MENTAL HEALTH PROBLEMS OF AFGHAN REFUGEE CHILDREN: ANXIETY AND DEPRESSION

Gülsün AYRAN PhD[1], Nurten ARSLAN ISIK PhD[2]
[1,2]Erzincan Binali Yıldırım University, Faculty of Health Sciences, Department of Nursing, Erzincan, Turkey.

Abstract

Objective: This study was carried out in order to determine the anxiety and depression levels of refugee children.

Material and Method: This study was carried out with 140 refugee children studying at secondary and high schools located in the central district of Erzincan province of Turkey between January and April 2022. Data were collected with Socio-demographic Questionnaire, "State-Trait Anxiety Inventory for Children", and "Child Depression Scale". Percent, means, simple t-test, One Way Anova Test, and multiple regression analysis were utilized in the analysis of the data.

Results: In the study, the variables of loss of father, education, separation from the family during the war, duration of life in Turkey, having any chronic disease, and smoking were observed to be effective on the total score of the State-Trait Anxiety Inventory (STAIC). While it was found that the mother/ father alive, the duration of living in Turkey, and having any chronic disease had an effect on the CDI total score ($p<0.05$). It was determined that the total mean score of the State-Trait Anxiety Inventory was 35.03 ±7.10, and the mean total score of CDI was 16.34 ±8.28. Furthermore, it was determined that 20.7% of refugee children had high levels of anxiety and 37.9% had depression.

Conclusion: Study findings have showed that refugee children have mental health problems while less than half of them experience high levels of anxiety and depression.

INRODUCTION

Religious or political pressures, wars, natural disasters force people around the world to leave their home country each and every year (Frounfelker et al., 2020). At least 89.3 million people worldwide had to leave their homes according to the United Nations High Commissioner for Refugees (UNHCR), 2021 data (Citaristi, 2022). Turkey is one of the countries that are most affected by migration. Turkey, combining Europe and Asia, has historically been a transit and destination country for immigrants. Turkey hosts one of the world's largest migrant populations of approximately 3.9 million refugees due to its geopolitical position on the route from the Middle East to Europe and ongoing conflicts in neighboring Iraq, Iran and Syria, (Barbui et al,, 2022; Beacham, 2022).

Children emerge as a new and important group in recent migration movements. Much as children make up one-third of the world's population, half of all immigrants are children (UNICEF, 2016). Children become the direct or indirect victims of war psychosocially and physically due to internal conflicts and interstate wars of interest. Children do not only lose their homes but also lose their belongings, memories, family and friends (Jabbar & Zaza, 2017). Migration has a significant impact on children whatever the reason is.

The most important of these effects are being unaccompanied or living in a single-parent household, having parents with psychiatric problems or exposed to violence, economic difficulties, perceived discrimination in the host country, difficulties experienced during schooling and exposure to violence after migration. (IOM & UNICEF, 2016; Frounfelker et al., 2020). Emotional and behavioral disorders, post-traumatic stress disorder (PTSD), anxiety and depression are common in children subsequent to migration (Jabbar & Zaza, 2017).

According to the results of a meta-analysis study conducted through Mattelin et al., (2022), the prevalence of PTSD was found to be 22.71%, anxiety disorder 15.77%, and depression 13.81% among refugee and asylum-seeking children (Mattelin et al., 2022). In a mental health screening study carried out with the participation of 2374 6th grade students from Asia, Africa, Europe and Latin America between 2001 and 2004 in the USA, it was determined that the depression scores of children exposed to immigration were higher than those of children who were not exposed to immigration. (Kim et al., 2018). As a result of a study carried out in a refugee camp in Turkey, in order to break down the events faced by children who migrated to Turkey due to the problems in Syria and to measure their psychological reactions to the situation they live in, it was found that 45% of Syrian refugee children had PTSD, 44% had symptoms of depression and approximately 33% had physiological complaints (Sirin, Rogers-Sirin 2015). In another study carried out with the participation of 355 Syrian students from the 6th, 7th, 8th and 9th grades in Turkey, it was observed that 47.9% of the students had depressive symptoms (Kandemir et al., 2018).

Although Turkey has been one of the countries hosting the highest number of refugees since 2014, there are only a limited number of studies addressing the mental health of refugee children in Turkey (Sirin, Rogers-Sirin 2015; Kandemir et al., 2018). New and comprehensive studies are required in order to understand the effects of migration on child mental health. As such, this study was carried out in order to determine the anxiety and depression levels of refugee children.

MATERIAL AND METHOD

Type, Population and Sample of the Study

Cross- sectional study has been conducted. The population of the research consisted of refugee children studying in secondary and high schools in the central district of Erzincan province between January and April 2022. Sample selection was not made in the study, it was aimed to reach the entire universe. 10 students did not accept to participate in the study for various reasons. In this way, 150 students who volunteered to participate in the study and whose informed consent forms were obtained were included in the study. However, 10 students were not evaluated because the questionnaires were not filled in reliably and the study was completed with 140 participants. Sampling criteria were as follows:
- Having both parents born outside of Turkey,
- To be between the ages of 10-18,
- Being literate,
- To be of Afghan nationality.

Data Collection Tools

"Question Form", "State-Trait Anxiety Inventory for Children (STAIC)" and "Child Depression Inventory (CDI)" were utilized in order to collect study data.

Question Form

There are 10 questions regarding demographic characteristics such as age, number of siblings, whether a child has suffered a loss of one or both parents; mother's education level, father's education level, presence of chronic disease and smoking status in this form prepared by the researcher.

State-Trait Anxiety Inventory for Children (STAIC)

The scale, developed by Spielberger and validated in Turkish by Özusta (1993), is asked to evaluate how children feel in the moment they are in, and emotions related to state anxiety such as tension, irritability, and uneasiness (Spielberger, 1973). If the presence of these emotions is reported to be the highest score is given as 3 and if it is reported that these

emotions are absent the lowest score is given as 1. The scale consists of 20 items. The highest score that can be obtained from the scale is 60, and the lowest score is 20. As the score obtained from the scale increases, the level of anxiety increases. In the Turkish validity and reliability study of the scale (Özusta, 1993), Cronbach's Alpha coefficient was found to be 0.82. Cronbach's Alpha coefficient was determined as 0.83 in this study.

Child Depression Scale (CDI)

The scale has been developed by Kovacs (1985) and the Turkish validity and reliability study carried out by Öy (1991) is asked to evaluate depression in children aged 7 years and older. It consists of 27 items in total, 14 of which are scored straight and 13 of which are reverse scored. There are 3 options in the evaluation of each item, and each item is scored as 0, 1, 2 according to the severity of the symptom. The cut-off point of the scale was 19, the highest score to be taken from the scale was 54 and the lowest score was 1. In the Turkish validity and reliability study of the scale (Öy, 1991), Cronbach's Alpha coefficient was found to be 0.80 while Cronbach's Alpha coefficient was determined as 0.80 in this study.

Ethical Principles of the Study

Ethics committee approval (dated 26.02.2021 and numbered 03/15) was obtained from the Human Research Ethics Committee in order to conduct the study. Subsequently, legal permissions were obtained from the Provincial Immigration Administration and the Provincial Directorate of National Education. After the parents of the children participating in the study were informed about the study, written and verbal consent was obtained from their parents. Children participating in the study were assured that their personal information would not be disclosed to others, used anywhere else, and that they had the right to withdraw from the study at any time. Declaration of Helsinki was adhered to in this study. Children participating in the study and their parents were assured that their personal information would not be disclosed to others, would not be used anywhere else, and that they had the right to withdraw from the study at any time.

Data Collection

Before starting the data collection process, the "Informed Consent Form" was delivered to the parents in a sealed envelope through the children in order to obtain written consent from the parents of the refugee children. The consent form signed by one of the parents was handed over to the researcher by the children. A suitable work program was created with the school administrator for the application of the data collection forms. It was stated that the participation was voluntary, and the children were informed about the study and their verbal consent was obtained. According to the specified timeline, the data were collected face to face in the classroom environment. Filling out the questionnaires took an average of 15-20 minutes.

Analysis and Evaluation of Data

Statistical analyses were performed using the SPSS software version 25. Percentage, mean, independent samples t-test, One way Anova test, Pearson's correlation test and Multiple Regression analysis were used to evaluate the data. The normal distribution of the data was evaluated by the Shao method. In this respect, the mean scores of age, STAIC and CDI show normal distribution, and Skewness and Kurtosis values were found to range between -3 and +3. Statistical significance and the confidence interval was set at $p < 0.05$ and 99%, respectively.

RESULTS

The mean scores of refugee children were compared according to some descriptive characteristics are given in Table 1. According to this; the presence of the father, education level of the father, being separated from the family during the war, the length of time he lived in Turkey, having any chronic disease and smoking status were found to be effective on the total score of the STAIC; survival of the parents, the length of time they lived in Turkey, and having any chronic disease were found to be effective on the CDI total score ($p < 0.05$).

Table 1. Distribution of STAIC and CDI Mean Scores by Socio-demographic Characteristics (n=140)

	n	%	STAIC X±SS	STAIC Test p	CDI X±SS	CDI Test p
Gender						
Female	67	47.9	35.57±6.84	t:0.760 p:0.448	16.56±8.92	t:0.306 p:0.760
Male	73	52.1	34.65±7.34		16.13±7.70	
Number of siblings						
1	20	14.3	34.35±6.47	F:0.119 P:0.940	18.00±6.24	F:0.589 P:0.623
2	22	15.7	35.45±5.70		16.13±7.19	
3	26	18.6	35.50±8.83		14.76±7.85	
4 and over	72	51.4	35.04±7.07		16.51±9.22	
Is the mother alive?						
Yes	127	90.7	34.79±6.87	t:-1.558 p:0.122	15.55±7.18	**t:-2.281 p:0.040**
No	13	9.3	38.00±8.81		24.00±12.76	
Is the father alive?						
Yes	113	80.7	34.17±6.42	**t:-3.196 p:0.002***	15.57±7.64	**t:-2.277 p:0.024***
No	27	19.3	38.88±8.52		19.55±10.08	
Mother's Educational Status						
Illiterate	40	28.6	33.94±5.88	F:0.872 p:0.482	16.55±6.97	F:0.249 p:0.910
Primary school	46	32.9	36.30±7.38		16.93±8.05	
Middle School	39	27.9	35.41±7.58		15.82±10.41	
High school	10	7.1	34.30±7.86		14.40±5.66	
University and above	5	3.6	32.00±8.21		17.20±7.66	
Father's Educational Status						
Illiterate [a]	39	27.9	34.71±6.62	**F:2.449 p:0.049*** Bonferroni d<c	16.87±6.58	F:2.044 p:0.092
Primary school [b]	37	26.4	33.94±7.20		15.81±8.19	
Middle School [c]	29	20.7	38.44±6.93		17.89±7.38	
High school [d]	23	16.4	33.08±6.07		12.60±7.18	
University and above [e]	12	8.6	35.50±8.73		19.66±14.33	
Family Separation Status in War						
Yes	27	19.3	37.96±7.47	**t:2.378 p:0.019**	18.18±7.19	t:1.289 p:0.199
No	113	80.7	34.40±6.86		15.90±8.49	
Length of time lived in Turkey (Years)						
≤1 [a]	16	11.4	36.93±8.76	**F:3.668 p:0.007*** Bonferroni e<c	19.37±8.24	**F:2.569 P:0.041*** Bonferroni e<c
2 [b]	19	13.6	35.00±6.46		16.73±6.99	
3 [c]	25	17.9	38.84±6.42		19.60±11.36	
4 [d]	22	15.7	35.31±7.40		15.50±7.01	
≥5 [e]	58	41.4	32.87±6.29		14.29±7.04	
Chronic Disease						
Yes	18	12.9	41.27±6.97	**t:4.191 p:0.000***	23.66±11.97	**t:2.904 p:0.009***
No	122	87.1	34.17±6.67		15.26±7.03	

Smoking habit						
Yes	7	5.0	43.57±6.72	**t:3.360**	23.28±14.20	t:1.350
No	133	95.0	34.64±6.85	**P:0.001***	15.97±7.77	p:0.224
					X±SS	
Age (Year)					14.20±1.86	

*p<0.05 STAIC: State-Trait Anxiety Inventory for Children CDI: Child Depression Inventory

STAIC and CDI mean scores of refugee children and Pearson correlation analysis results are given in Table 2. It was determined that the STAIC total score average was 35.03 ± 7.10, and the CDI total score average was 16.34 ± 8.28. In addition, it was determined that 20.7% of refugee children experienced high levels of anxiety and 37.9% had depression, and there was a positive and moderate (0.40 < r ≤ 0.60) relationship between students' STAIC and CDI scores.

Table 2. Mean Scores and Correlation Evaluation of Refugee Children's STAIC and CDI Scores of Migrant Children from the STAIC and CDI

Scale		n	%	Min-Max	X±SS	STAIC	CDI
STAIC	Low Anxiety Level (20-40 Points)	111	79.3	20-52	35.03±7.10	1	0.572**
	High Anxiety Level (41- 60 Points)	29	20.7				
CDI	<19	87	62.1	3-49	16.34±8.28	0.572**	1
	≥19	53	37.9				

STAIC: State-Trait Anxiety Inventory for Children CDI: Child Depression Inventory
** Correlation is significant at the 0.01 level (2-tailed)

According to the results of the regression analysis in Table 3, when the significance level corresponding to the F value is considered, it is seen that the model established is statistically significant (F=4.643; p<0.05). Considering the beta coefficient value, t value and significance level of the independent variable, it was determined that age, the presence of the father, separation from the family due to war, having a chronic disease and smoking status had a statistically significant effect on the total score of the State- Trait Anxiety Inventory (t=2.404, p<0.05; t=2.471, p<0.05; t=-2.712, p<0.05, t=-2.362, p<0.05, t=-2.079, p<0.05). Age, the presence of the father, separation from the family due to war, having a chronic disease, and smoking explain 22.4% of the change in the total score of the STAIC (Adjusted R2=0.224). There is no autocorrelation problem in the established model. Durbin Watson value is between 1.5 and 2.5 (DW=1,636).

Table 3. Multiple Regression Results on the Effect of Descriptive Characteristics on the STAIC (n=140)

Model	β	Std. Error	Beta	t	p	Partial	Part	Tolerance	VIF
Constant*	56.856	9.155		6.210	**0.000***				
Age	0.744	0.310	0.195	2.404	**0.018***	0.208	0.180	0.851	1.176
Gender	-1.866	1.104	-0.132	-1.691	0.093	-0.148	-0.126	0.922	1.085
Number of siblings	-0.296	0.511	-0.046	-.579	0.564	-0.051	-0.043	0.867	1.153
Mother alive	-2.529	2.154	-0.104	-1.174	0.243	-0.103	-0.088	0.717	1.395
Father alive	3.738	1.513	0.208	2.471	**0.015***	0.213	0.185	0.787	1.271
Mother's Educational Status	-0.814	0.726	-0.121	-1.122	0.264	-0.099	-0.084	0.478	2.092

Father's Educational Status	0.083	0.604	0.015	0.138	0.891	0.012	0.010	0.466	2.147
Family Separation Status in War	-4.056	1.495	-0.226	-2.712	**0.008***	-0.233	-0.203	0.805	1.242
Length of time lived in Turkey (Years)	-0.528	0.404	-0.106	-1.305	0.194	-0.115	-0.097	0.848	1.180
Chronic Disease	-4.383	1.855	-0.207	-2.362	**0.020***	-0.204	-0.177	0.726	1.377
Smoking habit	-5.785	2.782	-0.178	-2.079	**0.040***	-0.181	-0.155	0.762	1.312

Dependent Variables: STAIC STAIC: State-Trait Anxiety Inventory for Children R: 0.285
*R^2: 0.224 F: 4.643 *p:0.000 Durbin Watson:1.636*

According to the results of the regression analysis in Table 4, it is seen that the established model is statistically significant when the significance level corresponding to the F value is considered (F=3.365; p<0.05). Considering the beta coefficient value, t value and significance level of the independent variable, it was determined that the mother's the presence of the mother, the time she lived in Turkey and the status of having a chronic disease had a statistically significant effect on the CDI total score (t=2.379, p<0.05; t=-2.167, p<0.05; t=-2.858, p<0.05). The presence of the mother, duration of life in Turkey, and having a chronic disease explain 15.8% of the change in the total CDI score (Adjusted R^2=0.158). There is no autocorrelation problem in the established model. Durbin Watson value is between 1.5 and 2.5 (DW=1.557).

Table 4. Multiple Regression Results on the Effect of Descriptive Characteristics on CDI (n=140)

Model	β	Std. Error	Beta	t	p	Partial	Part	Tolerance	VIF
Constant*	38.358	11.115		3.451	**0.001***				
Age	-0.051	0.376	-0.011	-0.135	0.893	-0.012	-0.010	0.851	1.176
Gender	-1.148	1.340	-0.069	-0.857	0.393	-0.075	-0.067	0.922	1.085
Number of siblings	-0.644	0.620	-0.087	-1.039	0.301	-0.091	-0.081	0.867	1.153
Mother alive	6.222	2.615	0.219	2.379	**0.019***	0.206	0.185	0.717	1.395
Father alive	0.478	1.836	0.023	0.261	0.795	0.023	0.020	0.787	1.271
Mother's Educational Status	-0.391	0.881	-0.050	-0.443	0.658	-0.039	-0.035	0.478	2.092
Father's Educational Status	-0.663	0.733	-0.103	-0.905	0.367	-0.080	-0.070	0.466	2.147
Family Separation Status in War	-1.027	1.815	-0.049	-0.566	0.573	-0.050	-0.044	0.805	1.242
Length of time lived in Turkey (Years)	-1.064	0.491	-0.183	-2.167	**0.032***	-0.188	-0.169	0.848	1.180
Chronic Disease	-6.436	2.252	-0.261	-2.858	**0.005***	-0.245	-0.222	0.726	1.377
Smoking habit	-2.381	3.377	-0.063	-0.705	0.482	-0.062	-0.055	0.762	1.312

Dependent Variables: CDI CDI: Child Depression Inventory R: 0.224 R^2: 0.158
*F: 3.365 *p:0.000 Durbin Watson:1.557*

DISCUSSION

The fact that children who are subject to migration leave their homes and countries, have their education interrupted, lost one or both parents, relatives or one of their friends, witness the torture and death of their family members, potentially are exposed to discrimination in the country they come from, and experience economic problems adversely affect their mental health. In this study, it was aimed to determine the anxiety and depression levels of refugee children. Thus, the present study opens a window to their emotional world by examining how children experience migration.

There was no significant difference between the depression and anxiety scores of male and female students. When the literature is examined, it is seen that there is no clear evidence of a difference in terms of depression between girls and boys (Angel et al., 2001; Ellis et al., 2008; Betancourt et al., 2012; Rothe et al., 2002). Contrary to our study finding, there are studies reporting that the levels of depression and anxiety differ between girls and boys. For example; Nasıroğlu & Çeri (2016) in their study with refugee children exposed to the war in Syria, found that girls experience more depression than boys (Nasıroğlu & Çeri, 2016). Okello et al., in a study carried out with adolescents exposed to war in Northern Uganda in 2013, determined that girls had higher anxiety and depression scores than boys (Okello et al., 2013) Amone P'Olak et al., (2014) in his study with war-affected young people, observed that girls experience more depression and anxiety than boys (Amone P'Olak et al., 2014).

It was found, according to the results obtained from the study, that the depression scores of the children whose mothers died were high while both depression and anxiety scores of the children whose father died were high. In the study of Yayan & Düken (2019) with 738 refugee children settled in Turkey, it was determined that most of the children participating in the study had to leave their families and lost one of their family members. Children whose mother or father died had higher depression and anxiety scores. Studies carried out with children exposed to war have revealed the fact that children who have experienced war-related events and lost their parents have higher scores for depression, anxiety, and post- traumatic stress disorder. (Okello et al., 2013; Amone P'Olak et al., 2014). In a study carried out with children who experienced the war 10 years after the Gulf War in Iraq, it was reported that children had poor sleep quality and had anxiety and post-traumatic stress disorder (Llabre & Hadi, 2009). In one study, it was found that children who witnessed the death or injury of their parents more frequently experienced mental health problems (Fazel et al., 2012).

The effects of parent education on child mental health are addressed by a limited number of studies with inconsistent results (Panter- Brick et al., 2015; Yalın Sapmaz et al., 2017). In our study, it was seen that the anxiety levels of the children of fathers who graduated from high school were lower than those of fathers who graduated from secondary school. In a study, it was determined that as the education level of their fathers increased, the mental problems of the children decreased. (Çeri & Nasıroğlu, 2018), while other studies did not find a relation between the education level of the parents and the mental health of the child (Beiser & Hou, 2016 ; Beni Yonis et al., 2020 ; Yalın Sapmaz et al., 2017).

Family is an important source of social support for children. Evidence consistently supports the role of family ties as assets and positive parent-child relationships as a source of strength, protection, and security for children (Bermudez et al., 2018; Eruyar et al., 2020; Nasıroğlu et al., 2018). ; Zwi et al., 2018). As such, some mental health problems can be seen in children in families torn apart by war (Areba et al., 2018). This study and other studies support the literature, and it is seen that children separated from their families during the war experience high levels of anxiety (Yayan et al., 2020; Arakelyan & Ager, 2020).

In our study, no significant difference was observed between the duration (years) of the participants living in Turkey after migration and their depression and anxiety scores. Considering that most of the participants have lived in Turkey for 5 years or more, it can be thought that the fact that time has passed since migration and they live in a country far from conflicts will reduce the level of depression and anxiety. After the forced displacement, individuals feel unhappy and sad. When they adapt to the country they come and start to feel that they belong there, it is expected that depressive symptoms and anxiety levels begin to

decrease gradually (Hertz, 1984). However, there is no general consensus among the studies. While there are studies showing that depressive symptoms decrease over time, there are studies reporting the opposite (Huemer et al., 2013; Vervliet et al., 2014). As such, there is a need for longer-term studies with larger samples observing refugee children after migration.

It was observed that both depression and anxiety scores of the participants with any chronic disease were higher than those without chronic diseases. Refugees who try to live in another country may have difficulties in adapting to the health system where they migrated, as they are used to the system in their country (Uğurlu et al., 2003). If we look at other issues, these people do not have sufficient information about how to access health services, have difficulty in expressing their problems due to language problems, and are reluctant to fully express their problems, and the lack of travel money to apply to the nearest health institution can be counted. Most of the refugees do not know how to benefit from health services (Önal & Keklik, 2016). Studies have shown that most of the patients with chronic diseases do not know the procedures to be performed when surgery is required, more than half of them do not know how to use the drug when they have to use it, and the majority of them consult their neighbors about how to use the drug (Keskin, 2017). It is thought that both not knowing the language adequately and not knowing exactly how to apply to health services increase the level of depression and anxiety in those with chronic diseases.

Refugees suffer from common daily life stresses such as high unemployment, low income, high poverty, food insecurity, protection problems, limited public space, crowded homes and lack of activities for children and youth (Damiri, 2020). Refugee youth with emotional distress are in danger of adopting risky behaviors such as smoking (Walsh et al., 2010). In this study and other studies, it is seen that the anxiety levels of children who smoke are higher (Walsh et al., 2010; Yayan et al., 2020; Salloum et al., 2019). These results can be interpreted as showing that children are prone to smoking behavior, which is an ineffective method in coping with mental problems.

Studies on the effects of post-war migration on mental health have revealed the fact that children have high rates of depression and anxiety disorders (Al Ghalayini, & Thabet, 2017; Eruyar et al., 2018; Javanbakht et al., 2018). In our study, 37.9% of refugee children had depressive symptoms and 20.7% had high anxiety. Similar to our study results, when the studies with refugees in Turkey were examined, the prevalence rate of depression was found to be in the range of 8.9-69.3% (Çeri, et al., 2018; Önen et al., 2014; Handan & Cerit, 2018). In studies carried out with Yazidi children, it was determined that the most common psychiatric issue is depression (Nasıroğlu, 2016; Çeri et al., 2016). On the other hand, Attanayake et al. (2009) reported that depression (43%) and anxiety (27%) were common in children who survived the war (Attanayake et al., 2009). In another study, Betancourt et al., (2012) reported that the anxiety rate in refugee children affected by war was 26.8% (Betancourt et al., 2012). Fazel et al. (2005) refugee children who had to leave their own country; stated that the rate of depression was ten times higher (Fazel et al., 2005). Our study results are similar to the literature.

As a result of the correlation analysis, it was observed that there was a positive and moderate relationship between depression and anxiety scores. Similarly, when studies with children and adolescents who were exposed to war were examined, it was seen that there was a positive relationship between depression and anxiety scores of children (Betancourt & Borisova, 2011; Jenssen & Johannessen, 2015; Betancourt et al.,2015; Boelen & Spuij, 2013). In another study examining the mental health of refugee children in Norway, a positive correlation was observed between depression, post-traumatic stress disorder, anxiety and social relations scores (Jenssen & Johannessen, 2015). The study findings are similar to the literature.

Limitations of the Study

Much as we obtained important findings regarding the mental health of refugee children in a study we carried out in a province in eastern Turkey, There are several limitations in the research. The first of these is that the small sample size makes it difficult to generalize our findings. The study is performed at a single city and this may be accepted as a limitation because we evaluated only refugee children living in the center of Erzincan.

The second limitation is that data collection conditions were also not at ideal standards, language issues led to limitations in collecting information. Issues in communication were actually expected. Much as this problem has been resolved with volunteer students who speak Arabic - Turkish, conducting the study with students who speak Arabic - Turkish will facilitate the process in future studies.

And the third limitation is that results from analyzes are based on cross- sectional data and longitudinal studies are needed to obtain stronger results.

Recommendations

• Children exposed to immigration are at high risk for mental health problems. The mental health requirements of refugee children, who are a vulnerable group, should be assessed immediately following resettlement and adequate support should be provided, with particular attention to young adults. Psychosocial interventions may have an impact on post- traumatic stress disorder, depression and anxiety in asylum seekers and refugees, but there is limited support for pharmacological treatment. Comprehensive interventions which also address social and financial difficulties can improve the mental health of refugee children.

• Studies should be carried out to ensure the integration of children who have been exposed to migration, to prevent social isolation, and to develop and improve interpersonal relations.

• Joint studies should be carried out with teachers and school administrators, and children in the risk group in terms of trauma and depression scores should be determined, and these children should be directed to guidance services and psychological/psychiatric support units for support.

• In this study, data were collected only from children, in further studies, children's depression and anxiety symptoms should also be questioned from teachers and parents.

• The data of this study were collected in a province located in eastern Turkey. In future research, samples can be collected from different cities, towns and villages by considering distributions such as various ages, socio -economic status.

REFERENCES

Areba, E. M., Duckett, L., Robertson, C., & Savik, K. (2018). Religious Coping, Symptoms of Depression and Anxiety, and Well-Being Among Somali College Students. *Journal of religion and health*, *57*(1), 94–109. https://doi.org/10.1007/s10943-017-0359-3

Arakelyan, S., & Ager, A. (2021). Annual Research Review: A multilevel bioecological analysis of factors influencing the mental health and psychosocial well-being of refugee children. *Journal of child psychology and psychiatry, and allied disciplines*, *62*(5), 484–509. https://doi.org/10.1111/jcpp.13355

Attanayake, V., McKay, R., Joffres, M., Singh, S., Burkle, F., Jr, & Mills, E. (2009). Prevalence of mental disorders among children exposed to war: a systematic review of 7,920 children. *Medicine, conflict, and survival*, *25*(1), 4–19. https://doi.org/10.1080/13623690802568913

Al Ghalayini, H., & Thabet, A. M. (2017). The relationship between war trauma and anxiety and posttraumatic stress disorder among preschool children in the Gaza strip. *Arab Journal of Psychiatry*, *28*(1), 36-45.

Amone-P'Olak, K., Jones, P., Meiser-Stedman, R., Abbott, R., Ayella-Ataro, P. S., Amone, J., & Ovuga, E. (2014). War experiences, general functioning and barriers to care among former child soldiers in Northern Uganda: the WAYS study. *Journal of public health (Oxford, England)*, *36*(4), 568–576. https://doi.org/10.1093/pubmed/fdt126

Angel, B., Hjern, A., & Ingleby, D. (2001). Effects of war and organized violence on children: a study of Bosnian refugees in Sweden. *The American journal of orthopsychiatry*, *71*(1), 4–15. https://doi.org/10.1037/0002-9432.71.1.4

Arakelyan, S. & Ager, A. (2020) A multilevel bioecological analysis of factors influencing the mental health and psychosocial wellbeing of refugee children. Journal of Child Psychology and Psychiatry, 62(5), pp. 484-509.

Barbui, C., Purgato, M., Acarturk, C., Churchill, R., Cuijpers, P., Koesters, M., Sijbrandij, M., Välimäki, M., Wancata, J., & White, R. G. (2022). Preventing the mental health consequences of war in refugee populations. *Epidemiology and psychiatric sciences*, *31*, e24. https://doi.org/10.1017/S2045796022000154

Beacham, M. J. (2022). *Turkey's governance of Syrian refugees: a case of transformation towards regulatory statehood* (Doctoral dissertation, Bilkent University).

Beiser, M., & Hou, F. (2016). Mental Health Effects of Premigration Trauma and Postmigration Discrimination on Refugee Youth in Canada. *The Journal of nervous and mental disease*, *204*(6), 464–470. https://doi.org/10.1097/NMD.0000000000000516

Beni Yonis, O., Khader, Y., Jarboua, A., Al-Bsoul, M. M., Al-Akour, N., Alfaqih, M. A., Khatatbeh, M. M., & Amarneh, B.

(2020). Post-traumatic stress disorder among Syrian adolescent refugees in Jordan. *Journal of public health (Oxford, England)*, *42*(2), 319–324. https://doi.org/10.1093/pubmed/fdz026

Betancourt, T. S., Newnham, E. A., Layne, C. M., Kim, S., Steinberg, A. M., Ellis, H., & Birman, D. (2012). Trauma history and psychopathology in war-affected refugee children referred for trauma-related mental health services in the United States. *Journal of traumatic stress*, *25*(6), 682–690. https://doi.org/10.1002/jts.21749

Betancourt, T. S., Borisova, I. I., de la Soudière, M., & Williamson, J. (2011). Sierra Leone's child soldiers: war exposures and mental health problems by gender. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*, *49*(1), 21–28. https://doi.org/10.1016/j.jadohealth.2010.09.021

Bermudez, L. G., Parks, L., Meyer, S. R., Muhorakeye, L., & Stark, L. (2018). Safety, trust, and disclosure: A qualitative examination of violence against refugee adolescents in Kiziba Camp, Rwanda. *Social science & medicine (1982)*, *200*, 83–91. https://doi.org/10.1016/j.socscimed.2018.01.018

Boelen, P. A., & Spuij, M. (2013). Symptoms of post-traumatic stress disorder in bereaved children and adolescents: factor structure and correlates. *Journal of abnormal child psychology*, *41*(7), 1097–1108. https://doi.org/10.1007/s10802-013-9748-6

Citaristi, I. (2022). United Nations High Commissioner for Refugees—UNHCR. In *The Europa Directory of International Organizations 2022* (pp. 220-240). Routledge.

Çeri, V., Nasıroğlu, S., Ceri, M., & Çetin, F. Ç. (2018). Psychiatric Morbidity Among a School Sample of Syrian Refugee Children in Turkey: A Cross-Sectional, Semistructured, Standardized Interview-Based Study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *57*(9), 696–698.e2. https://doi.org/10.1016/j.jaac.2018.05.019

Damiri, B. R. (2020). The use of psychoactive substances in a conflict area in the West Bank: Drug use risk factors and practices in Palestinian refugee camps. *International Journal of Mental Health and Addiction*, *18*(6), 1507-1520.

Ellis, B. H., MacDonald, H. Z., Lincoln, A. K., & Cabral, H. J. (2008). Mental health of Somali adolescent refugees: the role of trauma, stress, and perceived discrimination. *Journal of consulting and clinical psychology*, *76*(2), 184–193. https://doi.org/10.1037/0022-006X.76.2.184

Eruyar, S., Maltby, J., & Vostanis, P. (2018). Mental health problems of Syrian refugee children: the role of parental factors. *European child & adolescent psychiatry*, *27*(4), 401–409. https://doi.org/10.1007/s00787-017-1101-0

Fazel, M., Reed, R. V., Panter-Brick, C., & Stein, A. (2012). Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *Lancet (London, England)*, *379*(9812), 266–282. https://doi.org/10.1016/S0140-6736(11)60051-2

Fazel, M., Wheeler, J., & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *Lancet (London, England)*, *365*(9467), 1309–1314. https://doi.org/10.1016/S0140-6736(05)61027-6

Frounfelker, R. L., Miconi, D., Farrar, J., Brooks, M. A., Rousseau, C., & Betancourt, T. S. (2020). Mental Health of Refugee Children and Youth: Epidemiology, Interventions, and Future Directions. *Annual review of public health*, *41*, 159–176. https://doi.org/10.1146/annurev-publhealth-040119-094230

Handan, Ö., & Cerit, C. (2018). Post-Traumatic Stress Disorder And Related Factors In Post-War Syrıan Refugees Who Migrated To Turkey And Worked In Humanitarian Aid Organizations. *Kocaeli Üniversitesi Sağlık Bilimleri Dergisi*, *4*(3), 70-73. https://doi.org/10.30934/kusbed.431796

Hertz D. G. (1984). Psychological and psychiatric aspects of remigration. *The Israel journal of psychiatry and related sciences*, *21*(1), 57–68.

Huemer, J., Völkl-Kernstock, S., Karnik, N., Denny, K. G., Granditsch, E., Mitterer, M., Humphreys, K., Plattner, B., Friedrich, M., Shaw, R. J., & Steiner, H. (2013). Personality and psychopathology in African unaccompanied refugee minors: repression, resilience and vulnerability. *Child psychiatry and human development*, *44*(1), 39–50. https://doi.org/10.1007/s10578-012-0308-z

IOM and UNICEF. (2016). Data brief: Migration of children to Europe. Retrieved from http://www.iom.int/sites/default/files/press_release/file/IOM-UNICEF-Data-BriefRefugee-and-Migrant-Crisis-in-Europe-30.11.15.pdf

Jabbar, S. A., & Zaza, H. I. (2019). Post-traumatic stress and depression (PSTD) and general anxiety among Iraqi refugee children: A case study from Jordan. *Early Child Development and Care*, *189*(7), 1114–1134. https://doi.org/10.1080/03004430.2017.1369974

Javanbakht, A., Rosenberg, D., Haddad, L., & Arfken, C. L. (2018). Mental Health in Syrian Refugee Children Resettling in the United States: War Trauma, Migration, and the Role of Parental Stress. *Journal of the American Academy of Child and Adolescent Psychiatry*, *57*(3), 209–211.e2. https://doi.org/10.1016/j.jaac.2018.01.013

Jenssen, I. H., & Johannessen, K. B. (2015). Aggression and body image concerns among anabolic androgenic steroid users, contemplators, and controls in Norway. *Body image*, *12*, 6–13. https://doi.org/10.1016/j.bodyim.2014.08.009

Kandemir, H., Karataş, H., Çeri, V., Solmaz, F., Kandemir, S. B., & Solmaz, A. (2018). Prevalence of war-related adverse events, depression and anxiety among Syrian refugee children settled in Turkey. *European child & adolescent psychiatry*, *27*(11), 1513–1517. https://doi.org/10.1007/s00787-018-1178-0

Keskin, A. (2017). *Cerrahi Hastalarında Amerikan Ağrı Derneği Revize Hasta Sonuçları Anketi'nin Türkçe Geçerlik–Güvenirliği* (Master›s thesis, Eastern Mediterranean University (EMU)-Doğu Akdeniz Üniversitesi (DAÜ)).

Kim, J., Nicodimos, S., Kushner, S. E., Rhew, I. C., McCauley, E., & Vander Stoep, A. (2018). Comparing Mental Health of US Children of Immigrants and Non-Immigrants in 4 Racial/Ethnic Groups. *The Journal of school health*, *88*(2), 167–175. https://doi.org/10.1111/josh.12586

Kovacs M. (1985). The Children's Depression, Inventory (CDI). *Psychopharmacology bulletin*, *21*(4), 995–998.

Llabre, M. M., & Hadi, F. (2009). War-related exposure and psychological distress as predictors of health and sleep: a longitudinal study of Kuwaiti children. *Psychosomatic medicine*, *71*(7), 776–783. https://doi.org/10.1097/PSY.0b013e3181ae6aee

Mattelin, E., Paidar, K., Söderlind, N., Fröberg, F., & Korhonen, L. (2022). A systematic review of studies on resilience

and risk and protective factors for health among refugee children in Nordic countries. *European child & adolescent psychiatry*, 10.1007/s00787-022-01975-y. Advance online publication. https://doi.org/10.1007/s00787-022-01975-y

Nasıroğlu, S., & Çeri, V. (2016). Posttraumatic stress and depression in Yazidi refugees. *Neuropsychiatric disease and treatment*, *12*, 2941–2948. https://doi.org/10.2147/NDT.S119506

Nasıroğlu, S., Çeri, V., Erkorkmaz, Ü., & Semerci, B. (2018). Determinants of psychiatric disorders in children refugees in Turkey's Yazidi refugee camp. *Psychiatry and Clinical Psychopharmacology*, *28*(3), 291-299. https://doi.org/10.1080/24750573.2017.1422958

Okello, J., Nakimuli-Mpungu, E., Musisi, S., Broekaert, E., & Derluyn, I. (2013). War-related trauma exposure and multiple risk behaviors among school-going adolescents in Northern Uganda: the mediating role of depression symptoms. *Journal of affective disorders*, *151*(2), 715–721. https://doi.org/10.1016/j.jad.2013.07.030

Önal, A., & Keklik, B. (2016). Mülteci Ve Sığınmacıların Sağlık Hizmetlerine Erişimde Yaşadığı Sorunlar: Isparta İlinde Bir Uygulama. *Suleyman Demirel University The Journal of Visionary*, *7*(15),132-148.

Önen, C., Günes, G., Tureme, A., & Agaç, P. (2014). Depression and anxiety case in Syrians that live in a refugee camp. *The Journal of Academic Social Sciences,* 2(6), 223-230. doi: 10.16992/ASOS.307

Özusta, S. (1993). Adaptation, Validity and Reliability of the State-Trait Anxiety Inventory for Children Study. Master›s thesis (unpublished). Ankara: Hacettepe University

Panter-Brick, C., Grimon, M. P., Kalin, M., & Eggerman, M. (2015). Trauma memories, mental health, and resilience: a prospective study of Afghan youth. *Journal of child psychology and psychiatry, and allied disciplines*, *56*(7), 814–825. https://doi.org/10.1111/jcpp.12350

Rothe, E. M., Lewis, J., Castillo-Matos, H., Martinez, O., Busquets, R., & Martinez, I. (2002). Posttraumatic stress disorder among Cuban children and adolescents after release from a refugee camp. *Psychiatric services (Washington, D.C.)*, *53*(8), 970–976. https://doi.org/10.1176/appi.ps.53.8.970

Salloum, R. G., Lee, J., Mostafa, A., Abu-Rmeileh, N. M. E., Hamadeh, R. R., Darawad, M. W., Kheirallah, K. A., Salama, M., Maziak, W., & Nakkash, R. (2019). Waterpipe Tobacco Smoking among University Students in Three Eastern Mediterranean Countries: Patterns, Place, and Price. *Substance use & misuse*, *54*(14), 2275–2283. https://doi.org/10.1080/10826084.2019.1645177

Yalın Sapmaz, Ş., Uzel Tanrıverdi, B., Öztürk, M., Gözaçanlar, Ö., Yörük Ülker, G., & Özkan, Y. (2017). Immigration-related mental health disorders in refugees 5-18 years old living in Turkey. *Neuropsychiatric disease and treatment*, *13*, 2813–2821. https://doi.org/10.2147/NDT.S150592

Sirin, S. R., & Rogers-Sirin, L. (2015). *The educational and mental health needs of Syrian refugee children* (p. 13). Washington, DC: Migration Policy Institute.

Spielberger, C. D., Edwards, C. D., Lushene, R. E., Montuori, J., & Platzek, D. (1973). The state-trait anxiety inventory for children (preliminary manual). Palo Alto, CA: Consulting Psychologists Press.

Uğurlu, M., Bakım, B., Güveli, M., Karamustafaoğlu, K. O., Soydal, T., & Ergüder, T. (2003). Afet Yaşantıları, Afet Psikiyatrisi ve Bingöl Depremi Sonrası Ruhsal Müdahale Programı. *Düşünen Adam*, *16*(4), 203-210.

United Nations Children's Fund. (2016). The state of the world's children 2016: A fair chance for every child. New York: UNICEF. Retrieved from https://www.unicef.org/publications/files/UNICEF_SOWC_2016.pdf

Vervliet, M., Lammertyn, J., Broekaert, E., & Derluyn, I. (2014). Longitudinal follow-up of the mental health of unaccompanied refugee minors. *European child & adolescent psychiatry*, *23*(5), 337–346. https://doi.org/10.1007/s00787-013-0463-1

Yayan, E. H., Düken, M. E., Özdemir, A. A., & Çelebioğlu, A. (2020). Mental Health Problems of Syrian Refugee Children: Post-Traumatic Stress, Depression and Anxiety. *Journal of pediatric nursing*, *51*, e27–e32. https://doi.org/10.1016/j.pedn.2019.06.012

Yayan, E. H., & Düken, M. E. (2019). Determination of psychosocial conditions of refugee children living in society. *Perspectives in psychiatric care*, *55*(4), 644–651. https://doi.org/10.1111/ppc.12387

Walsh, S. D., Harel-Fisch, Y., & Fogel-Grinvald, H. (2010). Parents, teachers and peer relations as predictors of risk behaviors and mental well-being among immigrant and Israeli born adolescents. *Social science & medicine (1982)*, *70*(7), 976–984. https://doi.org/10.1016/j.socscimed.2009.12.010

Zwi, K., Woodland, L., Williams, K., Palasanthiran, P., Rungan, S., Jaffe, A., & Woolfenden, S. (2018). Protective factors for social-emotional well-being of refugee children in the first three years of settlement in Australia. *Archives of disease in childhood*, *103*(3), 261–268. https://doi.org/10.1136/archdischild-2016-312495