

Post-traumatic stress disorder among Iraqi military personnel

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ABSTRACT

INTRODUCTION: Previous local studies showed that post-traumatic stress disorder (PTSD) is a highly prevalent disorder in Iraq. No published data on PTSD among Iraqi military personnel were available.

OBJECTIVE: To estimate the prevalence of PTSD among Iraqi military personnel and to study the correlation between life events and the PTSD.

METHODS: A total of 360 Iraqi military personnel were included in this cross sectional study. They were selected by multistage random sampling (Division, Brigade, Battalion then soldiers) from 1st of March 2017 - 31st of May 2017. Post-traumatic checklist (PCL-5) and life event checklist (LEC-5) according to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) were used. The participants have selected the most suitable choice from the checklists.

RESULTS: PTSD was found in 67 participants, making a prevalence of 18.6%. Age has not shown a significant effect on development of PTSD ($p=0.3$). Accumulated exposure has a direct association with the symptoms of PTSD ($p<0.05$).

CONCLUSION: PTSD is a common among Iraqi military personnel. Experience of stressful events has more impact on development of symptoms of PTSD.

Key words: PTSD, Iraq, soldiers, DSM-5, LEC-5, PCL-5.

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INTRODUCTION

Post-traumatic stress disorder (PTSD) is a syndrome develops after the exposure to an extreme stressful event that provoked by fear, horror or helplessness.¹ In conflict situations, the occurrence of variety of psychological symptoms and syndromes is widely documented. PTSD is one of the important sequelae of trauma, and it is a psychiatric disorder developed among those experienced or witnessed a traumatic event such as a natural disaster, a serious accident, a terrorist act, war/combat, rape or other violent personal assault.²

The signs and symptoms of PTSD appear to reflect a persistent abnormal adaptation of neu-

robiological systems to the stress of witnessed trauma.³

Trauma can impact individuals in many ways, including socially, psychologically, academically, neurophysiologically, socioeconomically, and impair physical health in the traumatized individuals. Trauma during childhood and adolescence are at increased risk for social and behavioural problems in particular.⁴

The exposure to trauma has pernicious effects on both mental and physical health. Trauma has an impact not only on individual level but also on the communities in general. Disasters, terrorism, and armed conflicts can undermine the social fabric of communities and erode the public health infrastructure and systems

that are most needed following community-level trauma.⁵

Iraqi population was exposed to wars, civil war and widespread violence during last decades,⁶⁻⁹ hence the finding of a high prevalence of PTSD among Iraqi's is expected. Several articles were published about PTSD among Iraqi's.¹⁰⁻¹¹

American psychiatric association has defined PTSD in DSM-IV as the presence of three clusters of the symptoms (re-experience, avoidance and arousal), while in DMS-5 another cluster of symptoms was added (intrusion, avoidance, alterations in cognition and mood, and arousal) and scoring of answers according to special calculation was used with a cut off point 33 to diagnose PTSD according to DSM-5.¹²

This study was carried out to measure PTSD among Iraqi military personnel using Posttraumatic checklist (PCL-5) according to DSM-5 criteria for the definition of PTSD. And assessing the effect of different stressful events on the development of PTSD by using LEC-5 checklist.

METHODS

Settings and design of the study: A Cross sectional, multistage study was conducted on military personnel working at Ministry of Defence in Iraq and their military units were based in Baghdad. The data were collected from 1st of March 2017 - 31st of May 2017.

Ethical issue: This study was done after taking the approval of the Ministry of Defence in Iraq and in accordance to the regulations of the University of Baghdad, College of Medicine. A written consent was taken from each participant before being enrolled in this study after explaining the purpose of the study and its importance. Data were collected exclusively by the author himself and were kept confidential and used exclusively for the sake of the research.

Sampling: We used multistage random sampling to select the participants. In cooperation with the Grand Force Command, we firstly select the Military division by lottery, then on the same principle we have chosen a brigade and a battalion. The military personnel were selected for participation in the study by simple random sampling using the salary list as a frame. All the selected persons have accepted to participate

in this study.

Procedure: We have used two questionnaire forms, the first one is the post-traumatic stress disorder checklist PCL-5^{13,14} which used to define the presence of PTSD. And the second was life events checklist LEC-5^{13,15} which used to study the effect of some stressful life events on the development of PTSD. The checklists were translated into Arabic language by six bilingual experts. The validity and reliability of these checklists were studied by an expert biostatistician. A pilot study was conducted on 10 participants and the checklists were reorganized accordingly.

PCL-5 is containing information about symptoms of PTSD for intrusion (5 questions), avoidance (2 questions), alter cognition and mood (7 questions) and arousal (6 questions). The LEC-5 contains 17 events to measure the exposure to stressful accident by the participants in their previous life. The last one in the list is about any other very stressful events which may be not listed in the questionnaire.

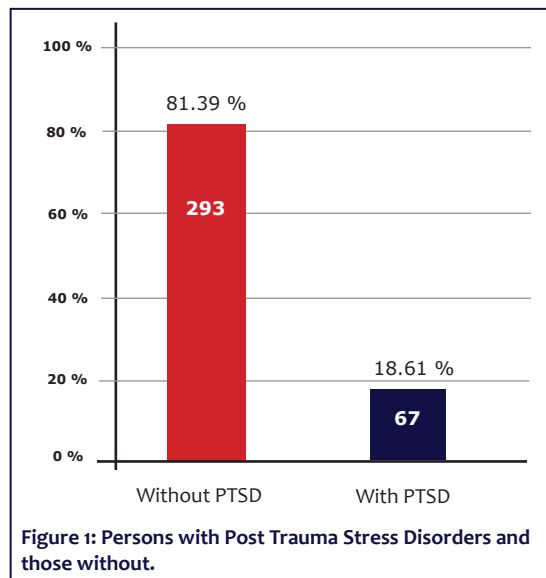
The author has explained, for all participants, the questions reported in the checklists and how to answer them, in addition asking them to answer some demographic characteristics. Filling in the checklist was done by each participant under the direct supervision of the author himself to ensure that the participant has understood the meaning of each question.

Data Analysis: Frequency and means were used to demonstrate the findings. Student's t test was used to examine age difference in means between those with and without PTSD. Regression line was used to demonstrate the impact of accumulated events on symptoms of PTSD. P value < 0.05 was considered significant.

RESULTS

The questionnaire forms were distributed among 376 participants; 360 forms were included in the statistical assessment (95.7 %). The other forms were excluded because they were partially filled. On using the DSM-5 criteria and PCL-5 score, 67 (18.6 %) of the participants have fulfilled the criteria of the diagnosis of PTSD while 293 (81.4 %) have not. See **figure 1**

The mean age of those who have fulfilled the criteria of PTSD was 33.4±9.5 year, while



the mean of the age of those who have not was 32.4 ± 7.6 year; however, the difference is statistically nonsignificant ($t = 0.8$, $d.f.=358$, $p = 0.3$). See [table 1](#)

Figure 2 shows the association by regression analysis between PTSD score and LEC score. Where $R^2 = 0.3$ this mean that the relation is positive and direct.

Table 1: mean age of participants with PTSD and those without

	No.	M and SD of age
PTSD	67	33.9 ± 9.5
No PTSD	293	32.4 ± 7.5
$t=0.8$, $d.f.=358$, $P=0.37$		

DISCUSSION

In our study, 67 (18.6%) participants have fulfilled the criteria of the diagnosis of PTSD as measured by DSM-5 criteria and PCL-5 score. On reviewing the literature worldwide, the prevalence of PTSD among military personnel varies between 1.09 - 34.8 %.¹⁵ This variation also presents if we compare the data of military personnel from a single country, for example the rate of PTSD among members of US military personnel served in Iraq and Afghanistan was 40% and 17% respectively.^{16,17} The variation in the prevalence of PTSD worldwide can be explained on the fact that there was wide variation in the criteria used for case detection.

After reviewing Iraqi literature, we could not reach published studies about the prevalence of PTSD among military personnel despite the fact that Iraqi armed forces are in chains of succes-

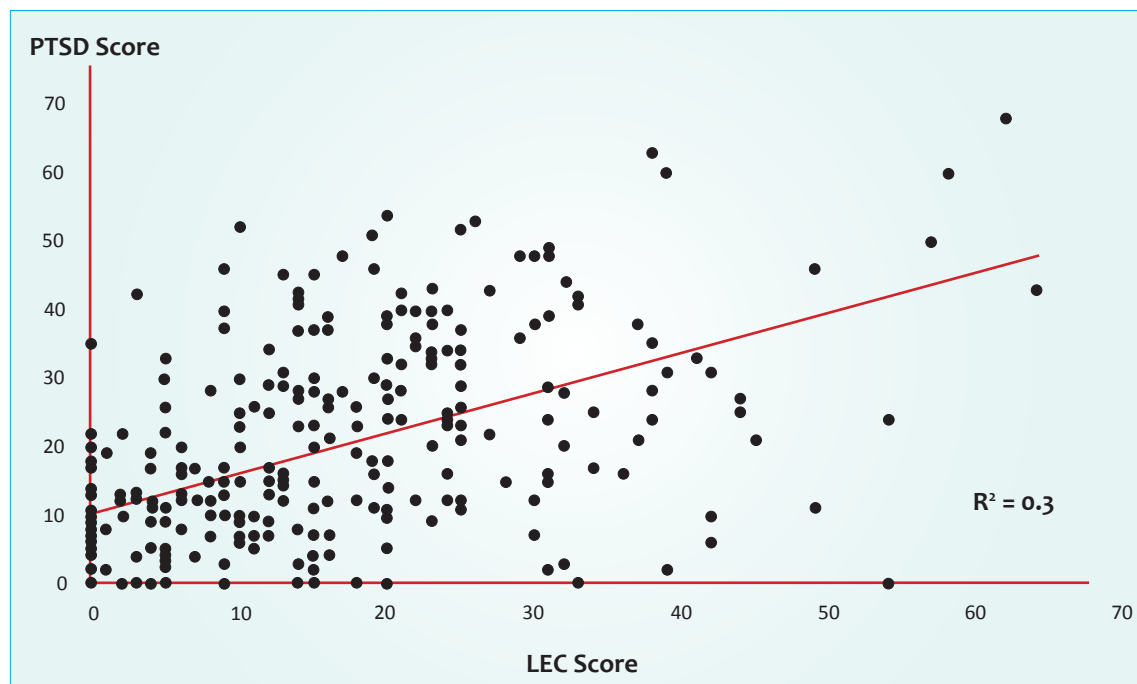


Figure 2 shows the association by regression analysis between PTSD score and LEC score.

sive wars since 1980.¹⁸ This paucity may be related to the lack of the interest of the researchers in such topic or their refraining to touch such a sensitive topic which may carry security concern. In comparison to the results of studies from Iraq on civilian personnel, Al-Shawi¹⁰ has found that the prevalence of PTSD among Iraqi youth (university students) was 22.9 %. It worth mentioned that Al-Shawi has used the Iraqi version of Harvard trauma questionnaire¹⁹ in applying the DSM-IV- TR Criteria (text revision) of the diagnosis of PTSD. While in our study we have used PCL-5 questionnaire which is a general instrument for the whole world and needs more time to be explained for the participants. The increased rate of case detection in Al-Shawi study in comparison to ours can be explained on two reasons. The first, is that Harvard using less domains than PCL-5 leading to more probability of case detection; in addition, they used the Iraqi Version which was designed to be used for those whose their mother language is Arabic and this would ease the perception of the exposure and the presence of symptoms. The second, is that the civilian personnel is logically has more probability to have psychological consequences after exposure to stressful events as compared to military personnel who are more trained to tolerate such events.²⁰ However, it is prudent to say that after 2003 more civilians are exposed to stressful events like explosions and terrorist acts.

Our results were much higher than that of Alhasnawi and colleagues who have stated that PTSD was found in only 2.5 %.²¹ Variety of causes has been proposed to explain this huge difference. The first is that Alhasnawi in his survey has used another instrument to measure the PTSD which was the Composite International Diagnostic Interview (CIDI).²² This instrument was designed to detect many mental problems besides PTSD which was not their primary objective. The second, is that Alhasnawi study has conducted in 2006 during the escalation of the violence and this might prevent the researcher to visit more areas of Iraq which were considered hot at that time.

This study showed no significant difference in age between those with and without PTSD which is consistent with other studies,^{10,11} accumulated exposure to events was positively

related to symptoms of PTSD.

CONCLUSIONS

PTSD is a common problem among Iraqi military personnel. Experience of stressful events has more impact on development of symptoms of PTSD.

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Abbreviation list: Composite International Diagnostic Interview (CIDI), Diagnostic and Statistical Manual of Mental Disorder (DSM), Life Event Checklist (LEC), Post- traumatic stress checklist (PCL), Post-traumatic stress disorder (PTSD)

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