The relations of traumatic life events with depression, loneliness, anxiety, posttraumatic growth and pain in refugee university students

Mülteci Üniversitesi Öğrencilerinde Travmatik Yaşantilarin Depresyon, Yalnizlik, Anksiyete, Travma Sonrasi Gelişim ve Ağri ile İlişkisi

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ABSTRACT

Aim: The purpose of this study was to investigate the rate of traumatic experiences and the relationship between traumas and anxiety, loneliness, depression, posttraumatic growth and pain, in refugee university students.
Materials and Methods: This study was conducted at the Gaziantep University between September 2017 and September 2018. UCLA (University of California, Los Angeles) Loneliness Scale, Posttraumatic Growth Inventory (PTGI), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Traumatic Events Checklist (T.E.C) were used for assessment purposes.
Results: A total of 71 students were included in our study. There was a positive correlation between UCLA and BDI, T.E.C and a negative correlation between UCLA and PTGE. There was a positive correlation between BDI and BAI, T.E.C. A negative correlation was determined between PTGE and BDI and also T.E.C. A significant and positive correlation was observed between duration of pain felt during a day and T.E.C, BDI, and a negative correlation between duration of pain and PTGE.
Conclusion: Excessive traumatic experiences were positively related with depression and negatively related with traumatic growth. The duration of pain felt during a day was positively related with the excess of depressive symptoms and traumatic events, however there was no relationship between the presence of pain/localization of pain and assessment scales.

Key words: Refugees, trauma, anxiety, depression, pain, posttraumatic growth

ÖZ

Amaç: Bu çalışmanın amacı, mülteci üniversite öğrencilerinde travmatik deneyimlerin oranını ve travmalar ile anksiyete, yalnızlık, depresyon, travma sonrası gelişim ve ağrı arasındaki ilişkiyi araştırmaktır. Gereç ve
Yöntemler: Bu çalışma Eylül 2017 ve Eylül 2018 tarihleri arasında XXX Üniversitesinde gerçekleştirilmiştir. Değerlendirme için UCLA (California Üniversitesi, Los Angeles) Yalnızlık Ölçeği, Travma Sonrası Büyüme Envanteri (TSBE), Beck Depresyon Envanteri (BDE), Beck Anksiyete Envanteri (BAE), Travmatik Yaşantilar Kontrol Listesi (TYKL) kullanılmıştır.
Bulgular: Çalışmaya toplam 71 öğrenci dahil edildi. UCLA ve BDE, TYKL arasında pozitif, UCLA ve TSBE arasında negatif korelasyon vardı. BDI, BAE ve TYKL arasında pozitif korelasyon vardı. TSBE ve BDE ile TYKL arasında negatif bir korelasyon saptandı. Bir gün içinde hissedilen ortalama ağrı süresi ile TYKL, BDE arasında anlamlı ve pozitif bir korelasyon ve ağrı süresi ile TSBE arasında negatif korelasyon gözlendi.
Sonuç: Mülteci öğrencilerde travmatik yaşantıların fazla olması depresyon ile pozitif, travmatik büyüme ile negatif ilişkiliydi. Gün içinde hissedilen ortalama ağrı süresi, depresif belirtilerin fazlalığı ve travmatik olayların fazlalılığı ile pozitif ilişkilidir, ancak ağrının varlığı / ağrının lokalizasyonu ve değerlendirme ölçekleri arasında bir ilişki saptanmamıştır..

Anahtar kelimeler: Travma, Depresyon, Yalnizlik, Anksiyete, Travma Sonrasi Gelişim, Ağri

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INTRODUCTION

Traumatic events are described in the 5th Edition of Diagnostic and Statistical of Mental Disorders as exposure to actual or threatened death, serious injury or sexual violation (DSM-5) [1]. Refugees comprise a high-risk population with regard to trauma exposure [2] and have higher risks of mental disorders in the long term, such as anxiety, depression, posttraumatic stress disorder and somatic complaints, such as pain. These mental disorders emerge in refugees after their exposure to war, violence or exile [3] and moreover, chronic pain and anxiety/depression are largely comorbid [4].

Turkey continues to be the world's largest home for refugees, with an approximate population of 4 million refugees according to statistics data by the United Nations High Commissioner for Refugees (UNHCR) from August 2018 [5]. Syrian refugees started to attend Turkish Universities as early as 2013 [6] and Gaziantep University, where the present study was carried out, has been the university with the highest number of refugee students in Turkey during the 2016-2017 academic year [7].

Posttraumatic growth (PTG) is an interesting concept that articulates that people can benefit from traumas, or even grow to a more optimal functioning [8]. Social support and coping styles facilitate posttraumatic growth and in Turkey, where social support for immigrants continues on an on-going basis, this relationship has not yet been studied.

Loneliness is a subjective concept based on the individual's perceptions. In other words, loneliness is the discrepancy between the relationships that an individual wants and the relationship that the person actually has. Loneliness and trauma symptoms were found to predict levels of PTG, and loneliness was found to moderated the relationship between PTG and trauma [9].

The most frequent traumatic events reported in Syrian refugees were being forced to flee their home country, witnessing drumfire and being confined to home [10]. Posttraumatic stress disorder and anxiety disorders have been investigated in refugees in previous studies:

although the relationship between anxiety, depression symptoms and also chronic pain symptoms in refugees have been documented [11], it is not yet clear which trauma is associated with which variable, nor how traumatic growth in immigrants staying in our country for at least 5 years is related to these variables. Our aim in this study was to analyze the traumas that refugee university students suffer from the most, as well as to investigate the relationship between loneliness, anxiety, depression symptoms, psychosomatic pain, posttraumatic growth and traumatic experiences.

METHODS

Refugee university students were included in this descriptive study carried out between the dates of September 2017 and October 2018 in Gaziantep, Turkey. The approval for the study was obtained from the Ethics Committee of Gaziantep University (Ethical code: 2019/482), and written and verbal informed consent was recorded from the voluntary participants. A total of 71 students were selected to participate and the minimum duration of their status as a refugee was five years for all participants. Exclusion criteria were neurological diseases, acute infections, diabetes mellitus and other endocrinopathologies, a medical disease that might change pain thresholds, using medication for pain or anxiety, as well as being a patient with malignant diseases. Sociodemographic variables such as age and marital status were recorded and the participants were asked about the following traumas: the death of a family member, witnessing violence, witnessing drumfire, witnessing death, being homeless and being a subject of torture. Also, participants were asked if they have pain, to localize such pain in addition to the duration of pain during a day (no/not every day/0-30 min/30-60 min/more than 60 min). A visual analog scale was used to assess pain severity.

The participants were asked to complete all the scales. However, since some participants did not respond to certain questions or disregarded the scale, each test was evaluated according to the participants who completed those tests.

ASSESSMENT TOOLS

UCLA (UNIVERSITY OF CALIFORNIA, LOS

ANGELES) LONELINESS SCALE

The UCLA consists of 20-items and a 4-point Likert-type self-report questionnaire. It assesses the general subjective feelings of loneliness and social isolation for individuals. The scale was developed in 1978 and revised in 1980. The UCLA was investigated according to psychometric qualities for the Turkish version [12, 13]. Cronbach's alpha was 0.72

POSTTRAUMATIC GROWTH INVENTORY (PTGI)

The PTGI consists of 21-items and a 6-point Likert-type questionnaire. The test assesses favorable posttraumatic changes: higher scores mean favorable psychological changes owing to the hostile life events [14]. The PTGI was investigated according to psychometric qualities for Turkish version [15]. Internal consistency was found at 0.88 for self-perception subscale, 0.78 for philosophy of life subscale, 0.77 for relationship subscale and 0.92 for overall items.

BECK DEPRESSION INVENTORY (BDI):

The BDI consists of 21 items and a 4-point Likert-type questionnaire which evaluates depression severity over the previous week. The total score is an indication of the severity of depression. Cronbach's alpha was 0.91. The reliability and validity studies were carried out for this scale in Turkish [16].

BECK ANXIETY INVENTORY (BAI):

The scale was developed in 1988 and consists of 21 items and a 4-point Likert-type questionnaire for evaluating anxiety severity. The reliability and validity studies were conducted for this scale in Turkish [17, 18]. Cronbach's alpha was 0.93.

TRAUMATIC EVENTS CHECKLIST (T.E.C)

The T.E.C consists of 29-items for potentially traumatizing events and a Likert-type self-report questionnaire. The total score is an indication of potentially traumatizing experiences (range 0–29). The reliability and validity studies were carried out for this scale in Turkish [18].

The SPSS 22.0 program (IBM Corporation, Armonk, NY) was used for analyzing the variables. Descriptive statistics were used for the demographic characteristics of the 71 students. Data were described as mean±standard deviation. The normal distribution of numerical data was tested via the Shapiro-Wilk test. Comparisons for the variables which are compatible with normal distribution were performed by the t test, otherwise using the Mann-Whitney u test. $P < 0.05$ was considered as significant.

RESULTS

A total of 71 cases were included in our study. The mean age was 22±4, 97.1% of the students were single, 39.1% were smokers. A total of 41 participants were Syrian, whereas 23 participants didn't indicate their nationality. Of the total number of students, 14 reported the death of a family member, while 34 stated that they witnessed violence, 28 witnessed drumfire, 43 witnessed death, 20 experienced being homeless and 19 of them were subject to torture. Sixty-two participants complained of pain (Table 1).

Table 1: Traumatic events

		n	%
Witnessing drum-fire event	Yes	28	%40
	No	42	%60
Death of a family member during process	Yes	14	%20
	No	56	%80
Witnessing violence	Yes	34	%48.6
	No	36	%51.4
Witnessing a death except that of a family member	Yes	43	%61.4
	No	27	%38.6
Being homeless	Yes	20	%28.6
	No	50	%71.4
Being subject to torture	Yes	19	%27.1
	No	51	%72.9
Pain	Yes	62	%87.3
	No	9	%12.7

The mean assessment scales scores were as follows: UCLA: 45.2±10.4, PTGE: 56.5±12.3, BDI: 19.4±12.5, BAI: 17.4±15.5; T.E.C:15.7±18.8. A positive correlation was observed between UCLA and BDI, T.E.C and a negative correlation with PTGE. There was a negative correlation between PTGE and BDI and also T.E.C, whereas a positive correlation was found between BDI and BAI,

T.E.C. (Table 2).

Table 2: Correlations of assessment tools

Spearman's rho		UCLA	PTGE	BDI	BAI	T.E.C	Duration of pain
UCLA	R	1,000	-,376**	,391**	,133	,316**	,433**
	P		,001	,001	,274	,008	,000
	N		70	70	70	70	70
PTGE	R		1,000	-0.341	-,032	-,292*	-,245*
	P			,004	,793	,014	,041
	N			70	70	70	70
BDI	R		-0.341	1,000	,341**	,500**	,409**
	P				,004	,000	,000
	N				70	70	70
BAI	R				1,000	,206	,180
	P					,088	,135
	N					70	70
T.E.C	R					1,000	,466**
	P						,000
							70

There were no significant differences between death of a family member/witnessing drumfire and five assessment tools. There were significant differences witnessing violence and BDI, BAI, T.E.C. There was significant differences between death of a family member and BAI, T.E.C. There was significant differences being homeless and BAI, BDI, and there were significant differences being a subject of torture and UCLA, BAI (Table 3).

Of the participants with pain, 49 (79%) described widespread pain, 5 (7.1%) complained of waist and back pains, 6 (8.6%) of headaches and 2 (2.9%) of leg-knee-foot pain. There were no significant differences between pain/pain localization and trauma exposure types and assessment tools. A statistically significant correlation could not be determined between presence of pain and assessment tools. However, there was a significant positive correlation between duration of pain and T.E.C, BDI and a negative correlation between duration of pain and PTGE (Table 2). Moreover, a significant and positive correlation was determined between duration of pain and witnessing violence (p=0.001, r: 0.471), being homeless (p=0.002, r: 0.356) and being a subject of torture (p=0.003, r:0.354).

A significant and positive correlation was also determined between the duration of pain and witnessing violence (p=0.001, r: 0.471), being homeless (p=0.002, r: 0.356) and being a subject of torture (p=0.003, r: 0.354).

Table 3: The significant differences between trauma types and five assessment scores

	Witnessing violence	N	Mean	Std. Deviation	P
BDI	No	36	16,56	13,40	0,022
	Yes	34	22,56	10,99	
BAI	No	36	12,47	14,77	0,002
	Yes	34	22,79	14,77	
T.E.C	No	36	11,81	20,74	0,001
	Yes	34	19,91	15,89	
	Witnessing a death except that of a family mem-ber	N	Mean	Std. Deviation	P
BAI	No	27	12,04	16,22	0,002
	Yes	43	20,91	14,27	
T.E.C	No	27	15,22	23,80	0,047
	Yes	43	16,07	15,28	
	Being homeless	N	Mean	Std. Deviation	P
BDI	No	50	17,66	12,63	0,050
	Yes	20	24,00	11,50	
BAI	No	50	14,10	14,61	0,001
	Yes	20	25,95	14,94	
	Being subject to torture	N	Mean	Std. Deviation	P
UCLA	No	51	43,16	10,26	0,003
	Yes	19	50,95	9,13	
BAI	No	51	15,63	15,60	0,031
		19	22,47	14,69	

DISCUSSION

Our country is home to refugees and ensures the continuity of the university education of refugee students [5-7]; it is believed their attendance in school facilitates their adaptation to the host country [19]. This study investigated traumas and related mental symptoms, including psychosomatic pain and post traumatic improvement, in refugee university students who are expected to adapt to their host country.

Witnessing a death (61.4 %) was observed to be the maximum traumatic events in our study. A relationship was found between PTSD and depression and also PTSD and anxiety in a meta-analysis [11]. Our study confirms that there was

a positive correlation between depression and anxiety symptoms/traumatic events; witnessing violence was also observed to be related with higher depressive symptoms, according to trauma type.

The UCLA is an indication of subjective feelings on loneliness but does not provide information on causes [12]. Positive correlations between UCLA and depressive symptoms and negative correlations with PTGE, suggest that the feeling of loneliness increases with increasing depressive symptoms and that those feelings of loneliness decrease as refugees recover from posttraumatic symptoms. Being subject to torture was also observed to be related to higher loneliness symptoms, according to trauma type. A strong relationship has been observed in previous studies between depression and loneliness [20] and these results indicate the importance of coping with post traumatic depressive symptoms.

Traumatic life events were found to be a major risk factor for depression. Migrants were also more likely to report feelings of loneliness and greater overall depression, in comparison with non-migrants [21]. Similarly, our study showed that there is a strong relationship between traumatic events and depression. A negative correlation was also observed between T.E.C. and PTGE, and these results suggest that "the greater number of traumas means fewer posttraumatic recoveries". Moreover, the minimum period of time the participants spent as a refugee was five years, which reveals that the majority of the participants had traumatic experiences before the age of 18. Therefore some of these traumatic experiences can be evaluated as childhood traumas, which in turn are associated with mixed anxiety-mood disorders [22]. Being homeless, being subject to torture, witnessing violence, the death of a family member, were all observed to have significantly higher BAI scores, whereas witnessing violence and being homeless were also observed to have significantly higher BDI scores. These results suggest that some childhood traumas may highly contribute to anxiety and depression symptom levels in adulthood.

There is strong evidence purporting to the relationship between chronic pain and anxiety/

depression [4]. There is also consistent evidence on the relation between chronic pain and PTSD: indeed patients with PTSD report greater chronic pain severity [23]. Since the majority of the students did not fill out the VAS - the scale related to pain - we were unable to reach a conclusion on pain severity. We did not find any relationship between the presence of pain/localization of pain and assessment scales. However, a significant and positive correlation was observed between duration of pain and T.E.C, UCLA, BDI. There was also a significant and positive correlation between duration of pain and witnessing violence, being homeless and being subject to torture. These results suggest that more traumatic events and depression severity increased the duration of the pain in our refugee students. In addition, trauma type is also related to chronic pain: there was a particularly strong relation between chronic pain and witnessing violence. The mechanisms for the relationship between pain and trauma are not fully known, but one hypothesis is that pain is a maladaptive coping strategy against arousal, that triggers traumas leading to PTSD. Another hypothesis is that high levels of anxiety sensitivity lead to a traumatic stressor or pain [24].

The limitations of our study were the low number of participants, the self-report evaluation, the fact that participants did not answer all questions in the questionnaires, and that the precise duration of time spent as a refugee is unknown – though a five year minimum duration of time spent as a refugee was selected as a criteria for inclusion in the study of some 71 individuals. In addition, most of the participants preferred not to indicate their gender, therefore we were unable to determine if there was a difference between the sexes. Furthermore, though studies aim to eliminate the mental health challenges and improve preventive strategies for mental health in these populations, refugees may be suspicious of research, may feel some degree of shame or may fear a loss of confidentiality, thereby making them less likely to participate in research. We think that participants may have been particularly overly concerned about revealing their identity.

Trauma rates are high among refugee university students and the most common trauma type reported by students in our study was witnessing

a death (61.4 %). Feelings of loneliness were positively correlated with depressive symptoms and negatively correlated with post traumatic growth in refugees. Growth after trauma is difficult if traumatic experiences are high; our results indicate the significance of coping with post traumatic mental symptoms. Exercise was negatively associated with pain, but they were not associated with anxiety depression. The duration of pain is positively proportional with excessive depressive symptoms and traumatic events, while no relationship could be determined between the presence of pain/localization of pain and assessment scales. Further large scale studies are needed to better evaluate the association between traumas and anxiety/depression/pain in refugees.

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