



Mental health and quality of life among asylum seekers and refugees living in refugee housing facilities in Sweden

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Abstract

Introduction In 2015, there was a high influx of refugees to Sweden, creating an extreme situation where individuals were forced to remain in large housing facilities for long periods. The present study aims to describe the mental health and quality of life of these individuals.

Methods Data, based on 510 individuals, were obtained by means of a questionnaire at open screenings conducted at or nearby refugee housing facilities. Of the participating refugees, 367 were asylum seekers and 143 had received a residence permit but were still awaiting a more permanent housing solution. The questionnaire included measures of depressive symptoms (PHQ-9), symptoms of anxiety (GAD-7), risk of having post-traumatic stress disorder (PC-PTSD), and quality of life (WHOQOL-BREF).

Results Of the total sample, 56–58.4% reported clinically significant levels of symptoms of depression, anxiety and risk of having PTSD. Prevalence estimates were higher among asylum seekers than among those who had received their residence permit. Quality of life was generally rated below population norms and correlated negatively with mental health outcomes.

Conclusions Individuals residing in refugee housing facilities show high levels of psychological distress and rate their quality of life as low. Asylum seekers score higher than those having received a residence permit. These results are troublesome since the wait time for asylum decisions has lengthened considerably after 2015. The results of the present study calls for the urgency of societal actions to shorten the asylum process and improve conditions at the housing facilities.

Keywords Asylum seekers · Mental health · Prevalence · Quality of life · Refugee

Introduction

In the end of 2015, 65.3 million individuals around the world were forcibly displaced from their homes. Although the majority was hosted in camps and temporary housings in neighboring countries, Europe saw a great increase of refugees. Sweden was one of the European countries that received most asylum seekers per habitant [1]. The large

influx of refugees during these years put great stress on receiving systems and reception was all but perfect. For example, The Swedish Migration Agency reports that in Sweden, the mean time before an asylum application was approved or rejected went from 142 days in 2014 to 392 days in march 2017 (personal communication, March 28, 2017). Moreover, between the years 2015–2017, the majority of asylum seekers were accommodated in large, institutional-like housing facilities. Even after having received a positive decision on the asylum application, many refugees remained in asylum housings for a long time, waiting for a decision of placement to a municipality. Thus, refugees stayed in these facilities over long periods, waiting for a decision about their future. Little research has been conducted to study refugees under these conditions.

Several studies report higher levels of mental health problems [2–5] and lower self-rated quality of life [6, 7] among refugees when compared to the general population. For example, Bogic et al. [2] showed prevalence estimates

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ranging from 2.3 to 80% regarding depression, from 4.4 to 86% regarding PTSD and from 20.3 to 88% for unspecified anxiety in studies of refugees affected by war. This could be compared to prevalence estimates in the general population for mood disorders ranging between 3.4 and 8.4%, between 4.3 and 10.9% for anxiety disorders [8] and at 1.1% for post-traumatic stress disorder (PTSD) [9]. In the Swedish general population, higher estimates have been found with a point prevalence of 5.2% for depression, 8.8% for generalized anxiety [10] and a lifetime prevalence of 5.6% for PTSD [11].

The variation in prevalence rates among studies of refugee mental health is certainly due to methodological issues [4], but also to refugee characteristics such as region of origin [2, 4]. The main countries of origin of refugees in 2014 and 2015 were Syria, Afghanistan and Somalia [1]. These groups are scarcely represented in the literature on refugee mental health, which predominantly includes individuals from Southeast Asia [2, 3]. Since the outbreak of the war in Syria in 2011, some studies have provided insight in the mental health status of Syrian refugees [12–17] and a few recent studies, e.g., Nosè et al. [18], have included refugees of various nationalities. However, the broader community of refugees arriving to Europe in 2015 and forward has not yet been thoroughly studied. Moreover, only a few studies have highlighted the importance of residence status. Nevertheless, those studies indicate poorer mental health among asylum seekers compared to resettled refugees [19, 20].

The group of refugees arriving in the aftermath of the refugee crisis in 2015 was a heterogeneous group, but they shared the conditions they were met with in the host countries. In order to meet the needs of incoming asylum seekers and support transition into a new society, there is a need for extended knowledge on this group of refugees.

In the light of these facts, the primary aim of the current study was to assess the mental health status and quality of life in a heterogeneous sample of refugees residing in housing facilities provided by the Swedish Migration Agency. In order to do this, a cross-sectional study was conducted in the region Jämtland Härjedalen, Sweden.

Methods

Design

The study was a cross-sectional survey conducted mainly in housing facilities for asylum seekers. Assessing the prevalence of mental health problems among refugees was part of the *AMIR project* (Assessment of Mental Health and early Intervention for Refugees), aiming to develop a model for assessment and treatment of mental health problems among refugees. The project was carried out in collaboration with

the county council of Jämtland Härjedalen and was approved by the regional ethical committee (2016-364-31).

Sampling procedure and recruitment

In this study, a convenience sampling method was used. We aimed to include all adult asylum seekers (18 years old or older) in the region speaking any of the five most common refugee languages (Arabic, Dari, Farsi, Somali and Tigrinya) residing in facilities provided by the Swedish Migration Agency, in the region of Jämtland-Härjedalen.

A letter, translated to their first language, was sent to all adult asylum seeking refugees in the region speaking any of the aforementioned languages ($N=1265$), inviting them to participate in the study. Lists of asylum seekers were provided by the migration agency. Asylum seekers are a “hard-to-reach” group [21] and due to this it was deemed unlikely that a sufficient response rate would be reached only by means of a postal survey. Potential participants were in the letter asked either to answer the questionnaire online by following a link, or to attend a scheduled screening meeting at or nearby their housing facility.

To be able to include refugees speaking other languages and to remind individuals who had missed the screening meeting at their housing facility of the possibility to participate online, a second letter was sent out. Now including all adult asylum seekers in the region regardless of mother tongue, this resulted in a final sample of 1332 individuals. In the second letter, it was made clear that those who had already answered the survey should not take it again.

Participants

The sample consisted of refugees 18 years old or older currently seeking asylum or who had been granted asylum but were still living in facilities provided by the Swedish Migration Agency (hereafter referred to as “individuals with RP” RP for “residence permit”), residing in the region Jämtland-Härjedalen in the period of November 2016 to April 2017. In total, the selected sample consisted of 1332 individuals. Of these, 577 (43%) individuals participated in the study. Due to incomplete answers, 66 individuals were excluded resulting in a total sample of 510 (38% of 1332) participants, of which 14 individuals completed the survey online.

Procedure

In order to get assistance with advertising the screening-meetings, we reached out to housing facility managers and volunteers in close contact with the asylum seekers. Meetings were held at places housing more than 30 asylum seekers with the target languages. During meetings, participants were asked to answer the survey on-site using

an I-Pad. Sound support was offered in Arabic, Dari, Farsi and Tigrinya. Bilingual staff members offered assistance in answering the survey during the meeting. Since the questions concerned mental health issues, information about how to access health care was provided for individuals experiencing symptoms. The information was given both verbally, by the bilingual project personnel, and in translated leaflets.

Instruments

All instruments were chosen with regard to psychometric properties, transcultural validity, brevity and previous use in refugee populations. Depressive symptoms was measured with the *Patient Health Questionnaire-9* (PHQ-9) [22]. PHQ-9 is an instrument designed to detect depression in primary care. It has nine items, each one is scored from 0 to 3, total score 27. A cut-off for major depressive disorder has been set at a score of ≥ 10 . Since the PHQ-9 corresponds to the DSM criteria for depression, it can also be used with a diagnostic algorithm. A diagnosis is made if five or more of the nine depressive symptoms are scored ≥ 2 and one of these symptoms is anhedonia or depressed mood. The instrument has been used in a wide range of cultures, including both refugee populations [17] and the Swedish general population [10]. Its use with refugee populations is recommended by Sweden's National Board of Health and Welfare [23]. Cronbach's α in the present sample was 0.87.

Symptoms of anxiety was measured by *General Anxiety Disorder 7*, GAD-7 [24]. GAD-7 is an instrument originally developed to screen for generalized anxiety disorder. It consists of seven items scored 0–3, total score maximum 21. To diagnose generalized anxiety disorder, a cut-off has been set to ≥ 10 . However, it is frequently used to assess severity of anxiety symptoms more generally in primary care settings. For that purpose, a cut-off of ≥ 8 is used [25]. The instrument has good psychometric properties and has been used both in refugee populations [26] and in the Swedish general population [10]. Cronbach's α in the present sample was 0.91.

Risk for PTSD was measured by the *Primary Care PTSD Screen* (PC-PTSD) [27] which is a 4-item screener for post-traumatic stress. It consists of four questions regarding avoidance, intrusions, arousal and emotional numbing. Each question is answered either yes or no. PC-PTSD is comprehensive to individuals with limited reading skills. It has acceptable psychometric properties [28] and has been used in various populations, including refugees [29]. Its use with refugees is recommended by Sweden's National Board of Health and Welfare [23]. Cronbach's α in the present sample was 0.69.

Quality of life was measured by the *World Health Organization Quality of Life—brief version* WHOQOL-BREF [30] which is an instrument developed by the World Health

Organization as a transcultural measure of quality of life and health. It is a 26-item short version of the WHOQOL-100 [31] that is scored from 1 to 5 and shows good psychometric properties [32]. The WHOQOL-BREF assesses physical, psychological, social and environmental health and quality of life. Raw scores are transformed to domain scores ranging from 4 to 20. In a sample consisting of 11,830 adults from 23 countries [32], mean domain scores ranged from 13.5 to 16.2 (SD 2.6–3.2.). The WHOQOL is explicitly developed as an alternative to other commonly used scales that might have a western bias and is therefore often used with refugee populations [6, 33]. Cronbach's α in the present sample was 0.92.

Translation of instruments

In case translated versions were not accessible at the project start (August 2016), translations were performed in order to be able to give the scales in the participants' native language. To ensure language-specific semantics and cultural equivalence, translations were made using a rigorous, iterative back and forth process including professional translators, monolingual focus groups and bilingual health care personnel [34, 35]. This process resulted in versions of all scales in English, Swedish, Arabic, Dari, Farsi, Somali and Tigrinya (see Table 1 for an overview of the translations made by the project group).

Statistical analysis

Pearson's Chi-square was used to examine differences in health outcomes between asylum seekers and individuals with RP. Differences in mean values on health outcomes were assessed using t test. Due to multiple comparisons, a Bonferroni correction of the α -value was set to 0.005 [36]. Due to uneven distribution mean confidence intervals were bootstrapped with 1000 samples. Correlations between health outcomes and quality of life were tested with Pearson's r . All analyses were performed with SPSS (version 24).

Results

Characteristics of the study population are presented in Table 2. Of the total sample, 28% had been granted a residence permit. The rate of approved asylum applications differed between nationalities. A larger percentage of the Syrians and Eritreans had received a residence permit than what was the case among the other nationalities. The majority were men and most participants were in the ages of 18–35.

Table 1 Overview of translations conducted by the project group

Language	Measure			
	PC-PTSD	PHQ-9	GAD-7	WHOQOL
Swedish				
English				
Arabic	X			
Dari	X	X	X	
Farsi	X	X	X	
Tigrinya	X	X	X	X
Somali	X	X	X	X

PHQ-9, Patient Health Questionnaire-9; GAD-7, generalized anxiety disorder-7; PC-PTSD, Primary Care Post-traumatic Stress Disorder Screen; WHOQOL, WHOQOL-BREF

Prevalence of mental health problems

Prevalence of mental health problems is illustrated in Table 3. Using the estimate of clinically significant symptoms of depression and anxiety ($\text{PHQ-9} \geq 10$, $\text{GAD-7} \geq 8$), prevalence exceeded 50% in the total sample. More asylum seekers than individuals with RP showed clinically significant levels of symptoms. Using the more conservative diagnostic algorithm of PHQ-9 and the diagnostic cut-off for GAD-7 resulted in lower prevalence estimates. On most health outcomes measures, the asylum seekers scored higher than the individuals with RP did. Average score on the PHQ-9 in the entire sample was 11.54 ($\text{SD} = 6.88$), $\text{BCa } 95\% \text{ CI } [10.91, 12.09]$. With Bonferroni-corrected alpha levels ($\alpha = 0.005$), the results showed no difference in depressive symptoms ($n = 367$, $M = 12.05$, $\text{SD} = 6.80$) and RPs ($n = 143$, $M = 10.21$, $\text{SD} = 6.93$), $t(508) = 2.71$, $p = 0.007$, $d = 0.37$, $\text{BCa } 95\% \text{ CI } [0.49, 3.21]$. As for anxiety, the total mean score was 9.43 ($\text{SD} = 6.20$), $\text{BCa } 95\% \text{ CI } [8.91, 9.95]$. Anxiety scores were higher among asylum seekers ($M = 10.22$, $\text{SD} = 6.08$) than among individuals with RP ($M = 7.42$, $\text{SD} = 6.09$), $t(508) = 4.66$, $p < 0.001$, $d = 0.46$, $\text{BCa } 95\% \text{ CI } [1.65, 4.04]$. The mean score for PC-PTSD was 2.47 ($\text{SD} = 1.39$), $\text{BCa } 95\% \text{ CI } [2.36, 2.57]$ for the entire sample. For PTSD as well, the mean was higher for asylum seekers ($M = 2.70$, $\text{SD} = 1.30$), compared to individuals with RP ($M = 1.87$, $\text{SD} = 1.44$), $t(237.6) = 6.05$, $p < 0.001$, $d = 0.61$, $\text{BCa } 95\% \text{ CI } [0.56, 1.11]$, t and df corrected due to unequal variance. Comorbidity was high with 48.8% of the total sample showing clinically significant symptoms of both anxiety and depression (Table 3).

Quality of life

Quality of life was rated below the population norms established by Skevington, Lofty and O'Connell [24] in all

Table 2 Characteristics of the study population in terms of sex, nationality, age and residence permit

Characteristics	$n = 510$ $n (\%)$
Sex	
Male	367 (72.0)
Female	136 (26.6)
Other	7 (1.4)
Nationality	
Afghanistan	196 (38.4)
Syria	137 (26.9)
Iraq	51 (10.0)
Iran	22 (4.3)
Eritrea	21 (4.1)
Somalia	11 (2.2)
Other ^a	72 (14.1)
Age	
18–25	163 (31.9)
26–35	200 (39.1)
36–45	87 (17)
46–55	45 (8.8)
56–65	12 (2.3)
66+	3 (0.6)
Residence permit	
Yes	143 (28.0)
No	367 (72.0)

Number and percentage of the total sample is shown

^aOther ($N < 5$) = Palestine, Ethiopia, Pakistan, Algeria, Morocco, Nigeria, Egypt, Kuwait, Lebanon, Sudan and Yemen

domains, with the lowest ratings found in the domain of environmental quality of life. For physical health and quality of life, mean score in the total sample was 13.15 ($\text{SD} = 3.36$), $\text{BCa } 95\% \text{ CI } [12.83, 13.48]$. In the domain of psychological health and quality of life, the mean score was 12.31 ($\text{SD} = 2.87$), $\text{BCa } 95\% \text{ CI } [12.06, 12.57]$. For the domain of social relations, the mean score was 12.77 ($\text{SD} = 4.00$), $\text{BCa } 95\% \text{ CI } [12.38, 13.12]$. For the domain of environmental quality of life, the mean score was 10.82 ($\text{SD} = 2.97$), $\text{BCa } 95\% \text{ CI } [10.57, 11.11]$. No differences in ratings of quality of life were found between asylum seekers and individuals with RP, neither in the domain scores nor in general ratings of quality of life or overall satisfaction with health.

Mental health and quality of life

All health outcome measures were negatively correlated with self-assessed quality of life (see Table 4). The strongest association was found between degree of depression and perceived physical health.

Table 3 Prevalence estimates

Health outcome	Total <i>n</i> = 510 <i>n</i> (%)	AS <i>n</i> = 367 <i>n</i> (%)	RP <i>n</i> = 143 <i>n</i> (%)	Statistics
Clinically significant symptoms				
PHQ-9 ≥ 10	298 (58.4)	227 (61.9)	71 (49.7)	$\chi^2(1)=6.3, p=0.012$
GAD-7 ≥ 8	298 (58.4)	241 (65.7)	57 (39.9)	$\chi^2(1)=28.2, p < 0.001$
PC-PTSD ≥ 3	287 (56.2)	231 (62.9)	56 (39.2)	$\chi^2(1)=23.7, p < 0.001$
Diagnosis				
Depression	198 (38.8)	155 (42.2)	43 (30.1)	$\chi^2(1)=6.4, p=0.011$
GAD	247 (48.3)	205 (55.9)	42 (29.4)	$\chi^2(1)=28.9, p < 0.001$
Comorbidity				
Sympt. anx + dep	249 (48.8)	199 (54.2)	50 (35.0)	$\chi^2(1)=15.3, p < 0.001$
Sympt. anx + dep + PTSD	223 (43.7)	188 (51.2)	35 (24.5)	$\chi^2(1)=29.9, p < 0.001$
Diagn. Dep + GAD	167 (32.7)	136 (37.1)	31 (21.7)	$\chi^2(1)=11.1, p < 0.001$

Number and percentage of respondents within each group and in the total sample scoring above cut-off levels

Critical level of significance: 0.005

AS, asylum seekers; RP, individuals with residence permit; PHQ-9, Patient Health Questionnaire-9; GAD-7, generalized anxiety disorder-7; PC-PTSD, The Primary Care PTSD screen; Depression, PHQ-9 diagnostic algorithm; GAD, GAD-7 ≥ 10; Sympt. anx + dep, PHQ-9 ≥ 10 + GAD-7 ≥ 8; Sympt. anx + dep + PTSD, PHQ-9 ≥ 10 + GAD-7 ≥ 8 + PC-PTSD ≥ 3; Diagn. Dep + GAD, PHQ-9 diagnostic algorithm and GAD-7 ≥ 10

Discussion

The aim of the current study was to assess mental health and quality of life among individuals residing in the migration agency's housing facilities after the refugee crisis in 2015. The results show a generally high prevalence of symptoms. A majority of the sample reported clinically significant symptoms of depression, anxiety and risk for PTSD. Prevalence of depressive symptoms was five times higher in this sample than in the Swedish general population, and prevalence of anxiety was four times higher [10]. Levels of PTSD symptoms were about twice as high as compared to levels found in other populations [28, 30]. The above reported numbers are not only higher than those described in the general population of Sweden [10], but also of those previously reported in global general population studies [8]. In addition, the levels of reported symptom of mental ill-health in the current study diverged from numbers reported in previous reviews regarding refugee mental health [eg. 2, 3] and of recent studies on mental health of resettled Syrian refugees [12, 15]. This indicates that the refugees under

examination in the current study were worse off than what has previously been described within the field of refugee mental health. Explanations to these results might be found looking at the context of refugee reception from 2015 and forward, and the consequences this had for the asylum process and for the individuals caught in it.

First, while the majority of previously conducted studies on refugee mental health are based on resettled refugees with permanent housing, the current study is based on individuals who have recently fled their country with a majority still awaiting their asylum decision. In the present study, asylum seekers showed poorer mental health compared to individuals with a residence permit, pointing at the importance of residence status for mental health. Clinically significant symptoms of anxiety and risk for PTSD were reported by 40% of the individuals with RP and by more than 60% of the asylum seekers. Similar differences due to residence status have been reported previously [19, 20], and recent studies based on asylum seekers also show high prevalence [14, 16, 17]. High levels of anxiety are comprehensible considering the justified fear of repatriation, but PTSD can also

Table 4 Correlations (Pearson's *r*) between health outcomes and quality of life in the total sample

Health outcome	Physical health	Psychological	Social relationships	Environmental
PHQ-9	-0.582	-0.382	-0.372	-0.342
GAD-7	-0.522	-0.315	-0.373	-0.330
PC-PTSD	-0.364	-0.205	-0.268	-0.232

All correlations were significant at $p < 0.001$

PHQ-9, Patient Health Questionnaire-9; GAD-7, generalized anxiety disorder-7; PC-PTSD, Primary Care Post-traumatic Stress Disorder Screen

be explained by this factor. In facing a risk of being sent back to the country they have fled from, the trauma could be described as still ongoing (see Nickerson, Bryant, Silove and Steel [37] for further elaboration on this). There was no difference in prevalence of depressive symptoms. Given Bonferroni corrections for 10 pairwise comparisons, there is a certain risk for a Type II error, especially since a small to medium-sized effect was seen in the difference between the groups. However, since the two means were both in the same clinical interval: 10–14, indicating moderate depression [22], we chose to assume the null hypothesis. Furthermore, it is plausible that symptoms of anxiety decreases after a positive asylum decision, while depressive symptoms might be more affected by environmental issues such as conditions at the housing facility [4].

Another contextual factor plausibly affecting mental health was the prolonged stays at the facilities. Due to a lack of permanent housing solutions, large groups of refugees had received their residence permit but were still not resettled. The results of this study indicate that although they were better off than those still seeking asylum, their mental health status was still lower than that of the resettled refugees more often studied [2–5]. This finding could be related to the present lengthy asylum processes, something that has previously been shown to be a risk factor for psychopathology [38].

Thirdly, part of the explanation to the differences between the levels of symptoms in the current study compared to previous studies might be found in the living conditions. The participants of this study were all residing in refugee housing facilities, a special context characterized by high levels of uncertainty and unpredictable conditions regarding housing location, clearly limited resources regarding health care, high levels of passivity and low levels of meaningful daily activities. The negative effects of these circumstances were mirrored in the low ratings of quality of life, with overall ratings lower than the general population norms established by Skevington, Lofty and O’Connell [32]. Results of this study resemble previously reported ratings of quality of life among refugees in the Kurdistan region of Iraq [6]. In the study from Iraq, consisting of a homogeneous sample of refugees from Syria, scores on the domain of social relationships were higher than in the general population. This was interpreted as a strengthening of social support from the network due to shared experiences. The same effect was not seen in our study, possible due to the more heterogeneous mix of individuals in Swedish refugee housings. In the current study, however, environmental quality of life was rated lower than the other domains, something that was also seen in a study from the Netherlands [7] but not in the Iraqi study [6]. This is surprising since housing conditions could be expected to be of higher standards in Europe than in Iraqi refugee camps. One explanation could be the protective

factor of a strong social network in Iraq, since fewer social contacts predict low quality of life, including the environmental domain [33]. Another plausible explanation has to do with expectations. Quality of life can be discussed as the gap between expectations and experiences [39] and it could be presumed that refugees in European countries have higher expectations on environmental conditions than those remaining in the Middle East. Nevertheless, the domain of environmental quality of life contains questions regarding essential factors such as safety and access to health care and the low ratings should be taken seriously.

There was an overall negative relation between perceived quality of life and all included measures on mental health. The strongest association was found between physical health and depressive symptoms. The close link between physical health and depressive symptoms is well established [e.g., 40] and since no physical health status examination was included it cannot be ruled out that the participants suffered from physical ill-health causing their depressive symptoms. However, in the present sample, this result could also be a reflection of cultural variations in ways of expressing symptoms of depression. In a review of transcultural aspects of depression, Bhugra and Mastrogianni [41] illustrate how somatic metaphors are a common way of expressing depression in non-Western cultures.

The present study is one of the first to report on the mental health status among refugees after the crisis in 2015 and to compare the level of clinically significant symptoms among individuals with RP and asylum seekers. The present data illustrate significant mental health-related challenges among individuals in refugee housing facilities. It puts stress on the importance of adequate resources to meet the needs of people with high levels of mental health problems, in order to enable and facilitate integration of new members into the society. However, the study also suffers from some methodological limitations that should be considered when interpreting the results, the main one being the use of a convenience sampling method. Asylum seekers are upon arrival unsystematically allocated to regions in Sweden where there is housing available, we thus found it reasonable to assume that this sample would resemble that of the country as a whole. The final sample was compared to the statistics on the entire population of asylum seekers in Sweden. Based on age, gender and nationality, we can see that our sample in a number of aspects resembles the target population of refugees in housing facilities in Sweden. However, it does diverge in some aspect, indicating that generalizability of the results might be limited. While trying to reach hard-to-reach populations such as asylum seekers, flexible, often multiple, data collection methods are recommended [42]. Indeed only, a few individuals answered the postal survey and the main data collection took place at, or nearby, housing facilities in the region. Thus, the final sample consisted

of individuals we met at the sampling occasions. The visits were scheduled in order to maximize possible participation (e.g., at night, so individuals working could also participate, or in connection to meals). This procedure leads us to conclude that the 38% participating resembles the 62% we did not reach in terms of health outcomes.

Another limitation in the sample regards the comparison between asylum seekers and individuals with RP. Although highly interesting, the comparison was not planned, resulting in an unbalanced sample with more asylum seekers than individuals with RP.

There was a lack of control over the response rate in the current study. The reported response rate (38%) was based on the number of letters sent. However, only a few individuals did take the survey following the link in the letter. At the visits at the housing facilities, some individuals reported not having received the first letter at all. The individuals encountered at housing facilities mostly chose to participate, pointing at two conclusions: (1) the exact response rate is difficult to establish and (2) Individuals in refugee housing facilities are hard to reach using regular mail, which might constitute a risk for exclusion and discrimination. Although the lack of control over the response rate is problematic, the results of this study are strengthened by the sample size. With 510 participants, the current study is one of the largest existing studies including not resettled refugees.

The survey was lengthy and strenuous for the participants to complete due to language-difficulties and reading deficiencies thus there was a need for brief instruments. Although the instruments are not developed specifically for refugees, they have all been used with refugee populations previously and no psychometric difficulties have been reported [17, 26, 29]. The rigorous translation process and use of monolingual focus groups also serves to strengthen the validity of the instruments. As for GAD-7 and PHQ-9, one advantage was that they had previously been used in a study of the mental health of the Swedish general population. This allowed for comparisons with the host population. PC-PTSD yielded a very high prevalence of risk for PTSD and had the worse psychometric properties. However, this instrument should not be used as a diagnostic tool, but to screen individuals for risk for having PTSD. Self-report questionnaires were used and not diagnostic interviews, impeding conclusions about clinical diagnosis and allowing only for estimates of symptoms. Steel et al. [5] showed that the use of self-report questionnaires resulted in prevalence rates ten percentage units higher than when using diagnostic interviews. Even while considering this, estimates of mental health problems were alarmingly high in the present sample.

Conclusions

Psychological distress in terms of clinically significant levels of symptoms of depression, anxiety and risk of having PTSD is highly prevalent among individuals in refugee housing facilities in Sweden. It is considerably higher among those still waiting for their asylum decision than among those having received it. This is troublesome, especially when the wait time stretches out for several years. This calls for the urgency of societal efforts to shorten the asylum process, for improvements in the housing facilities and for psychosocial interventions to help asylum seekers manage their symptoms while waiting. Based on the results from the current study, a recommendation for future studies on refugee mental health is to describe the legal status of the participants and the psychosocial context in which the study takes place. These factors might greatly affect both the symptom levels and the quality of life of refugees.

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Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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