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RESEARCH ARTICLE

Prevalence of Post-traumatic Stress Disorder among Peshmargas, Whom fought against ISIS War in Kurdistan Region Borders

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ABSTRACT

Background and objectives: Psychological disturbance is one of the most significant feature amongst individuals who are served military tasks. This study presented the Post Traumatic Disorder (PTSD) among the *peshmargas* (Kurdish military personnel) who joined in ISIS war. The aim of this study is to determine the prevalence of post-traumatic stress disorder among *peshmargas* returning from war and to identify the associated factors of PTSD among the study sample.

Methods: A purposive sample of 113 *peshmargas* had been studied during the period 1st of January to 1st of June 2018. The participants' responses to the PTSD Checklist had been recorded by the researchers.

Results: The study revealed that 21.24% of *peshmargas* suffered from some symptoms of PTSD, more than half (52.21%) of them suffered from moderately to moderately high severity symptoms, and (26.55%) of them suffered from high severity of PTSD. It has been concluded that the high prevalence of PTSD among *peshmargas* needs attention from the concerned health institutions

Conclusions: Evidence based research on treatment of PTSD among combat soldiers is neglected internationally. Most studies are needed to diagnosis the PTSD and other Psychological and Psychiatric disorder among non-deployed and deployed Peshmargas. Further research is needed to study the impact of positive PTSD on the psychosocial aspect of Peshmargas.

Key Words: Psychological disorder, PTSD, and Peshmargas

INTRODUCTION

The post traumatic disorders are common in the general populations (Galea, Nandi et al. 2005). The war and terroristic events will influence the clinical psychological status of patients seeking health care services. Post-traumatic stress disorder (PTSD) will develop in a significant number of people (Yehuda 2002) and it is persistent condition which include traumas that occur due to combat exposure and witnessing among men and rape and sexual molestation among women. Studies showed that more than one third of people will not recover from PTSD even after many years (Va 2013). Kurdish *peshmargas* (Kurdish military personnel) are considered as the organized and disciplined force who helped the allied military forces which had defended the public of the northern region of Iraq from the terroristic attacks (Ahmed 2012). The incidence of mental disorders among the United States military personnel had been increased in the post-deployment duration in Iraq, Afghanistan, and the other countries of the region. About 10% of the personnel returned home with PTSDs. The combat duty in Iraq had led to higher use of mental health services in the USA (Smith, Ryan et al. 2008). Many studies had been conducted on the PTSD among the American and allied forces during the Iraq wars and the impact of the PTSD on with the physical health problems. Most of the studies were carried out after many years of returning of the

soldiers to their homes (Hoge, Terhakopian et al. 2007). The PTSD among *peshmargas* had not been studied previously, especially after a short period of returning to their homes which were located near to the war zones. This study aimed to determine the prevalence of post-traumatic stress disorder among *peshmargas* returning from war and to identify the associated factors of PTSD among the study sample.

SUBJECTS AND METHODS

A purposive sampling method of 113 *peshmargas* , including (soldiers, sergeants, captains, and lieutenants) from one lieutenant colonel had been selected after they met all inclusion criteria. study period was from 1st of January to 1st of June 2018 in off-day duty from battle field. A special questionnaire had been designed by the researchers which included the demographic characteristics of the study sample and the Post Traumatic Stress Disorder Checklist. The checklist consists of 17 items; the scores is ranged from 17 to 85. It is used as a continuous measure; the scale has good diagnostic utility. The cut-off of 50 on the checklist is a good predictor of a PTSD diagnosis (Weathers, Litz et al. 1993). Back translation to the local Kurdish language had been performed for the checklist. Data collection had been conducted through face to face interview at *Peshmarga's* home or military base camp after one year returning from battle field, for the illiterate participants and through a written consent and questionnaire for those who were literate. Participation was voluntary and the participants' responses had been scored through adding up all items from each of the 17 items for a total severity score (range = 17-85). The cut off which showed little to no severity was 17-29. While 28-29 indicated some PTSD symptoms. The scores between 30–44 showed moderate to moderately high severity of PTSD symptoms. The high severity of PTSD scores were between 45-85 (Weathers, Huska et al. 1991). Descriptive and inferential statistics (ANOVA) were used through the Microsoft Excel Database with the Statistical Package for Social Sciences (SPSS, Version 24). The P value of > 0.05 was considered as non-statistically significant. The P value of ≤ 0.05 was considered as statistically significant. The P value of ≤ 0.01 was considered as highly statistically significant.

RESULTS

This study examined the PTSD of 113 male Kurdish military personnel (*peshmargas*) with the mean age ± SD of 35.76 ± 8.008 ranging from less 21 to > 55 years old. Table 1 shows distribution of the study sample by their age groups. The highest percentage 28 (24.78%) of the participants were in the age group of 31-35 years, while only one (0.9%) of the participants was <21 years old.

Table 1. Distribution of the study sample by age

Age group/ years	*No.*	*%*
Age groups		
< 21	1	0.9
21-25	7	6.2
26-30	27	23.89
31-35	28	24.78
36-40	19	16.81
41-45	15	13.27
46-50	11	9.73
51-55	3	2.65
>55	2	1.77
Total	**100**	**100**

Table 2 reveals duration of employment of the participants. The employment duration ranged between 1 to 30 years with the mean ± SD which was 12.5 ± 7.5. About one fourth 29(25.7%) of the participants had 6-10 years of employment and only 8(7.1%) of them had each of the employment duration of 21-25 and 26-30 years

Table 2. Duration of employment by years

Duration of employment/ years	*No.*	*%*
1-5	24	21.2
6-10	29	25.7
11-15	26	23.0
16-20	18	15.9
21-25	8	7.1
26-30	8	7.1
Total	**113**	**100**

In regard to the residency of the *peshmarga* forces, less than half 48(42.5%) of the study sample used to live in urban areas while about one third 33(29.2%) and 32(28.3%) of them used to live in rural and suburban areas respectively, as it is shown in table 3.

Table 3. Distribution of Peshmargas by their residency

Residency	*No.*	*%*
Rural	33	29.2
Suburban	32	28.3
Urban	48	42.5
Total	**113**	**100**

Table 4 indicates the responses of the study sample to the PLC scale. The highest percentage of the participants 62(54.9%) didn't feel at all emotionally numb or being unable to have loving feelings for those close to them. While, few 18 (15.9%) of them didn't feel very upset at all when something reminded them of the stressful experience. In regard to the extremely feelings of post-traumatic stress, the highest proportion 12(10.6%) of *peshmargas* responded to avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it. Only 3(2.7%) of them responded to feeling as if their future will somehow be cut short.

Table 5 shows the total PTSD severity scores of *peshmargas.* The severity score ranged between 17-65 with the mean ±SD of 38.77 ± 11.26. This table illustrates that 24(21.24%) of *peshmargas* suffered from some symptoms of PTSD with the score ranging between 17 to 29, about half 59(52.21) of them suffered from moderately to moderately high severity symptoms with the score ranging from 30 to 44, and 30(26.55) of them suffered from high severity of PTSD who recorded the scores from 45 to 65.

Table 5. Distribution of *peshmargas* by the severity of PTSD.

PTSD severity Score	*No.*	*%*
Some symptoms (17-29)	24	21.24
Moderately to moderately high severity symptoms (30-44)	59	52.21
High severity (45-65)	30	26.55
Total	**113**	**100**

This study tested the correlation of age, employment duration, and residency of the study sample with the total PTSD scores and the responses of the participants to each questionnaire item as well. There was no significant correlation of the above mentioned variables with the total scores, but there was significant correlation between the demographic variables and the items as it is shown in table 6.

Table 6. Correlation of the *peshmargas* responses with their demographic variables

Demographic Variable	*P value*
Age	0.002**
Residency	0.002**
Residency	0.036*
Employment duration	0.036*

** Highly significant * Significant

Table 4. Distribution of the responses of *peshmargas* to the PTDS scale.

Items	*PTSD Scale*									
	Not at all		A little bit		Moderately		Quite a bit		Extremely	
	F	%	F	%	F	%	F	%	F	%
Repeated disturbing memories, thought, or images of the stressful experience?	27	23.9	31	27.4	27	23.9	17	15.0	11	9.7
Repeated disturbing dreams of the stressful experience?	37	32.7	41	36.3	25	22.1	5	4.4	5	4.4
Suddenly acting or feeling as if the stressful experience were happening again(as if you were reliving it)?	40	35.4	33	29.2	21	18.6	14	12.4	5	4.4
Feeling very upset when something reminded you of the stressful experience ?	18	15.9	32	28.3	30	26.5	26	23.0	7	6.2
Having physical reaction (e.g heart pounding, trouble breathing, or sweating)when something reminded you of the stressful experience?	42	37.2	34	30.1	26	23.0	7	6.2	4	3.5
Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it?	34	30.1	28	24.8	27	23.9	12	10.6	12	10.6
Avoiding activities or situations because they remind you of the stressful experience?	55	48.7	32	28.3	12	10.6	9	8.0	5	4.4
Trouble remembering important parts of the stressful experience?	28	24.8	36	31.9	33	29.2	10	8.8	6	5.3
Loss of interest in activities that you used to enjoy ?	41	36.3	25	22.1	22	19.5	18	15.9	7	6.2
Feeling distant or cut off from other people?	46	40.7	29	25.7	26	23.0	8	7.1	4	3.5
Feeling emotionally numb or being unable to have loving feelings for those	62	54.9	22	19.5	17	15.0	8	7.1	4	3.5

Feeling as if your future will somehow be cut short?	49	43.4	22	19.5	29	25.7	10	8.8	3	2.7
Trouble feeling or staying asleep?	39	34.5	22	19.5	29	25.7	13	11.5	10	8.8
Feeling irritable or having angry outbursts?	35	31.0	30	26.5	24	21.2	14	12.4	10	8.8
Having Difficulty concentrating?	35	31.0	27	23.9	23	20.4	17	15.0	11	9.7
Being "Super alert" or watchful or on guard?	44	38.9	24	21.2	27	23.9	8	7.1	10	8.8
Feeling jumpy or easily startled?	47	41.6	22	19.5	24	21.2	12	10.6	8	7.1

DISCUSSION

This study had explored the high prevalence positively screened PTSD among *peshmargas* using PTSD checklist including some symptoms (21.24%), moderately to moderately high severity symptoms (52.21%), and high severity symptoms (26.55%). Many studies agreed that there is a great influence of combat on the mental health of the fighting forces. It has been reported that 5% to 8% of the USA combat teams had suffered from PTSD using the PTSD scale. This range of positively detected PTSD was among the soldiers who had not deployed, while the latter numbers should be zero. In regard to the deployed USA soldiers for 3 months in Iraq, the proportion had reached to 15% and 50% in the National Guard Units. The positive screened PTSD range was 17-20% among the USA soldiers who returned from Iraq or Afghanistan. The percentages of the positive PTSD were different from Iraq soldiers (11.3% to 14.4%), compared to that of Afghanistan (4.6% to 9.6%). The PTSD can be categorized into many types; starting from normal stress response to acute stress disorder, uncomplicated PTSD, comorbid PTSD, and complex PTSD (Castro 2009).

A high degree of trauma exposure during war had been explored by previous studies. the prevalence of significant PTSD is lower among lower ages (German child soldiers) than the long-term survivors of war trauma (Kuwert, Spitzer et al. 2008). This result comes in coincide with the result of our study which showed the highly significant correlation of the age with the repeated disturbing dreams of the stressful experience. The PTSDs are associated with many psychological and mental disorders such as depression, anxiety and excessive compulsive behaviors. One study reported the combat related higher 12-month incidence and prevalence of PTSD among deployed soldiers, associated with higher anxiety, alcohol use disorders, and anxiety distress scores. The prior lifetime mental disorders were the predictors of PTSD and other mental disorders (Wittchen, Schönfeld et al. 2013). Another study by Telch et al, 2015 studied the effects of the interaction of war zone stressors by 5-HTTLPR genotype on war zone stress reactions including PTSD, depression and anxiety among the deployed soldiers to Iraq. significant interactions between 5-HTTLPR genotype and average level of war zone stressors during deployment for all three measures of war zone stress reactions had been detected (Telch, Beevers et al. 2015). In a study by Kozariæ-Kovaèiæ et al, 2001 the PTSD occurrence with the other

previous to war psychiatric and psychological disturbances had been found. Probably, this will affect the legal right of compensation of the soldiers who suffered from the psychiatric and psychological problems prior to their deployment to the war (Kozariæ-Kovaèiæ, Kocijan Hercigonja et al. 2001). The significant correlation of the PTDS with depression and anxiety had been detected among civilian North Korean Refugees as well (Taylor, Chekaluk et al. 2017).

The high prevalence of PTSD among the studied *peshmargas* in the current research must be taken into consideration. Recent studies had suggested treatment of such population due to the fact that PTSD is linked with psychosocial functioning impairment such as education, employment, parenting, family, and marriage. There are evidences that veterans are more likely to experience difficulties with parenting, unemployed, and be divorced. Improving in PTSD can improve psychosocial functioning. These psychosocial functions can be managed by the Evidence Based Psychotherapy in order to improve psychosocial functions and detection of the conditions that enhance the change in the symptoms. The Socio-Interpersonal Framework Model of PTSD can be used to create and establish the findings. The area of such management is neglected in research (Reich, Nemeth et al. 2019). Another study by Hoeft et al, 2019 found few research based interventions for management of the PTSD. They reported only 7 interventions which focused on individual therapies, only 8 describing treatment programs in primary care that were depended on collaborative care including medication management, tracking outcomes, referral services, and for some

CONCLUSION

The prevalence of the Post Traumatic Stress Disorder (PTSD) was high among *peshmargas* who participated in war. This was probably due to the influence of combat on their mental condition and the psychosocial functioning of the study sample. This prevalence was different in different age groups. It was at the top in the middle adult age group. The high prevalence of PTSD among *peshmargas* needs attention from the concerned health

institutions. Evidence based research on treatment of PTSD among combat soldiers is neglected internationally. More studies are needed to diagnose PTSD and other psychological and psychiatric disorders among non-deployed and deployed *peshmargas*. Further research is needed to study the impact of positive PTSD on the psycho social aspects of *peshmargas*

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