Prevalence of PTSD and related factors in communities living in conflictual area: Diyarbakir case

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Abstract

Objective: In this study, we aimed to investigate the distribution of Post-Traumatic Stress Disorder (PTSD) among adults who were living in the Diyarbakir city center.

Method: Data was obtained from 708 participants that represented the demographic structure of Diyarbakir. Houses to be visited were determined in collaboration with the Turkish Institute of Statistics.

Results: The prevalence of traumatic life experience was 47.9%. Most prevalent traumatic life experiences were forced emigration and witnessing of a case of murder or injury. The lifelong and current PTSD prevalence was 34.9% and 15.1%, respectively. We concluded that the prevalence of traumatic experiences and subsequent PTSD was high among people who were living in areas of conflict, and treatment opportunities were inadequate.

Conclusion: An important finding of this study is the association between the range of prevalence rates of traumatic experiences and risk factors for PTSD in an armed conflict region in Turkey. There is a need for studies that will also include people living in rural areas in order to understand the full picture of problems encountered by those in areas of conflict. Moreover, we believe in the importance of an effective approach of institutional and occupational organizations not to leave these people alone with their traumatic experiences.

Key words: conflict region, trauma, post traumatic stress disorder, social support

Introduction

The prevalence of PTSD was estimated between 2-15%, according to population based studies,[1] whereas this prevalence was reported to be between 3-58% in the risk groups.[2-4] It is also reported that trauma caused by humans have greater negative effects on mental health.[5] However, there is limited information concerning the prevalence of psychiatric disorders among people living in areas of conflict, especially those with a relatively low income, where trauma caused by humans is more prevalent. On the other hand, in a study conducted in four different regions with conflicts, the prevalence of PTSD was reported between 17.8-37.4%.[6] Cardozo et al.[7] and Cardozo et al.[8] found the prevalence of PTSD just after the Kosovo war and one year later as 17.1% and 25.0% respectively. The same prevalence was reported as 24.0% in another study that was performed in the same region later on.[9]

Experiencing a traumatic event does not in itself necessitate the development of

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PTSD.[10] There are also many factors that trigger improvement or chronic nature of the condition as well.[11] Improvement of the condition or development of chronic illness is generally affected by many factors before, during and after the trauma. For example, women develop PTSD twice as much as men who experience the same traumatic events. The condition shows a chronic pattern in more than half of the affected women.[12] It was reported that anxiety, functional impairment and physical symptoms were more prominent in women.[13] Positive history for previous psychiatric therapy, positive family history for psychiatric diseases, being divorced and exposure to torture or violence were known to have an effect on improvement or chronic nature of PTSD.[11]

It was also reported that patients with PTSD used health services more frequently than other individuals.[14,15] However, many of these studies were performed with refugees in developed countries. It was also ascertained that many patients who were living in areas of conflict and experienced traumatic events did not receive any treatment.[16,17] Two factors that affect the course of treatment were determined as need and accessibility. Severity of the disease was found to be important among factors of need, whereas accessibility was related with having economical resources like employment and health service awareness.[18] It was reported that untreated PTSD took a complicated stance with depression and substance abuse.[19]

Another tragedy encountered in areas of conflict is involuntarily internal displacement. The number of people forced into internal displacement within national borders was 23.7 millions worldwide by 2005 and although this number was twice as high as international refugees, it was reported that national internal displacements were in worse conditions and received less attention.[20] In the USA it is reported that the highest mortality rates in people under emergency conditions were present among individuals subjected to internal displacement.[21] Studies conducted within the last few decades in developed countries which accepted refugees demonstrated that there was an increase in the relationship between trauma and psychiatric morbidities, and also in information concerning refugee communities who experienced the traumatization of war.[22] Epidemiologic studies demonstrate that the prevalence of PTSD among people who were subjected to involuntary internal displacement was between 4-20%.[8,22,23]

Background

After the beginning of the 1980s, the Southeastern region of Turkey experienced a period of widespread violence that can lead to psychological traumas. It is still present today although its severity has decreased considerably. Thousands of people died, many people were injured and were exposed to traumatic events due to this conflict while they were trying to survive. On the other hand, from the end of the 1980s to the mid 1990s people living in especially rural areas of this region were obliged to migrate in mass numbers to bigger towns in or out of the region. There are a limited number of studies despite the various traumatic experiences and severe psychiatric disorders encountered in the conflicts areas. Moreover, it was reported that the number of studies that dealt with the prevalence of mental illnesses among people who were living in areas of conflict is limited.[6] All previous studies in Turkey investigated only one aspect of the problem and were performed in people who were subjected to national internal displacement. In a study performed during the earlier years of forced migration, it was shown

that traumatic experiences associated with conflicts were prevalent before and during migration and there was PTSD and other psychopathologies in 66% of the subjects who participated in the study.[24] We assume that the prevalence of psychiatric disorders related to conflicts may be high in our region as it is in other areas of conflict in the world. In this study, we aimed to investigate the distribution of traumatic life experiences and consequent PTSD among people who were living in the Diyarbakir city center that is situated in the area of armed conflict.

Materials and methods

The present study was a cross-sectional study. We carried out the study from May to July 2005. The study involved individuals who were older than 18 years of age and were living in the Diyarbakir city center. This number was 285,000 according to the 2000 census. The sample size of 270 subjects was calculated using the Epi Info 2000 software program by assuming the prevalence of PTSD as 0.02 (acceptable 0.03) in a 95% confidence interval. The houses to be visited were determined in collaboration with the Turkish Institute of Statistics. Fifty separate clusters representing the city center were established and 15 houses from each cluster were randomly chosen from the address lists and a list of 750 houses was obtained. One individual older than 18 years from each house was included in the study. The distribution of 15 individuals from each cluster according to age and gender was determined proportionately from the results of the 2000 census in the Diyarbakir city center. The individual to be interviewed was selected according to these criteria.

The questionnaires were administered by final year students from the Psychology Department of the Science and Literature School of Dicle University who were trained by Psychiatry and Public Health professors, through a face-to-face interview method. Inclusion criteria were: being older than 18 years, absence of any psychiatric or physical disorder that might affect the interview and acceptance to be a volunteer for the study. A total of 720 families were interviewed and their data were reviewed by the study group. Thirty families did not accept to participate in the study. Twelve subjects were excluded as their forms did not contain any information about PTSD or trauma. Demographic features, trauma experiences and related information were present for the remaining 708 participants.

Materials

1. Socio-demographic characteristics

The questionnaire was developed by the Departments of Psychiatry and Public Health. The aim of this form was to demonstrate the demographic characteristics of the interviewed individual. Age, gender, marital status, employment status, language spoken, presence of social insurance, the type and duration of migration if present, presence of a traumatic experience, the type of traumatic experience and the period elapsed after the trauma, number of inhabitants, and total monthly income of the family, were investigated.

2. Post-traumatic stress disorder scale (CAPS)

The CAPS that was administered to the subjects was the PTSD scale which is used for DSM IV. It was used for specific diagnosis of PTSD in three areas.[25] The scale determines the prevalence and intensity of each area as scores between 0-4. Total points between 0-19 were evaluated as asymptomatic, 20-39 were evaluated as mild, 40-59 as moderate, 60-79 as severe and over 80 were evaluated as very severe PTSD. The CAPS was translated into Turkish and reli-

ability and validity studies were performed.[26] The consistency between PTSD diagnoses of two separate interviewers was found to be high in the same study. Moreover it was found to be consistent with the structured SCID.[26]

Statistical analysis

Collected data was analysed using SPSS v. 15.00. In groups where frequencies were compared, the student's t test was used for analysis of continuous measurable variables and the chi-square test was used for categorical data. The Alpha value $p<0.05$ was considered to be significant.

Results

We determined that 15.1% of our participants had current PTSD, 34.88% of them had lifelong PTSD diagnosis according to CAPS and 47.88% of them according to the CAPS diagnosis A criteria. The mean time period that elapsed after traumatic experience was 9.8101±6.0078 years.

In our study, it was determined that the mean age was (33.4±6.48), the mean number of people living in the same house was (6±2.75) and the mean monthly income was (264.04±94.44) Euro. From our participants, we determined that the main issues were migration (28.95%), absence of health insurance (28.1%) and illiterate education (32.4%). The socio-demographic characteristics of participants are presented in Table 1.

The most prevalent traumatic experiences were forced internal displacement without additional trauma (11.72%), traumatic loss (7.49%), being exposed to violence not in detention (6.78), and witnessing a murder or injury of relatives (5.93%). Types of traumatic life experiences of participants are presented in Table 2.

It is determined that predictor factors of

Table 1. *Demographics variables of participants.*

Demographic variable	N=708	%/SD
Gender		
Female	398	56.21
Male	310	43.79
Education		
Illiterate	228	32.20
Primary school	263	37.15
High school/or above	217	30.65
Health insurance		
Absent	199	28.11
Partial	179	25.28
Present	330	46.61
Employed status		
Housewife	328	46.33
Unemployed/unqualified	322	45.48
Public worker	38	5.37
Other	20	2.82
Immigration		
Forced migration	145	20.48
Voluntary migration	60	8.47
Total migration	205	28.95
Ethnic background		
Kurdish	432	61.02
Turkish	26 6	37.57
Arabic	10	1.41
Mean age	33.4	6.48
Mean monthly income	470.2	169.2
The mean number of people living in the house	6	2.75

Table 2. *Participants' trauma type.*

Types of trauma	N= 708	%
Forced internal displacement with no report of additional trauma	83	11.7
Traumatic loss	53	7.49
Being exposed to violence not in detention	48	6.78
Witnessing only the physical violence form relatives	11	1.55
Witnessing the self-relative unrelated conflicts	38	5.37
Earthquake-accident-fire	42	5.93
Torture under detention	23	2.25
Witnessing a murder or injury of relatives	42	5.93
Violence in the family	19	2.68
Receiving death threats	38	5.37
Physical attack/purse-snatching	10	1.41
Sexual violence	10	1.41
Multiple trauma (2 or more)	35	4.94
Total trauma related with the conflicts	266	37.5
Total trauma	339	47.88

Table 3. *Predictor factors for traumatic experiences.*

	Traumatic Experiences N=339		
Predictor factors	**OR**	**CI**	**P**
Number of people living in the house	1.010	0.941-1.086	0.776
Gender	0.856	0.514-1.426	0.551
Education	2.725	1.344-5.526	0.005
Marital status	2.365	0.963-5.808	0.061
Unemployed/unqualified	0.783	0.436-1.716	0.856
Ethnic group	0.954	0.525-1.737	0.879
Immigration	1.449	0.959-2.190	0.078
Monthly income	0.421	0.076-2.324	0.321
Age	1.000	0.999-1.000	0.543
Absence of health insurance	1.009	0.990-1.028	0.371

Table 4. *Predictors for lifelong and current PTSD.*

	Lifelong PTSD			Current PTSD		
	OR	**CI**	**P**	**OR**	**CI**	**P**
Number of people living in the house	1.060	0.991-1.133	0.091	0.960	0.880-1.047	0.355
Gender	1.363	0.852-2.182	0.196	0.538	0.245-1.117	0.121
Education	0.332	0.139-0.792	0.013	0.230	0.076-0.695	0.009
Marital status	1.727	1.136-3.544	0.061	2.635	0.904-7.680	0.076
Unemployed/unqualified	0.331	0.098-1.122	0.076	0.349	0.162-0.750	0.007
Ethnic group	1.259	0.840-1.885	0.264	2.366	1.334-4.195	0.003
Forced migration	6.246	3.998-9.758	<0.001	3.391	2.008-5.727	<0.001
Monthly income	1.000	1.000-1.000	0.983	1.000	1.000-1.001	0.470
Age	1.017	0.999-1.035	0.072	1.022	0.998-1.046	0.076
Absence of health insurance	0.310	0.567-1.035	0.045	2.455	2.643-5.735	0.007

the traumatic experience group were forced migration (OR=2.725, CI=1.344 to 5.526, P=0.005), and ethnic group (OR=1.697, CI=1.284 to 4.526, P=0.043). In our study, predictor factors of traumatic experience group is presented in Table 3.

It is determined that predictor factors of lifelong PTSD group were forced migration (OR=6.246, CI=3.998 to 9.758, P<0.001), ethnic group (OR=2.727, CI=1.136 to 6.544, P=0.025), education (OR=0.332, CI=0.139 to 0.792, P=0.013) and absence of health insurance (OR=0.310, CI=0.567-1.035, P=0.045). It is determined that predictor factors of the current PTSD group were forced migration (OR=3.391, CI=2.008 to 5.727, P<0.001), ethnic group (OR=2.366, CI=1.134 to 4.195, P=0.003), education (OR=0.230, CI=0.076 to 0.695, P=0.009) absence of health insurance (OR=2.445, CI=2.643-5.735, P=0.007), and unemployed/unqualified (OR=0.349, CI=0.904 to 7.680, P=0.007). In our study, predictor factors for lifelong and current PTSD groups are presented in Table 4.

Discussion

We determined that approximately half of the study population had at least one traumatic experience. This finding was consistent with the information in the literature in which frequent reports of prevalent interrelated traumatic experiences in areas of arms conflict can be encountered.[27-29] There was

lifelong PTSD in more than one third of our participants. Compared with the National Comorbidity Survey in the United State[19] and other studies among western community samples,[30] we found relatively high rates of DSM-IV PTSD. In addition, compared with previous studies in populations affected by conflict and violence, we identified prevalence rates that are comparable in Algeria[6] and higher in Gaza or Kosovo.[6-8] An explanation for the relatively high rate among our participants may be the fact that armed conflict were still taking place during the time of data collection. For example, in Algeria which produced results similar to ours, the conflicts were still continuing during the time data collection. The prevalence of PTSD was found to be over 15% in our subjects despite more than approximately 10 years of traumatic experience. This finding was consistent with the study of Rosner et al.[31] (current PTSD was 18%), that was performed three years after the siege of Sarajevo.

In our study, it is determined that predictor factors of the traumatic experience group were forced migration and ethnic group. This might be due to forced internal displacement, as unemployment and inability to find suitable employments were frequent among refugees.[32] Ethnic minorities were a predictor factor for traumatic experiences in a conflict area. Gender did not appear in predictor factors for traumatic experiences. In general, although women were reported to have more traumatic experiences, there are some studies which report that men were exposed to traumatic experiences more frequently in areas of conflict.[6] Another possible explanation might be due to the cultural characteristics of our region; women were not very much involved in life outside their houses and thus were less exposed to traumas related to conflicts. For example, approximately 90% of our female participants were housewives.

It is determined that predictor factors of the lifelong PTSD group were forced migration, ethnic group, illiterate education and the absence of health insurance. Studies reported that factors related to minority and language use,[32] lower level education[6,19] and lack of social support[33,34] are some factors for chronic PTSD. Our findings may be related with these factors in the literature.

In our study, it is determined that predictor factors of the current PTSD group were forced migration, ethnic group, illiterate education, absence of health insurance, and employment status. These factors affect the course of treatment to PTSD. It was also reported that patients with PTSD used health services more frequently than other individuals.[14,15] However, many of these studies were performed with refugees in developed countries. It was also ascertained that many patients who were living in areas of conflict and experienced traumatic events did not receive any treatment.[16] Two factors that affect the course of treatment were determined as need and accessibility. Severity of the disease was found to be important among factors of need, whereas accessibility was related with having economical resources like employment and health service awareness.[18] It was reported that untreated PTSD took a complicated stance.[19]

Approximately half of our participants were unemployed or unqualified workers. This might be due to forced internal displacement as unemployment and inability to find suitable employments were frequent among refugees.[32] The determining factors in those with PTSD to seek treatment were reported as accessibility, economic facilities and being informed about health services.[18] It was suggested that psychiatric treatment might decrease the duration and severity of

new or old PTSD.[35] In our study we evaluated forced immigration as traumatic experience and these people formed the largest group among our participants. More than half of our participants did not have any kind of social insurance and the prevalence of traumatic experience was high in this group. Lack of social insurance might be a limiting factor to seek treatment for physical and mental negative consequences of the trauma.

We did not find any gender difference in participants who had both current and lifelong PTSD. This finding was different from the literature as it was reported that chronic PTSD was more common in women.[12,13,19] There might be a few reasons for this finding. First, this finding may be explained by the fact that male respondents in this sample are more likely to have been directly involved in a conflict situation than women. As our study site was in the center of an area of conflict, men experienced far more torture, multiple traumas related with conflict and witnessed more cases of murder or injury than women. The type of the trauma was important in the development and chronic nature of PTSD. Moisander and Ediston[36] found PTSD prevalence as high as 69-92% among refugee victims of torture from six different countries. In another study, Wenzel et al.[37] reported PTSD prevalence as 92% in torture victims after three years.

Secondly, our participants' largest group consisted of those who were forced into internal displacement and those who did not have any additional traumatic experience. The probable speculation for this finding might be the reflection of the decrease in self-confidence in men as they were responsible to provide adequate income for the family and unemployment or the inability to find suitable jobs could create a burden on them. Also, women might earn a relatively easier life in urban areas than in the rural areas where they used to work under difficult conditions. The gender role before migration did not change considerably and daily work was less tedious. In addition, maintaining previous neighborhood relations may also have been an important factor. It was reported that tighter social links and collectivity were related with lower mortality[38] and higher levels of mental health.[39] Lie[34] showed that unemployment and lack of social relations play a role in the chronic nature of PTSD.

The limitations of the study

Recording traumatic experiences only according to the expressions of the participants and not investigating the type of the trauma resulted in not having detailed information about the prevalence and type of the trauma. In addition a limitation is that without data from other sources, we are not certain about the accuracy of these self-reported data. Disregarding subgroups below the threshold and diagnosing PTSD only according to CAPS constituted another limitation to the study. This study might be suggested as a good reflection of the Diyarbakir city center; however it might not be a good reflection of PTSD prevalence in smaller locations within areas of conflict.

Conclusion

We studied self-reported symptoms of PTSD among a community sample from low income in a conflict area. An important finding of this study is the association between the range of prevalence rates of PTSD and risk factors for PTSD in an armed conflict region in Turkey. Approximately half of our participants had traumatic experiences and more than $^1/_3$ of them had a diagnosis of lifelong PTSD. We found out that the prevalence of current PTSD was 15% in

our participants who had lifelong PTSD diagnosis, despite more than an average of 10 years having passed since the traumatic experience. We also demonstrated that predictor factors of current PTSD were not having health insurance, being unemployed or working as nonqualified employees, ethnic difference, and forced migration. Lack of any institutional treatment approach might lead to the permanent nature of PTSD. As a result, there is a need for more studies that will include people living in rural areas, in order to fully understand the negative effects caused by the conflict environment of the whole region on the mental health of individuals. Moreover, we believe in the importance of effective treatment approaches of institutions for the management of current mental problems. We suggest that people who live in areas of conflict should not be left alone with their traumatic experiences.

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Justice heals: The impact of impunity and the fight against it on the recovery of severe human rights violations' survivors

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Abstract

Case studies show that traumatized refugees, who are survivors of serious human rights violations, suffer from persisting impunity in their home countries.

Ongoing impunity – the inability to overcome the legal protection of the perpetrators assured by impunity laws, incomplete truthfinding, missing integral reparation and a lack of the necessary acknowledgement by society – represents an important obstacle for the recovery of survivors of serious human rights violations.

There are reports describing that a high percentage of survivors shows an elevated mental vulnerability caused by impunity. Mental health problems resulting from traumatic experiences can persist or be reactivated by certain events. In particular, family members of the forcibly disappeared suffer from an incomplete mourning due to the uncertain fate of their beloved ones. The ongoing search for the forcibly disappeared under an atmosphere of impunity puts family members under high risk of retraumatization. Studies from other continents also prove that impunity severely affects mental health.

Due to the global character of impunity there can be only little evidence about a positive impact of justice on mental health. Nevertheless, a few examples, in particular from Latin America, show that the combined implementation of memory, truth and justice can have a healing impact on those who suffer from trauma. They demonstrate that the fight against impunity is not only a legitimate moral struggle for human rights, but also a basic need for the sustainable recovery of survivors.

Key words: torture, war crimes, trauma, survivors, human rights, impunity, transitional justice, transnational justice, Truth Commission, memory, reparation, justice heals

Introduction

The psychosocial impact of man-made disasters has attracted increasing attention during the last three decades. Scientific research work has mostly drawn attention to the mental health of individuals who survived severe human rights violations, to symptoms and diagnostic instruments as well as to different methods of individual or group therapy.

At the same time human rights organizations tried to hold the perpetrators responsible for the crimes that have been committed through wars or by authoritarian regimes. Although there have been trials against the Greek generals and torturers in 1975, and attempts to bring perpetrators to court as for example in post-dictatorship Argentina between 1983 and 1987, a real

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development to combine political transition with justice started, with much delay, with the arrest of Chilean dictator Augusto Pinochet in London less than ten years ago. Since then the necessity of justice in the aftermath of gross human rights violations has been discussed, but only as either a measure of democratization or as a probable danger to peace and reconciliation. Whereas psychological research on trauma and therapy didn't take the social environment and the situation of a society in transition much into account, the role of justice after atrocities has been debated regardless of its impact on survivors' recovery from trauma.

As a human rights organization and treatment center for refugees located in Bochum, Germany, the Medical Care Service for Refugees offers medical, psychosocial and legal support to survivors of torture, war crimes and other severe human rights violations.

During psychotherapy with survivors exiled in Germany we experienced that in several cases ongoing impunity in the countries of origin affected negatively the therapeutic process. We therefore recognized impunity to be an important factor in continuing their traumatic process or causing retraumatization. In some case studies we documented our findings. The case studies included survivors of serious human rights violations from Chile, Argentina, former Yugoslavia and Turkey.[1]

In 2001 Medical Care Service for Refugees started to systematically investigate the influence of impunity on survivors' mental health.

Methods

We systematized our experience from work with political refugees in exile and after their return to their home countries. From 2004 to 2007 we were able to realize a scientific research project on different strategies to fight impunity, covering the experiences from 13 countries.[2] Although the study's first aim was to focus on the different efforts that have been undertaken worldwide to deal with atrocities of the past, we included the question of mental health consequences of impunity in our research. The investigation covered literature research as well as personal interviews with survivors, therapy centers and human rights organizations.

The following essentials combine the experiences that have been published by the Chilean therapy centers CINTRAS[a] and ILAS[b], by EATIP[c] from Argentina, and by SER-SOC[d] from Uruguay.[3-8] Apart from their publications we analyzed a number of interviews we carried out in these three countries, as well as with ATYHA[e] in Paraguay and with the South African Khulumani Support Group. We discussed our findings internationally at the conference "Justice heals", held in October 2005 in Bochum, Germany, where further representatives from human rights groups, therapy centers or survivor's organizations in Cambodia, East Timor, El Salvador, Ex-Yugoslavia, France, Guatemala, Honduras, Peru, Rwanda, Sierra Leone, Turkey and from the Latin American Federation of Family Members of forcibly disappeared (FEDEFAM) followed our invitation to share experiences on impunity and mental health.

During other meetings we had the opportunity to talk to human rights activists or therapists from Algeria, Colombia, Denmark, Greece, Indonesia, Iraq, Liberia,

a) Center for Mental Heath and Human Rights.
b) Latin American Institute of Mental Health and Human Rights.
c) Argentinean Psychosocial Working and Investigation Group.
d) Social Rehabilitation Service.
e) Center for Alternatives in Mental Health.