups. Subtle discrimination was reported by 29% of Somali origin persons and 35% of Russian and Kurdish origin persons. Overt discrimination was reported by 22% of Russian origin persons, 23% of Kurdish origin persons and 24% of Somali origin persons. Among Russian origin persons, 19% reported only subtle experiences of discrimination, while 22% reported either overt or both overt and subtle experiences. The corresponding figures among Somali origin persons were 12% and 24%, and among Kurdish origin persons 16% and 23%.

The prevalence of perceived discrimination was also examined by reason for migration and region. No differences in the prevalence of discrimination were found when comparing those of Ingrian Finnish background (a population of Finnish descent) to those Russian origin persons with other reasons for migration (data not shown). Among Somali and Kurdish origin persons, no differences in perceived discrimination were found between those of refugee background and those with other reasons for migration. Differences were, instead, found when comparing experiences of discrimination by region in Finland (Supplementary table S1). Among Russian origin persons, experiences of discrimination were less common in the capital city and experiencing overt or subtle and overt discrimination was more common among those living in the other cities. Among Somali origin persons, great variation was found in the prevalence of perceived discrimination by region. While 41% of the Somali origin participants living in the capital city area reported experiences of discrimination, only 13% of the participants living in the other regions reported discrimination (P values <0.001). No differences in the prevalence of discrimination by region were found among Kurdish origin persons.

The association between perceived discrimination and health

Experiencing only subtle discrimination increased the odds for poor SRH among Russian and Kurdish origin persons (table 2). These associations remained in Model 2. Subtle discrimination increased the odds for poor SRH among Russian origin men and women, while among Kurdish origin persons statistically significant associations were not found in the gender-stratified analyses (Supplementary table S2). Among Somali origin persons, the associations between discrimination and SRH were significant only for

Table 1 Characteristics of the study populations

	Russian origin (692) %[a] (*n*)[b]	Somali origin (489) %[a] (*n*)[b]	Kurdish origin (614) %[a] (*n*)[b]	*P*-value
Explanatory variables				
Age (mean, range)	39.5 (18–64)	34.2 (18–64)	34.9 (18–63)	<0.001
Gender: women	62.0 (439)	55.8 (271)	44.8 (288)	<0.001
High school graduate[c]	76.5 (518)	28.2 (109)	43.2 (254)	<0.001
Employed	53.8 (384)	25.7 (108)	40.2 (238)	<0.001
Poor knowledge of Finnish/Swedish	9.3 (77)	19.4 (103)	16.5 (102)	<0.001
Living in municipal or non-profit housing	47.7 (246)	88.9 (288)	57.3 (291)	<0.001
Ingrian Finnish background	38.2 (189)	NA	NA	NA
Refugee background	NA	72.3 (233)	74.4 (378)	0.498
Time in Finland, years (mean, range)	12.1 (1.0–29.0)	12.0 (1.0–27.0)	10.9 (1.0–24.0)	<0.001
Region in Finland: capital city area	78.8 (435)	86.9 (330)	55.1 (336)	<0.001
Outcome variables				
Poor SRH	28.0 (233)	15.3 (58)	32.3 (183)	<0.001
Long-term illness or disability	30.2 (228)	17.4 (65)	30.4 (170)	<0.001
Mental health symptoms[d]	16.1 (79)	8.8 (32)	34.8 (175)	<0.001

a: Weighted and age-adjusted prevalence (only weighted mean for age and time lived in Finland).
b: Crude *n*, for mental health symptoms data from the health examination (Russian origin $n = 465$; Somali origin $n = 377$; Kurdish origin $n = 509$) and for migration background and housing variables data from the long interview (Russian origin $n = 516$; Somali origin $n = 340$; Kurdish origin $n = 503$).
c: Completed high school or part of high school in any country.
d: HSCL-25 (Hopkins Symptom Checklist-25), cut-off point > 1.75.
P values Difference between the three groups (two groups for refugee background), Satterthwaite adjusted F-statistic.
NA not applicable.

Table 2 The association between discrimination and poor SRH[a]

	Russian origin		Somali origin		Kurdish origin	
	Model 1 (*n* = 683) OR (95% CI)	Model 2 (*n* = 666) OR (95% CI)	Model 1 (*n* = 472) OR (95% CI)	Model 2 (*n* = 452) OR (95% CI)	Model 1 (*n* = 609) OR (95% CI)	Model 2 (*n* = 599) OR (95% CI)
Perceived discrimination						
No experiences of discrimination	1.00	1.00	1.00	1.00	1.00	1.00
Subtle discrimination only[b]	2.34 (1.47–3.74)	2.30 (1.42–3.73)	1.65 (0.62–4.37)	1.67 (0.58–4.77)	1.65 (1.00–2.72)	1.78 (1.04–3.05)
Overt[c] or subtle and overt experiences	1.35 (0.81–2.24)	1.50 (0.87–2.59)	1.77 (0.83–3.77)	2.12 (0.91–4.94)	1.19 (0.78–1.80)	1.39 (0.91–2.14)
Age, years (continuous)	1.09 (1.07–1.10)	1.09 (1.07–1.11)	1.11 (1.08–1.14)	1.12 (1.09–1.15)	1.07 (1.06–1.09)	1.10 (1.08–1.12)
Gender: men	1.00	1.00	1.00	1.00	1.00	1.00
Gender: women	1.91 (1.25–2.93)	1.87 (1.20–2.91)	3.47 (1.62–7.41)	3.21 (1.33–7.74)	1.46 (1.04–2.04)	1.48 (1.04–2.12)
Education level: high school	—	1.00	—	1.00	—	1.00
Education level: less than high school	—	0.83 (0.52–1.33)	—	1.91 (0.72–5.06)	—	2.48 (1.69–3.64)
Time in Finland, years (continuous)	—	0.97 (0.93–1.00)	—	0.94 (0.89–1.00)	—	0.92 (0.88–0.96)
Region of residence: other	—	1.00	—	1.00	—	1.00
Region of residence: capital city area	—	0.91 (0.60–1.38)	—	1.76 (0.71–4.38)	—	2.33 (1.60–3.39)

OR = odds ratio; 95% CI = 95% confidence interval.
Model 1 adjusting for age and gender.
Model 2 adjusting for age, gender, education level (high school), time since migration and region of residence in Finland.
a: Logistic regression, modeling the probability of having poor SRH.
b: Reporting being treated with less courtesy than others and/or treated with less respect than others.
c: Reporting being called names or insulted and/or threatened or harassed.

women reporting overt or subtle and overt discrimination. In all the groups, the odds for poor SRH increased with age and for women. Among Kurdish origin persons, less than high school education and living in the capital city area increased the odds for poor SRH, while longer time in Finland decreased the odds for poor SRH.

Experiencing only subtle discrimination increased the odds for LLTI among Russian and Kurdish origin persons (table 3). These associations remained in Model 2. In the gender-stratified analyses, these associations were found among Russian origin women and Kurdish origin men (Supplementary table S3). The associations between discrimination and LLTI were not significant among Somali origin persons. In all the groups, the odds for LLTI increased with age. Among Russian and Somali origin persons, the odds for LLTI were increased for women and for those living in the capital city area. Among Kurdish origin persons, less than high school education increased the odds for LLTI, while longer time in Finland decreased these odds.

Perceived discrimination increased the odds for mental health symptoms among Russian and Kurdish origin groups, both for those reporting subtle discrimination only and those reporting overt or subtle and overt discrimination (table 4). These associations remained in Model 2, but were less consistent in the gender-stratified analyses (Supplementary table S4). The odds for mental health symptoms increased with age and for women. Less than high school education and living in the capital city area increased the odds for mental health symptoms, while longer time in Finland decreased these odds. There were not enough mental health symptoms among Somali origin persons for statistical analysis.

Table 3 The association between discrimination and LLTI or disability[a]

	Russian origin		Somali origin		Kurdish origin	
	Model 1 (*n* = 683) OR (95% CI)	**Model 2 (*n* = 666) OR (95% CI)**	**Model 1 (*n* = 472) OR (95% CI)**	**Model 2 (*n* = 452) OR (95% CI)**	**Model 1 (*n* = 610) OR (95% CI)**	**Model 2 (*n* = 600) OR (95% CI)**
Perceived discrimination						
No experiences of discrimination	1.00	1.00	1.00	1.00	1.00	1.00
Subtle discrimination only[b]	1.77 (1.12–2.80)	1.71 (1.07–2.74)	1.20 (0.48–2.99)	1.13 (0.44–2.91)	2.21 (1.38–3.55)	2.43 (1.50–3.95)
Overt[c] or subtle and overt experiences	1.40 (0.87–2.24)	1.52 (0.92–2.51)	1.11 (0.55–2.26)	1.03 (0.48–2.19)	0.94 (0.60–1.46)	0.99 (0.63–1.56)
Age, years (continuous)	1.07 (1.05–1.08)	1.07 (1.05–1.09)	1.08 (1.05–1.11)	1.08 (1.05–1.11)	1.07 (1.05–1.08)	1.07 (1.05–1.10)
Gender: men	1.00	1.00	1.00	1.00	1.00	1.00
Gender (women)	1.82 (1.22–2.72)	1.69 (1.12–2.54)	3.25 (1.65–6.38)	2.64 (1.24–5.63)	1.08 (0.77–1.51)	1.06 (0.75–1.50)
Education level: high school	—	1.00	—	1.00	—	1.00
Education level: less than high school	—	0.69 (0.45–1.07)	—	1.82 (0.73–4.52)	—	1.68 (1.16–2.43)
Time in Finland, years (continuous)	—	0.99 (0.96–1.02)	—	0.98 (0.93–1.04)	—	0.96 (0.92–1.00)
Region of residence: other	—	1.00	—	1.00	—	1.00
Region of residence: capital city area	—	1.71 (1.14–2.56)	—	3.82 (1.58–9.24)	—	1.10 (0.76–1.57)

OR = odds ratio; 95% CI = 95% confidence interval.
Model 1 adjusting for age and gender.
Model 2 adjusting for age, gender, education level (high school), time since migration and region of residence in Finland.
a: Logistic regression, modeling the probability of having LLTI or disability.
b: Reporting being treated with less courtesy than others and/or treated with less respect than others.
c: Reporting being called names or insulted and/or threatened or harassed.

Table 4 The association between discrimination and mental health symptoms[a,b]

	Russian origin		Somali origin		Kurdish origin	
	Model 1 (*n* = 456) OR (95% CI)	**Model 2 (*n* = 455) OR (95% CI)**	**Model 1 (*n* = 344) OR (95% CI)**	**Model 2 (*n* = 341) OR (95% CI)**	**Model 1 (*n* = 493) OR (95% CI)**	**Model 2 (*n* = 489) OR (95% CI)**
Perceived discrimination			NA			
No experiences of discrimination	1.00	1.00			1.00	1.00
Subtle discrimination only[c]	2.37 (1.23–4.57)	2.40 (1.24–4.64)			1.74 (1.06–2.86)	1.95 (1.17–3.25)
Overt[d] or subtle and overt experiences	2.59 (1.35–4.97)	2.45 (1.22–4.90)			1.67 (1.07–2.63)	2.02 (1.28-3.21)
Age, years (continuous)	1.03 (1.01–1.06)	1.03 (1.00–1.05)			1.02 (1.00–1.04)	1.03 (1.01–1.07)
Gender: men	1.00	1.00			1.00	1.00
Gender (women)	3.18 (1.55–6.51)	3.20 (1.55–6.33)			3.25 (2.24–4.72)	3.70 (2.52–5.43)
Education level: high school	—	1.00			—	1.00
Education level (less than high school)	—	1.34 (0.67–2.67)			—	2.08 (1.41–3.08)
Time in Finland, years (continuous)	—	1.03 (0.98–1.08)			—	0.93 (0.89–0.97)
Region of residence: other	—	1.00			—	1.00
Region of residence: capital city area	—	1.65 (0.89–3.06)			—	1.77 (1.19–2.61)

OR = odds ratio; 95% CI = 95% confidence interval.
Model 1 adjusting for age and gender.
Model 2 adjusting for age, gender, education level (high school), time since migration and region of residence in Finland.
a: Logistic regression, modeling the probability of having mental health symptoms.
b: Mental health symptoms measured using the HSCL-25 and cut-off point > 1.75 (participants who had responded to at least 20 items of the HSCL were included in the analysis).
c: Reporting being treated with less courtesy than others and/or treated with less respect than others.
d: Reporting being called names or insulted and/or threatened or harassed.
NA not applicable (too few observations for statistical analysis for those reporting mental health symptoms).

Discussion

This study demonstrated that perceived subtle discrimination was more common than perceived overt discrimination among Russian, Somali and Kurdish origin populations in Finland. Experiences of discrimination were significantly associated with indicators of health, and the most consistent associations were found for mental health symptoms. This is in line with previous studies demonstrating that self-reported discrimination is associated with poor mental health, but less consistently associated with poor physical health.[26] The initial findings from the Maamu Study showed that experiences of discrimination among Russian, Somali and Kurdish origin populations were most commonly believed to be related to ethnicity.[27] Discrimination was experienced in various settings, most commonly in the street (24–33%), but also at school (9–16%) and in health and social services (7–20%).[27]

The findings of this study are in line with previous research from Finland. Castaneda et al.[13] found that perceived discrimination (yes/no) increased the odds for mental health symptoms and poor quality of life only among Russian and Kurdish origin populations, while associations between perceived discrimination and feelings of unsafety and low trust towards institutions were demonstrated also among the Somali origin population. Experiences of discrimination have been demonstrated to impact the degree of psychological stress among various immigrant groups in Finland, including persons of Russian origin.[12] On the other hand, in this study the

prevalence of those reporting no experiences of discrimination was high also among Somali origin persons, which seems contrary to the findings from the EU-MIDIS Surveys, demonstrating high incidence rates for assault or threat among Somalis in Finland.[9,10] One explanation for the low prevalence of perceived discrimination can be the denial of discrimination, which is proposed to be a strategy for mitigating the stigmatizing and dehumanizing effects of the minority and/or migrant experience.[28] Identifying experiences as discriminatory are also known to be learned process knowledge.[29] Moreover, recognizing and reporting discrimination is influenced by various factors from generational status and language use to motivations for migration.[29]

Our findings are also supported by research from other European countries. A Dutch study reported an association between perceived ethnic discrimination and mental health symptoms.[8] A study from the United Kingdom (UK) demonstrated an association between everyday discrimination and common mental disorders particularly among recently migrated population groups.[30] A Swedish study found that over 80% of Kurdish men reported discrimination, and experiences of discrimination were associated with sleeping difficulties, while statistically significant differences in SRH were not found.[31] Another Swedish study found that discrimination was among the factors that seemed to mediate the strong association between ethnicity and poor self-reported health among immigrants from Poland, Turkey and Iran.[32]

This study found that reporting subtle discrimination only increased the odds for poor health outcomes for all the studied indicators of health, while reporting overt or subtle and overt discrimination increased the odds for mental health symptoms only. The findings on the association between perceived subtle discrimination and health should be taken seriously, but it should be noted that the missing association between reporting overt or subtle and overt discrimination and the indicators of physical health may also be caused by lacking statistical power. Unanticipated differences were also found in the prevalence of perceived discrimination by region of residence in Finland. The lower prevalence of discrimination found particularly among Somali origin persons living outside the capital city region as compared to the capital city region may be explained by the shorter duration since migration among persons living outside the capital city.

The associations between perceived discrimination and health were demonstrated primarily for the Russian and Kurdish origin populations, but also for Somali origin women. Differences between the studied groups may be partly explained by the finding that populations that are less visible and culturally more proximal to the host population are more likely to attribute negative events and discriminatory experiences internally, whereas members of more stigmatized or visibly different groups may attribute these events externally (e.g. to the perpetrators racism as opposed to personal deficiencies).[12] Previous findings have shown that although experiences of discrimination were the most common among Somalis as compared to other immigrant groups in Finland, stress symptoms were the least common.[12] Conversely, Mölsä et al.[33] demonstrated that those reporting discrimination reported greater symptoms of PTSD among older Somalis in Finland. The examination of the background characteristics of this study revealed that 25% of Somali participants reported being employed, while almost 90% reported living in municipal or non-profit housing. Evidence suggests that one's neighbourhood may protect against experiencing and recognizing racial hostility,[29] hence strong Somali communities or limited outside contacts may have protected Somali origin persons against experiencing discrimination.

This study could not include a comparison of the studied population groups and the general population in Finland, as data on discrimination was not available from the comparative data set in the Health 2011 Survey.[34] Previous studies using these data have, however, shown that the prevalence of mental health symptoms among the general population is 9–10%,[35] while selected chronic conditions are reported by 25–30% of the general population.[15] The initial findings from the Health 2011 also showed that in the general population the prevalence of poor SRH and LLTI clearly increases with age.[34] Further studies comparing foreign-born population groups and the general population in Finland are needed.

This study suggests that promoting the health of Russian, Somali and Kurdish origin populations in Finland should include actions targeted towards the Finnish society. Building inclusive societies requires a zero tolerance for discrimination and racism, but also policies and practices that foster social cohesion and shared belonging.[36] Recently also the scope of health monitoring has broadened to include the concept of sense of belonging.[37] A critical examination of the use of the term 'immigrant' in research and policy is also needed, as the term implies 'otherness', and such divisions are sources of discrimination.

Limitations

The association between discrimination and health may be bi-directional,[16] although this study examines the association from discrimination to health. Moreover, self-reported discrimination measures may produce underestimates due to limited disclosure of discrimination.[38] There are also limitations related to the used measures of health, e.g. the HSCL-25 scales have limitations which may affect their valid use among Russian, Somali and Kurdish origin populations.[39] Despite being widely used, SRH is also criticized, and assessments of SRH among immigrants are shown to vary.[40] Potential problems related to non-response are recognized, although preliminary findings did not suggest common factors affecting the contact rate, refusal or willingness to participate to the survey. A significant limitation of this study is its cross-sectional design.

Conclusions

All forms of discrimination, including subtle experiences, are harmful for physical and mental health. To promote the health of diverse populations in Finland, actions against discrimination and racism are highly needed. These initiatives should not only aim to fight against discrimination, but also to advance social cohesion and shared belonging.

Supplementary data

Supplementary data are available at *EURPUB* online.

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Conflicts of interest: None declared.

Key points

- All forms of discrimination, including subtle discrimination, are harmful for physical and mental health.
- Perceived discrimination increased the odds for poor self-reported health, LLTI or disability and mental health symptoms among Russian, Somali and Kurdish origin populations in Finland.
- A critical examination of the use of the term 'immigrant' in research and policy is needed, as the term implies 'otherness' and such divisions are sources of discrimination.
- Actions against discrimination and racism are highly needed, but promoting health also requires fostering social cohesion and sense of belonging.

Author contributions

SR drafted the paper. ITE, SK, PK and AEC contributed to the study design and revision of the paper. EL provided statistical expertise. All authors read and approved the final version.

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