

# Assessing the Psychometric Qualities of the Refugee Post-Migration Stress Scale: A Study of Syrian Immigrants in Turkey

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## Abstract

The aim of this study is to adapt the Refugee Post-Migration Stress Scale (RPMS) to Syrian immigrants living in Türkiye and to determine the factors associated with RPMS. In this context, the WHO-5 Well-Being Index was administered with RPMS to 250 participants living in Mardin, one of Turkey's border provinces with Syria, for the study's first phase. In the second stage, RPMS and Multidimensional Perceived Social Support Scale were administered to 409 Syrians together with the demographic information form prepared by the researchers. According to the CFA results applied in the first stage, the psychometric properties of the adapted version of the scale were found to be satisfactory. In the second study, it was found that social support was negatively related to the post-migration stress levels of the participants and PMS differed significantly in terms of marital status, educational status, social support, income and employment status, language proficiency, hope for the future, and ethnicity variables. Study implications and limitations are discussed.

**Keywords:** Post-Migration Stress, Syrian Migrants, Mental Health, Well-Being, Social Support

## Öz

Bu çalışmanın amacı, Göç Sonrası Mülteci Stres Ölçeği'ni (RPMS) Türkiye'de yaşayan Suriyeli mültecilere uyarlamak ve RPMS ile ilişkili faktörleri belirlemektir. Bu kapsamda, çalışmanın ilk aşamasında Türkiye'nin Suriye ile sınır illerinden biri olan Mardin'de yaşayan 250 katılımcıya RPMS ile birlikte WHO-5 İyi Oluş Endeksi uygulanmıştır. İkinci aşamada ise 409 Suriyeliye araştırmacılar tarafından hazırlanan demografik bilgi formu ile birlikte RPMS ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği uygulanmıştır. İlk aşamada uygulanan DFA sonuçlarına göre, ölçeğin uyarlanan versiyonunun psikometrik özelliklerinin tatmin edici olduğu görülmüştür. Çalışmanın ikinci aşaması için yapılan analiz sonuçlarına göre, katılımcıların sosyal destek algıları ile göç sonrası stres düzeyleri arasında olumsuz ilişki bulunmuştur. Ayrıca katılımcıların göç sonrası stres düzeylerinin medeni durum, eğitim durumu, sosyal destek, gelir ve istihdam durumu, dil yeterliliği, geleceğe yönelik umut ve etnik köken değişkenleri açısından anlamlı bir şekilde farklılaştığı tespit edilmiştir. Çalışmanın güncel önerileri ve sınırlılıkları tartışılmıştır.

**Anahtar Kelimeler:** Göç Sonrası Stres, Suriyeli Göçmenler, Ruh Sağlığı, İyi Olma Hali, Sosyal Destek.

## Introduction

Ongoing internal conflicts in the Syrian Arab Republic displaced 13.4 million Syrians and 5.6 million people migrated to other countries from Syria. Accordingly United Nations Refugee Agency (UNHCR) among those who fled, 65% of Syrians (3.7 million) live in neighbouring Turkey which hosts the most refugees in the world (UNHCRa, 2023). Apart from refugees from Syria, Turkey also hosts around half a million people from Iran, Iraq, Afghanistan, and some African countries (UNHCRb, 2023). Syrians in Turkey have difficulties in terms of temporary status (insecure), accessing public services, inadequate integration facilities, limited work permits, poor living conditions (Akın & Bozbaş, 2020), discrimination, lacking language (Güneş Aslan & Güngör, 2019), low socio-adaptation, economic concerns, and uncertainty regarding duration of stay (Şafak-Ayvazoğlu et al. 2021). These problems are considered stress factors in post-migration living conditions (Tinghög et al., 2017).

Refugees who have been exposed to traumatic events such as conflict, death, disappearances, torture, and genocide, both before and during migration, must continue their lives with psychological and physical side effects while starting their lives after the migration (Acarturk et al., 2018; Lindert et al., 2016). Refugees experience mental health issues due to their experiences of traumatic events before, during, and after immigration (Li et al., 2016) and the problems include but are not limited to post-traumatic stress disorder (PTSD), depression, and anxiety (Acarturk et al., 2018; Bogic et al., 2015; Turrini et al., 2017). Turrini et al. (2019) claim that exposure to traumatic experiences such as excessive stress, torture, rape, and war brutality before and during migration has a negative impact on the mental health of refugees and asylum seekers. Schiess-Jokanovic et al. (2021) revealed a bidirectional relationship between post-migration difficulties and complex post-traumatic stress disorder. The prevalence of psychological disorders among refugees is associated with traumatic events and post-migration poor quality of life (Mahmood, 2014).

While studies on the well-being of refugees initially focused on risk factors such as pre-migration and PTSD, depression, anxiety, and trauma (Lindert et al., 2016; Sangalang et al., 2019) the effects of post-migration living conditions on refugees' mental health have just recently begun to be examined (Lies et al., 2020; Sengoelge et al., 2020; Tinghög et al., 2017). One of the concepts about well-being after migration is post-migration refugee stress (PMRS). Although substantial research is available, there is no clarity on the concept of post-migration stress (PMS) and how it will be evaluated (James et al., 2019; Sangalang et al., 2019).

The concept of PMS focuses on the stress caused by the living conditions after resettlement. Therefore, PMS is considered separate from post-traumatic stress experienced by refugees before and during migration (Malm et al., 2020). One definition of PMS is "the subjective appraisal of reoccurring or persistent post-resettlement related living conditions as distressing" (Malm et al., 2020 p. 2) and PMS is associated with: (1) socioeconomic factors (housing, security, employment, economy); (2) social and interpersonal factors (division of the family, failure to achieve family reunification, insufficient social support, change in social roles, discrimination, change in economic status); (3) the asylum-seeking process and immigration acceptance practices (limited residence permits, prolonged processing of applications, insufficient temporary accommodation opportunities) (Li et al., 2016). James et al. (2019) evaluated the experiences of refugees under five post-migration stressors including unemployment, perceived underemployment, inadequate housing, homelessness, and exposure to discrimination/violence.

Considering the post-migration living conditions of refugees, it is perhaps unsurprising that a strong association between mental health and social and economic losses (Li et al., 2016; Malm et al., 2020), ethnic discrimination (Pascoe & Richman, 2009), poor language skills (Tinghög et al., 2010), unemployment (not allowed to work) (Sengoelge et al., 2020) and insufficient social support (Tinghög et al., 2010) could be identified. Refugees may become socially isolated as a result

of the deteriorating social relationships after migrating (Simmons et al. 2020).

Silove et al., (1997) assessed and measured the problems and stress that refugees experience after resettlement via a checklist consisting of 17 items in the areas of asylum application processes, employment, and access to health services. Most stressors were refoulement, prolongation of asylum application, inability to connect with family members and access health care services (Aslan, 2021), worrying about the safety of family members, and social assistance. Tinghög et al., (2017) evaluated PMS under seven areas: perceived discrimination, problems of adaptation to the host country (language, culture, etc.), economic problems, anxiety about losing social relations in their country, worries about their country and family, social tensions, and family conflicts. Last but not least, the Refugee Post-Migration Stress (RPMS) scale was developed to assess the stress stemming from the living circumstances of refugees following their resettlement (Malm et al., 2020). RPMS was preferred in this study because it was developed on Syrian sample and it is more comprehensive than checklist (Silove et al., 1997).

The lack of a reliable tool to measure the PMS (apart from the traumatic events before and during the migration) in Turkey, which hosts a large population of refugees, is considered an important shortcoming. Therefore, we adapted the RPMS scale into Turkish context (Arabic version).

## Well-being

After adapting RPMS into Turkish context, we then examined the relationship between the RPMS and well-being in the study one to examine the association between the two constructs to establish criterion validity. We wanted to explore well-being from a holistic perspective to highlight the association between migration and its effects on the immigrant community. In addition to the negative effects of resettlement on mental health, positive mental health research has recently been conducted in refugees (van der Boor, 2020). In this context, the concepts of quality of life and well-being are frequently addressed (Alexander, 2021). We purposefully chose the WHO (2001)

definition of well-being as it links well-being to stress and capacity. It defines wellbeing as “a state in which an individual can realize their own potential, cope with normal stresses, can work productively, and can contribute to their community”. Alexander et al. (2021) found a negative relationship between post-migration stress and subjective well-being in a study conducted with adult Syrian refugees who settled in Sweden.

The lack of a reliable tool to measure the post-migration stress of refugees (apart from the traumatic events before and during the migration) in Turkey, which hosts most refugees in the world, is considered an important shortcoming. Therefore, the first aim of this study is to develop a tool that can measure the post-migration stress of Syrian refugees, the largest refugee group in Turkey. In the first study, an adaptation study of the RPMS scale to Syrians in Turkey was carried out. In the second study, we examined the relationship between the post-migration stress of Syrians in Turkey and their perceived social support with socio-demographic characteristics.

## Study 1: Adaptation of the Post-Migration Refugee Stress Scale (RPMS)

The purpose of the first study was (1) to adapt the form developed for Syrian refugees living in Sweden for Syrian refugees living in Turkey, (2) to perform Confirmatory Factor Analysis (CFA) to examine the construct validity of the RPMS, (3) to examine the criterion validity, and (4) to examine the validity of the scale and subscales.

## Materials and Methods

For both stages of the study the cross-sectional design was used. Refugees resettled in Mardin province in Turkey were reached during 2021 March-June.

## Participants

In study 1, 250 refugees participated ( $N_{\text{male}} = 138$ -%55,2,  $N_{\text{female}} = 112$ -%44,8). The sample of the first step of the research was determined using the convenience sampling method, which is not based

on probability due to the ease of access and convenience of the participants (Creswell, 2014). The inclusion criteria were to be over 18 years of age and to voluntarily participate in the study. It is stated that the sample size should be at least 5-10 times the number of items (Nunnally, 1978). Considering that the number of items in the scale is 21, the number of 210 participants is considered to be sufficient; however, 250 people were reached in the study, exceeding 210. Therefore, it can be stated that the number of 250 is sufficient for the analysis.

All participants are citizens of the Syrian Arab Republic and are fluent in Arabic. The study's participants willingly gave their oral consent to take part. The ages of the participants varied from 18 to 70 ( $M = 32.06$ ,  $SD = 11.27$ ). The majority of the participants consist of middle school-high school graduates (45.6%) and married (55.2%) Syrians. Among participants, 53.2% of the participants are Arab and 46.0% are of Kurdish origin.

## Materials

**Sociodemographic Data Form:** This form was created by researchers in Arabic. socio-demographic form was used to obtain information on gender, age, education level, and ethnicity.

**The Refugee Post-Migration Scale (RPMS):** This scale was originally developed by Malm et al. (2020) in Arabic. The scale consists of seven sub-dimensions including perceived discrimination, lack of host country-specific competencies, material and economic strain, loss of home country, family and home country concerns social strain, and family conflicts with 21 items using a five-point Likert-type scale (1: Very often, 5: Never). The scale has no cut-off point and no reverse items. A high score on the scale indicate high levels of stress. Questions include "Difficulties understanding documents and forms from authorities" and "Feeling excluded or isolated in the Swedish (Turkish) society". The internal consistency coefficient for Cronbach's alpha was determined to be 0.83.  $M = 2.67$ ,  $SD = .59$ , and the range is 21–105. The adapted version of the RPSM for Syrians in Türkiye is presented in Appendix 1.

**The WHO-5 Well-Being Index:** The World Health Organization-5 Index of Well-Being (WHO-5) is a five-item tool used to screen for depression. The scale is used to evaluate the well-being of the general population and individuals with health problems. Questions include "I have felt calm and relaxed and "My daily life has been filled with things that interest me." The Arabic form of the scale has valid psychometric properties as a surveying tool for depression among elderly individuals in Lebanon (Sibai et al., 2009). The internal consistency coefficient for Cronbach's alpha for this study was estimated to be 0.84. ( $M = 3.39$ ;  $SD = 1.11$ ; 0–25).

The internal consistency coefficient for Cronbach's alpha for this study was 0.84 ( $M = 3.39$ ;  $SD = 1.11$ ; 0-25).

## Procedure

We contacted the authors who developed the RPMS scale via e-mail and their permission was obtained. The words "Swedish" and "Sweden" in items 1, 5, 6, 13, 16, 17, and 18 of the scale have been changed to "Turkish" and "Türkiye", respectively. All the scales used in both phases are in Arabic language and administered to Syrian participants face to face. The translation was originally undertaken by a translator. Afterwards, the translations were evaluated by the academicians in the two Arabic Language and Literature departments, and the final Arabic version of the scales was obtained. After the scales were translated and the original and translated forms were compared, the items were appropriate to determine the fit of the model to a new culture. Native speakers of Arabic language and authors were present during data collection to discuss research related issues with the participants. Verbal consent obtained from participants. Syrian refugees were initially told of the study's goal and given an assurance of confidentiality during the data gathering phase. In order to reach the refugees, we first received support from a gatekeeper (refugee college student). The gatekeeper played a facilitating role in reaching



refugees and building rapport with them. The path based on the modification indices was used to

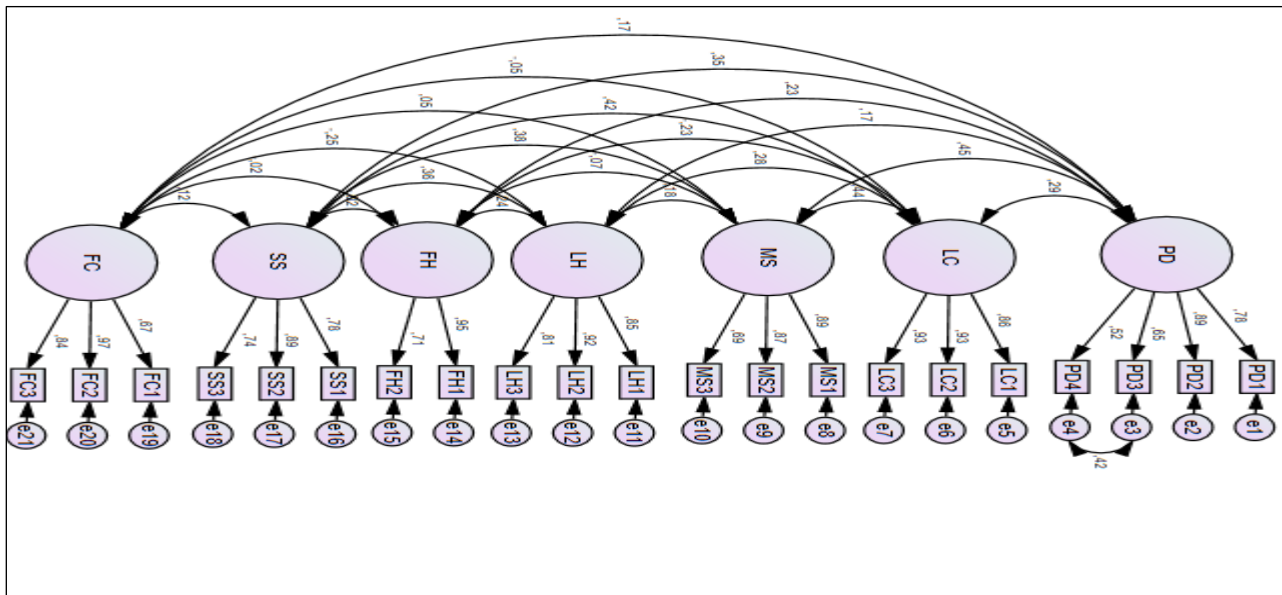


Figure 1. CFA path diagram of the RPMS, the covariances between any two given items are indicated.

gatekeeper mediated the collection of data by taking the researchers to the places where refugees mainly live. After that convenience and snowball sampling were used to contact the target population. Participants willingly consented to take part in the study. Participants were provided assurances that their information would be kept private and used only for scientific study.

The scales were completed during face-to-face interviews with refugees. Participants took an average of 10 minutes to complete the scales. Study one data were collected in March 2021. All participants gave oral consent to be part of the study and they were told that they could withdraw anytime if discomfort occurs.

## Results

Confirmatory Factor Analysis (CFA) was used for the construct validity of the RPMS. The item and sub-dimensions of the scale were tested with CFA, and it was concluded that the scale consisting of seven sub-dimensions was appropriate. There are certain steps required to run the CFA. First, the model consisting of four subscales was analyzed using standard fit indices ( $\chi^2/sd$ , CFI, GFI, root mean square residue (RMR) and RMSEA without changing the items. Before modification, it was observed that the model was not perfect but had an acceptable fit ( $\chi^2/df = 2.29$ , CFI = 0.93, GFI = 0.88, NFI = 0.88, RMSEA = 0.072). Second, a covariance

modify the model (Figure 1). The modified model's new fit indices ( $\chi^2/df = 2.08$ , CFI = 0.94, GFI = 0.89, IFI = 0.94, NFI = 0.90, RMSEA = 0.066) were acceptable.

Criterion validity was also used for the construct validity of the scale. Additionally, scale reliability was determined using Cronbach's Alpha ( $\alpha$ ) reliability coefficients. Table 1 displays descriptive statistics and coefficients for all variables.

Table 1. Means, standard deviations, and intercorrelations and Cronbach alpha levels in Study 1

Variables	M	SD	RPM S	PD	LC	M S	LH	FH	SS	FC	WHO
RPMS	2,6	0,5	<b>0,83</b>								
PD	1,8	0,7	.61**	<b>0,8</b>							
LC	2,9	1,4	.62**	.32	<b>0,9</b>						
MS	3,1	1,1	.61**	.39	.38	<b>0,8</b>					
LH	3,8	1,2	.59**	.13	.26	.17	<b>0,8</b>				
FH	3,0	1,3	.39**	.18	-	-0	.25	<b>0,8</b>			
SS	2,4	1,0	.67**	.34	.41	.32	.34	0,0	<b>0,8</b>		
FC	1,4	0,7	.19**	.14	-	.05	.21	0,0	.15	<b>0,8</b>	
WHO	3,3	1,1	-.15*	-	0,0	-	.17	-	-	.21	<b>0,84</b>

\*RPMS: Refugee Post-Migration Scale, PD: Perceived discrimination, LC: Lack of host country specific competences, MS: Material and economic strain, LH: Loss of home country, FH: Family and home country concerns, SS: Social strain, FC: Family conflicts. WHO: The WHO-5 Well-Being Index. N = 250. All correlations were significant at the \* $p < .01$  level (two-tailed) and \*\* $p < .05$  level (two-tailed).

*Correlations between RPMS subscales and total were computed with the subscale removed from the total score. Cronbach alphas are shown in the table as bold.*

The results indicated that the scale's psychometric qualities were satisfactory. According to the DFA results, the seven-factor and 21-item RPMS was found suitable for Syrian refugees living in Turkey. Moreover, all item loads related to the factors were found to be higher than 0.5. The correlation between the scale (WHO) used for criterion validity analysis and the RPMS was also significant and negatively correlated. After validating the RPSM scale, we wanted to investigate whether post migration stress and social support was related in Syrian immigrants living in Turkey.

## **Study 2: Post-Migration Stress and Social Support**

The purpose of the second study was to examine the effect of perceived social support on RPMS Syrian refugees, and the relationship between demographic characteristics of participants and post-migration stress levels of them.

### **Social Support and Post-Migration Stress**

Starting a life in a new country is challenging in many ways and the loss of social capital is a major one. Studies on social support demonstrate that it acts as a barrier against post-traumatic stress disorder (Visser et al., 2017; van der Boor, 2020). Loss or decrease in social support is seen as one of the principal causes of mental health problems amongst refugees (Miller & Rasmussen, 2010) and perceived social support appears to be a supportive factor in the process of coping with mental health problems after migration (Ryan, 2021). Daily living conditions such as living in unsafe neighbourhoods, not being able to access basic services, and being deprived of adequate social support mediate the mental disorders of refugees exposed to war and conflict (Miller & Rasmussen, 2010).

### **Materials and methods**

## **Participants**

Almost half of the Syrian refugees in Turkey are hosted by the border cities of Gaziantep, Kilis, Şanlıurfa, Hatay and Mardin. Among these cities, Mardin has the least number of Syrian refugees (Apak, 2022). In Turkey's border province of Mardin, which hosts around 90,000 Syrian refugees, the survey was administered to 409 people of Syrian origin who fled to Turkey after 2011 and who have temporary protection status. In cases where the size of the population is known, sampling calculation (Naing, Winn, & Rusli, 2006) could be made. We determined that the 409 questionnaires included in the analysis were sufficient in terms of sample size. The ages of the participants ranged from 18 to 60. The majority of the participants were male (58.4%), secondary school graduates (44.5%), and married (59.4%).

## **Materials**

In the second stage of the research, Refugee Post-Migration Scale (RPMS) and Multidimensional Scale of Perceived Social Support (MSPSS) scales were used.

**Refugee Post-Migration Scale (RPMS):** This scale was developed by Malm, Tinghög, Narusyte, and Saboonchi (2020). The construct validity and reliability of the scale were provided by the researchers in Study 1. In this second phase, the Cronbach's Alpha coefficient of the RPMS Scale was calculated as .87. ( $M = 2.64$ ,  $SD = .67$ , range = 21–105). The RPMS is a concise, multidimensional self-assessment instrument for the evaluation of post migratory stress among refugees. The original scale was developed for Syrian refugees. They were exposed to war and losses. Therefore, as this study also focuses on Syrian refugees, this measurement was particularly selected to address Syrians in Turkey.

**Multidimensional Scale of Perceived Social Support (MSPSS):** The scale was developed by Zimet et al. (1988) and was adapted to the Arabic language by Kazarian (2015). There are 12 questions in the scale. Responses range from 1 (Strongly Disagree) to 7 (Strongly Agree). Questions about the social support received from

three different groups: family, friends, and significant others. Questions include “I can talk about my problems with my family” and “There is a special person in my life who cares about my feelings”. The Cronbach’s Alpha coefficient, showing the reliability of the adapted scale, was calculated as .88. In the current study, the calculated Cronbach’s Alpha coefficient was .90. (M = 5.20, SD = 1.23, range = 12–84).

### Procedure

Necessary permission was obtained from the Ethics Committee of X University (decision dated 01.03.2021 and numbered 2021/2-4) for the prepared questionnaire. Study two data were collected between April and May 2021. Detailed information about the data collection process was given in the previous phase. During the data collection phase, the participants were informed of the purpose and scope of the research. A total of 433 forms were collected. Due to incomplete surveys, 24 forms were removed from the dataset. Analyses were performed on the remaining 409 forms.

### Statistical analysis

The SPSS 25.0 program was used to analyse the data. The normality test shows that the items' Skewness and Kurtosis values were between -1.50 and +1.50 and the items were normally distributed (Tabachnick, B. G. & Fidell, 2013). The One-way Analysis of Variance (ANOVA) and Tukey were used to compare group differences, and the multiple regression analysis was carried out to determine the factors that influenced post-migration stress.

### Results

Findings regarding the PMS scores of Syrian refugees according to demographic variables are presented below.

<b>Marital Status</b>						
1.Married	243	2,72	0,71	4,207	0,016	1-2
2.Single	135	2,51	0,62			
3.Divorced- Widow	31	2,61	0,58			
Total	409	2,64	0,67			
<b>Education</b>						
1. Illiterate	41	2,73	0,56	4,311	0,003	2-3
2.Primary School	77	2,87	0,75			2-4
3.Secondary- High School	182	2,55	0,67			
4.University	109	2,58	0,63			
Total	409	2,64	0,67			
<b>Income</b>						
1.No income	81	2,67	0,74	5,667	0	1-4
2,0-1000	90	2,71	0,66			2-4
3,1001-2000	153	2,74	0,66			3-4
4,2001-3000	69	2,33	0,62			
5.3000+	16	2,48	0,46			
Total	409	2,64	0,67			
<b>Turkish Proficiency</b>						
1.Very Well	136	2,35	0,56	25,073	0	1-3
2.Adequate	99	2,51	0,71			1-4
3.Very Little	113	2,86	0,66			2-3
4.None	61	3,06	0,53			2-4
Total	409	2,64	0,67			
<b>Employment</b>						
1.Unemployed	77	2,8	0,69	8,22	0	1-4
2.Employed	183	2,63	0,69			2-4
3.Housewife	67	2,81	0,65			3-4
4.Student	82	2,35	0,55			
Total	409	2,64	0,67			
<b>Looking to Future with Hope</b>						
1.Yes	109	2,45	0,62	7,018	0	1-2
2.No	24	3,07	0,49			1-3
3.Partially	259	2,66	0,68			2-3
4.No Answer	17	2,84	0,78			
Total	409	2,64	0,67			

There are significant differences in RPMS scores in terms of marital status [F(2-422) = 4.207, p < 0.05], the level of education [F. (3-409) = 4.311, p < 0.01], income level [F(3-409) = 5.667, p < 0.01], Turkish proficiency [F(3-409) = 25.073, p < 0.01] and working status. [F(3-409) = 8.220, p < 0.01]. Moreover, there was a significant difference between Kurdish participants' and Arab participants' test scores (t. (414) = 7.26, p < 0.01). As hypothesised, multidimensional social support predicts RPMS (B=-.137, SH=.026, p<.001).

Table 2. ANOVA analysis of post-migration stress levels according to participants' demographic characteristics

Independent Variable	N	RPMS	Ss	F	p	Difference
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**Table 3.** Regression Analysis of Post-Migration Stress Level and Multidimensional Social Support of Syrian Refugees

Dimension	B	SH	$\beta$
Post-Migration Stress Level (Dependent Variable)	3.359	.141	
Multidimensional Perceived Social Support Level	-.137	.026	-.250*
R <sup>2</sup>	.062		
F	27.04		

\*p &lt; .001

## General Discussion

In the first part of this study, we adapted the RPMS scale, developed by Malm et al. (2020), evaluated its psychometric properties for Syrian refugees living in Turkey. The RPMS factor structure was obtained using CFA, the values obtained were appropriate and showed acceptable fit indices (Schermelleh-Engel et al., 2003). The internal consistency coefficient obtained from the overall scale was found to be .83. This tool has demonstrated high reliability by measuring an alpha coefficient of .86 in previous research (Malm et al., 2020). We found a significant and negative correlation between WHO-5, which was used for criterion validity analysis, and the RPMS. We conclude that the RPMS is a suitable and valid measure for Syrian refugees living in Turkey.

In the second stage of the study, we found that stress levels were lower in single people than in married participants. Tinghög et al., (2010) in their study of Iraqi and Iranian refugees in Sweden, reported that single people experienced fewer mental health problems than married or divorced refugees. Previous research showed that divorced, widowed, or individuals who are separated from their spouses are more likely to have psychiatric disorders than those who are married living together (Roberts et al., 2008). We also found that the RPMS level decreased as the education level increased. Previous studies have also reported a higher prevalence of PTSD, anxiety, and depression in refugees with low education levels (Solberg et al., 2020). However, in the study by Tinghög et al. of refugees in Sweden, the level of education was not significant in predicting wellbeing (Tinghög et al., 2017).

Employment was found to be one of the factors affecting the levels of RPMS of the participants. The levels of RPMS amongst employed

immigrants are lower than those who are not. The influence of employment on different mental health problems has been demonstrated in studies conducted on both non-immigrants (Moxham et al., 2018) and immigrants (Wu et al., 2021). In addition to having stable income, employment can also have functions such as strengthening the network of relations in the society they live in, learning languages, and understanding cultural elements, especially for the immigrant population (Sengoelge et al., 2020). Paul and Batinic (2010) showed that employment has latent functions such as contributing to meeting the psycho-social needs of individuals and ensuring better mental health utilising producing social participation and relations, and providing social status. Income status, which is one of the factors related to employment, was also related to RPMS. We found a negative correlation between income and RPMS in our participants. In line with this finding, Wu et al. (2021) found that depressive symptoms and low socioeconomic status were associated in Chinese immigrants. Similarly, Dangmann et al. (2021) revealed that economic problems are post-migration stressors that negatively influence their quality of life. We argue that having a low socioeconomic level causes people to engage in less social activity, which diminishes the protective effect that social interaction has on mental health. RPMS scores among the students are significantly lower compared to the working, non-working, and housewives among the participants. In addition, being unemployed as a refugee is seen as a high-risk factor in terms of depression and anxiety (Tinghög et al., 2010).

We found the RPMS levels of the Arab Syrian immigrants are significantly higher than those of the Kurdish Syrian immigrants. Having relatives and using the same language as the local host people may explain this difference. Moreover, pre-war conditions of Kurds living in Syria were also difficult with no official identity or recognition as citizens and basic rights (education and health care) (Yildiz, 2005). This may shed light on the different perceptions on post migration experiences.

Another factor affecting RPMS is proficiency in speaking Turkish. In different studies, no evidence



was found regarding the relationship between language skills and RPMS, but studies show that lack of language skills is a stressor for post-migration mental problems (Dangmann et al., 2021). Moreover, there are studies in the literature that showed that inadequate knowledge of the language of the local culture may be linked to a range of mental health problems amongst immigrants (Brown et al., 2010; Damen et al., 2021). Dangmann et al. (2021) attribute the decrease in psychological problems in children to the improvement in their language skills.

Furthermore, we found a negative relationship between social support and RPMS. Studies measuring the relationship between social support and depression have found that the two are inversely related to each other (van der Boor, 2020; Ryan, 2021). Close relationships with relatives, being married, having emotional support from a spouse and family, living with extended family, and positive relationships with family were found to be effective when counteracting mental health problems amongst immigrants (Guo & Stensland, 2018). Li et al. (2021) argue that social support increases psychological well-being and alleviates the effects of stressors. It could be that an increase in social support for immigrants is effective in reducing RPMS via making them more visible and by increasing their social participation (Lai et al., 2019; Vaughan et al., 2016).

### Limitations, implications, and conclusion

This study, to our knowledge, is the first to investigate the RPMS of Syrian refugees in Turkey and its relationship with social support and well-being. However, the work is not without its limits. First, due to the mobility of refugees and the difficulty of identifying the same people at the same address, test retests could not be performed in the first phase. The second limitation is that, due to the cross-sectional nature of the study, we could not assess stress over a period. For this reason, in future studies, longitudinal studies could be undertaken to allow for a better understanding of the characteristics and processes of RPMS. The third limitation is the observation that a significant number of Syrians refused to participate in the survey due to privacy concerns. Using online

platforms and a nationally representative sample of hard-to-reach groups is recommended. In future studies, RPSM scale can be used in quasi-experimental studies to test the effectiveness of various interventions for refugees and this could provide evidence-based, practice-oriented data.

### Declarations

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Appendix 1. The Refugee Post-Migration Stress Scale (RPMS)

Arabic version

يرجى أن تضع علامة موضحا هل غالبا ما تتعرض إلى موقف من المواقف التالية في تركيا؟

أبدا	نادرا	أحيانا	غالبا	كثيرا	
					1 التمييز من قبل السلطات التركية
					2 التمييز في المدرسة أو العمل
					3 الشعور بعدم الاحترام بسبب جنسيتي
					4 قيام أشخاص بتلميحات عنصرية تجاهي
					5 الانزعاج بسبب صعوبة التواصل باللغة التركية
					6 صعوبة فهم الأنشطة اليومية المعتادة في تركيا (التسوق, قطع التذاكر, السفر.....إلخ)
					7 صعوبة فهم الوثائق والمستندات والنماذج المستخدمة لدى السلطات والجهات المعنية
					8 القلق بشأن الوضع المالي غير المستقر
					9 الإحباط بسبب عدم القدرة على إعالة نفسي ماليًا
					10 القلق بسبب الديون
					11 الإشتياق لحياتي الاجتماعية التي كنت أشعر بها في موطني
					12 الحنين إلى بلدي الأم (موطني الأصلي)
					13 الإشتياق للأنشطة التي اعتدت أن أقوم بها قبل المجيء إلى تركيا
					14 القلق على أفراد الأسرة التي انفصلت عنها
					15 لشعور بالحزن بسبب عدم لم الشمل مع أسرتي
					16 الشعور بالاستبعاد أو منعزل في المجتمع التركي
					17 الإحباط بسبب فقدان المكانة في المجتمع التركي
					18 الإحباط بسبب عدم قدرتي على الاستفادة من إمكانياتي في تركيا
					19 خلافات مزعجة في أسرتي
					20 الشعور بعدم الاحترام في أسرتي
					21 الشعور بعدم الأهمية في أسرتي