

## Prevalence of Posttraumatic Stress Disorder (PTSD) among the Iraqi Repatriated Prisoners of the Iran-Iraq War, 1980-1988

انتشار اضطراب ما بعد الصدمة الكدمية لدى الأسرى العراقيين العائدين من الحرب الإيرانية-العراقية، ١٩٨٠-١٩٨٨

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المستخلص:

الأهداف: تحديد مدى إنتشار اضطراب ما بعد الصدمة الكدمية للأسرى العراقيين العائدين من حرب إيران والعراق ١٩٨٠-١٩٨٨ وأيجاد العلاقة ما بين هذا الإضطراب وبعض المتغيرات الديموغرافية.

طريقة البحث: أجريت دراسة وصفية من تاريخ ١٨ تشرين الثاني، ٢٠٠٩ الى العاشر من كانون الثاني، ٢٠١٠، أستخدمت الطريقة غير الاحتمالية المعتمدة على الكرة الثلجية في جمع عينة البحث البالغة ٩٢ أسير عائد من الذين زاروا وزارة حقوق الإنسان في بغداد. لجمع المعلومات فقد تم بناء إستبيان خاص لهذا الغرض بأستعمال المقابلة الموجزة ويتضمن قسمين: الأول يتكون من ستة من المواصفات الديموغرافية، وثمانية فقرات لقياس مستويات اضطراب ما بعد الصدمة. حلت المعلومات بتطبيق التحليل الوصفي والذي تضمن الترددات والنسبة المئوية؛ وأيضا الأحصاء التحليلي.

النتائج: كشفت الدراسة بأن غالبية الأسرى العراقيين العائدين (٧٨.٣%) لديهم بعض المستويات من اضطراب ما بعد الصدمة الكدمية منها البسيط (٢٩.٣%) و المتوسط (٣٢.٦%) و العالي (١٦.٤%). وجدت علاقة احصائية ما بين هذا الإضطراب وطول مدة الأسر، الحالة الزوجية، والمستوى التعليمي.

التوصيات: توصي الدراسة بإيجاد مراكز خاصة للصحة النفسية ضمن مراكز العناية الصحية الأولية لتشخيص ومعالجة ومتابعة هؤلاء الأسرى العائدين، وكذلك أنجاز الدراسات لمتابعة تطور حالاتهم الصحية جسديا ونفسيا.

**Objective:** To determine the prevalence of Posttraumatic Stress Disorder (PTSD) among Iraqi repatriated prisoners of Iran-Iraq war, and the relationship with demographic factors.

**Methodology:** A descriptive study was carried out from Oct. 18th, 2009 through Jan. 10<sup>th</sup>, 2010. A non-probability based snowball sampling technique was used to recruit 92 Iraqi repatriated prisoners of war (IRPOWs) who had visited Ministry of Human Rights. A data collection instrument was constructed that consisted of six demographic characteristics, and eight items to measure the level of PTSD in POWs. Data were collected with the constructed instrument during a brief interview. Data were analyzed through the application of descriptive statistical analysis: percentages; frequencies and inferential statistic analysis (Pearson correlation coefficient).

**Results:** The study revealed that the majority of IRPOWs have some level of PTSD (78.3%). Proportions of IRPOWs with low, medium and high severity PTSD: Low (29.3%); medium (32.6%) and high (16.4%). Statistically significant relationships were observed between PTSD and duration of captivity, marital status and level of education.

**Recommendations:** The study recommends special mental health services centres are established within primary health care centres in order to diagnose and treat them and that further studies are conducted to explore effective treatments for IRPOWs

**Keyword:** PTSD, prevalence, Iraqi, repatriated, prisoners, POW.

## Introduction

PTSD is a term applied to psychological and emotional disturbance that develops after experiencing, witnessing or being exposed to a traumatic event<sup>(1,2,3)</sup>. The event may involve actual or threatened death, serious physical injury or threat to physical integrity such as a natural disaster, wartime combat, torture, murder, severe harm to oneself or others, rape, and violent attack or an assault<sup>(4,5,6)</sup>.

Individuals who have experienced such events can respond with recurrent flashbacks of the traumatic event, nightmares and sleep disturbance, intensive fears, helplessness, irritability, fatigue, extreme distress, forgetfulness, avoidance of reminders and emotional detachment, numbing of general responsiveness, persistent signs of increased arousal, and social withdrawal<sup>(1,3,4,5,6)</sup>. Psychological reactions after traumatic experiences have been acknowledged during the last decades and the vulnerability of repatriated POWs to psychological difficulty has been a topic of on-going study. For former POWs have reported more severe psychological disturbances and more problems in functioning than the other combatants<sup>(7,8)</sup>.

Psychological approaches related to wartime captivity were established during and after the Second World War, there were no important modifications during the Korean Conflict. It was not until the later part of the Vietnam War that US psychiatrists projected a different perspective. In some measure, they were motivated to show that the effects of war extended well beyond the frontline itself, impairing the ability of ex-servicemen to function in civilian life<sup>(9)</sup>. Iraqi prisoners of war are the Iraqi combatants who were captured in the war between Iran and Iraq, 1980-1988. This war which was the longest war in modern history took place in September 1980 and ended in August 1988 (Shay, 2009). The circumstances of the captivity of Iraqi prisoners of war in Iran are considered to have been miserable<sup>(29,30)</sup>.

Iraqi POWs were expected to bear heavy the burdens of a long series of hardness, cruelty, and bad treatment. Such treatment continued for many years because Iran ignored the International Geneva convention in their

treatment of Iraqi prisoners of war<sup>(31)</sup>. Evidence demonstrates that Iraqi Repatriated Prisoners of War (IRPOWs) had spent unbelievable and unexpected periods of time imprisoned. This is confirmed by Al-Ameri & Mohammed (2005) who found that about 89% of Iraqi prisoners of the Iran-Iraq war had spent periods of time ranging from six to 21 years<sup>(25)</sup>.

## Methods

Non-probability convenience sample of 92 Iraqi repatriated prisoners of Iran-Iraq war, 1980-1988, who visited the POWs and Missing section of Iraqi Ministry of Human Right, was recruited. The sample represented IRPOWs who had been captured during the 8-year war between the two countries and were set free between 1990 and 2003. This sample was recruited using snowball sampling. A questionnaire was constructed as an instrument for data collection which consisted of two parts.

Firstly; the Demographic data sheet which contained six items; current age, age at capture, duration of captivity, rank, marital status, level of education, and secondly eight items from the existing POW Questionnaire for PTSD<sup>(10)</sup>. This scale measures the PTSD levels among POWs, a 3-level Likert rating scale where "3" indicates that the status was persistent, "2" indicates (presence) of the status, and "1" indicates (absence) of the status. So the sum of eight scores for PTSD in this study were measured, scored, and rated on 3-level rating scale<sup>(11)</sup>; low with cut-off point ranged (8-15) that indicates that the level of PTSD is low; medium with cut-off point ranged (16-17) that indicates that the level of PTSD is medium; and high with cut-off point ranged (18-24) that indicates that the level of PTSD is high<sup>(11)</sup>. The rating scale was implicated to rate the frequency and extension of the status<sup>(11)</sup>. Data were analyzed using SPSS version 19 using descriptive data analysis (frequency, and percentage), and inferential data analysis (correlation coefficient)<sup>(11, 12, 13)</sup>.

## Results

Table 1: Sample Demographic Characteristics

Current Age			Age at Capture		
year	f	%	year	f	%
40-49	22	23.9%	≤19	14	15.3%
50-59	45	48.8%	20-29	40	43.5%
≥60	25	27.3%	30-39	34	36.8%
<b>Total</b>	<b>92</b>	<b>100%</b>	≥40	4	4.4%
			<b>Total</b>	<b>92</b>	<b>100%</b>
Duration of Captivity			Time elapsed since release		
Year	F	%	year	f	%
8-11	21	22.8%	6-10	55	59.8
12-15	8	8.7%	11-15	15	16.3
≥16	63	68.5%	≥16	22	23.9
<b>Total</b>	<b>92</b>	<b>100%</b>	<b>Total</b>	<b>92</b>	<b>100</b>
Rank			Level of Education		
Rank	f	%	Degree	f	%
Officer	25	27.2%	Bachelor/ postgraduate	34	37.0%
Sub-officer	3	3.3%	Diploma	8	8.7%
Reserved	31	33.7%	Secondary	8	8.7%
Recruit	18	19.6%	Intermediate	16	17.4%
Public army	12	13.0%	Primary	26	28.3%
Civilian	3	3.3%	<b>Total</b>	<b>92</b>	<b>100%</b>
<b>Total</b>	<b>92</b>	<b>100%</b>	<b>Marital status</b>		
			Status	f	%
			<b>Married</b>	<b>92</b>	<b>100%</b>

*IRPOW: Iraqi repatriated prisoners of war, f → frequency, % → percentage*

Most of the participants of this study were middle aged at the time of recruitment in 2009. The highest percentage was located in the age group 50-59 year (48.8%). 74% of the participants were aged, at capture, between 20 to 39 years. IRPOWs spent long periods in captivity. The periods in captivity ranged from 8 to 21 years and 68.5% of IRPOWs spent between 16 and 21 years. With regard to the time elapsed since release from captivity, this ranged from 6-20 years and about 60% of the sample were released 6-10 years ago.

Table 2: Distribution in Levels of reported PTSD according to demographic characteristics

Disorder		PTSD Levels									
Demographics		No PTSD		Low		Medium		High		Total	
		f	%	f	%	f	%	f	%	f	%
Current age	40-49	7	7.6	5	5.4	6	6.5	4	4.3	22	23.9
	50-59	7	7.6	13	14.1	15	16.3	10	10.9	45	48.9
	≥60	6	6.5	9	9.8	9	9.8	1	1.1	25	27.2
	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>
Age at capture	≤19	5	5.4	2	2.2	3	3.3	4	4.3	14	15.2
	20-29	6	6.5	15	16.3	14	15.2	5	5.4	40	43.5
	30-39	7	7.6	9	9.8	12	13.0	6	6.5	34	37.0
	≥40	2	2.2	1	1.1	1	1.1	0	0.0	4	4.3

Continues

Table 2 Continues

	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>
<b>Duration of captivity</b>	8-11	4	4.3	8	8.7	8	8.7	1	1.1	21	22.8
	12-15	4	4.3	2	2.2	1	1.1	1	1.1	8	8.7
	≥16	12	13.0	17	18.5	21	22.8	13	14.1	63	68.5
	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>
<b>Time elapsed Since release</b>	6-10	15	16.4	13	14.1	15	16.4	12	13.0	55	59.8
	11-15	1	1.1	5	5.4	7	7.6	2	2.2	15	16.3
	≥16	4	4.3	9	9.8	8	8.7	1	1.1	22	23.9
	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>
<b>Level of Education</b>	Bachelor/postgraduate	11	12.0	8	8.7	9	9.8	6	6.5	34	37.0
	Diploma	0	0.0	4	4.3	3	3.3	1	1.1	8	8.7
	Secondary	3	3.3	1	1.1	2	2.2	2	2.2	8	8.7
	Intermediate	3	3.3	7	7.6	6	6.5	0	0.0	16	17.4
	Primary	3	3.3	7	7.6	10	10.9	6	6.5	26	28.3
	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>
<b>Rank</b>	Officer	7	7.6	7	7.6	7	7.6	4	4.3	25	27.2
	Sub-officer	1	1.1	1	1.1	1	1.1	0	0.0	3	3.3
	Reserved	6	6.5	7	7.6	11	12.0	7	7.6	31	33.7
	Recruit	5	5.4	5	5.4	4	4.3	4	4.3	18	19.6
	Public army	1	1.1	5	5.4	6	6.5	0	0.0	12	13.0
	Civilian	0	0.0	2	2.2	1	1.1	0	0.0	3	3.3
	<b>Total</b>	<b>20</b>	<b>21.7</b>	<b>27</b>	<b>29.3</b>	<b>30</b>	<b>32.6</b>	<b>15</b>	<b>16.4</b>	<b>92</b>	<b>100</b>

IRPOW: Iraqi repatriated prisoners of war,  $f \rightarrow$  frequency,  $\% \rightarrow$  percentage,  $\geq$  greater than or equal

Table (2) shows that 26.2% of IRPOWs have medium and high levels of PTSD within the 50-59 years age group, and 31.5% of those repatriates having low to medium levels were in the age range 20-29 at the time of capture. Regarding duration of captivity, 41.3% of IRPOWs who spent 16 years and more in captivity have low and medium levels of PTSD.

29.4% of IRPOWs who were released six to ten years ago had medium to high levels of PTSD. 18.5% of IRPOWs with Bachelor and Postgraduate degrees and of those with primary school education have low and medium levels of PTSD. 15.2% of officers have low and medium levels of PTSD, whereas 19.6% of reserved have medium and high levels of PTSD.

**Table 3: Association between demographic characteristics and Anxiety and Depression**

Correlation coefficient		
Variables	PTSD	
Demographics	r	sig
Age now	0.03	0.82
Age at capture	-0.04	0.96
Duration of captivity	0.10	0.37
Time elapsed	0.02	0.87
Level of education	0.17	0.11
Rank	0.10	0.37

r=correlation coefficient Sig= Significance

The extent of any correlation between PTSD and demographic characteristics were also explored (Table 3).

No significant correlations were identified between demographic characteristics and PTSD

## Recommendation

The study recommends special mental health services centres are established within primary health care centres in order to diagnose and treat them and that further studies are conducted to explore effective treatments for IRPOWs.

## Discussion

### 1. Discussion of the Demographic

#### Characteristics

At the time of Iran-Iraq war, 1980-1988 about five cohorts of recruits were in the army (born between 1957 and 1961) with about the same number of reserved and graduates. As the war lasted for eight years, the majority of captured soldiers were still young; range  $\leq 19$ - $\leq 39$  (table 1).

Many findings of various studies supported the results of this study, local studies indicated that the age at capture was 27 to 45 years in 1994<sup>(18)</sup>; 20 to 50 in 1995<sup>(19)</sup>; and 22 to 40 years in 1994<sup>(20)</sup>; and for the prisoners of the Second World War: held in Germany a study indicated the average of age was 23.9 years<sup>(21)</sup>; in Japan was 24.2 years<sup>(22)</sup>; in Korean Conflict was 23 years<sup>(23)</sup>; held in Japan was 23.6 years<sup>(24)</sup>; and held in Vietnam was 30.6 years<sup>(23)</sup>. The differences between Iraqi studies and other studies are due to the time elapsed since release from captivity and the date of previous studies; for the POWs of the Second World War study<sup>(21)</sup> was in 2009 and the time elapsed since release was about 65 years which indicated that just those who were the youngest during their repatriation were still alive because the study participants completed a mailed survey. This may also be the case for other studies except the POWs of Vietnam War which ended in 1975 and perhaps POWs with different age joined the study in 2008<sup>(23)</sup>.

The period Iraqi POWs stayed in captivity show different durations (table 1) and is supported by previous studies which reported that 87% of the total sample spent between six to 21 years in captivity<sup>(25)</sup>.

About half of the Iraqi POWs (42,000) were captured during 1982, coinciding with a major

Iranian offensive and 41 thousands Iraqi prisoners of war were released in 1990<sup>(26)</sup>, meaning that approximately half of Iraqi prisoners of war had spent 6 to 13 years in captivity. Iran began to release prisoners again in a large numbers after 1998 and so the rest spent 14 to 21 years in prison<sup>(26)</sup>. According to the study conducted in 1989 the POWs of the Second world War stayed for a period ranging from 6-26 months<sup>(13)</sup>; the average length of captivity the POWs held in Vietnam was five years and three months<sup>(27)</sup>; and for Croatian POWs duration of captivity ranged from 6-9 months<sup>(28)</sup>. Regarding the Time elapsed since release the formal release of POWs took place in August, 1990 (41,000 IPOWs were released) and continued until May, 2003 (55 IPOWs) after Iraq was invaded by a coalition led by the USA<sup>(22)</sup>. Within the 23 years (1990 to 2003) most the Iraqi prisoners of Iran-Iraq war (about 75,000) had been released and about 10 thousand chose to stay in Iran<sup>(22)</sup>. The study also revealed that more than half of those (table 1) who joined in the study were released after the year 2000. This high percentage of participants from those released after year 2000 could be because many were not able to finish all the requirements of their retirement, as a result of the invasion by the USA led coalition, and also would be in contact with the authorities in Baghdad.

The Iraqi Ministry of Defence was dissolved and they began again to follow up the process of the retirement after reforming a new Ministry of Human Rights which shouldered the responsibility of the IRPOWs.

### 2: Discussion of the reported PTSD

Regarding the levels of reported PTSD, the results of this study indicate, as expected, that a high proportion, over 75% of the sample have PTSD but at different levels (table 2). A local study assessed in 2005 the psychological status of 540 Iraqi repatriated prisoners of Iran-Iraq war and found that 82.00% of those repatriates had PTSD; 46.32% with moderate level; and 35.68% with severe level<sup>(25)</sup>.

Another study achieved in 1994 found that the prevalence of PTSD among Iraqi repatriated prisoners of Iran-Iraq was estimated between 55% and 97%<sup>(14)</sup>. Other findings revealed that 71.9% of Iraqi repatriates were diagnosed with PTSD<sup>(15)</sup>. There is broad agreement between these studies and any differences in prevalence could be due to differences in duration of captivity and the time elapsed since release because the studies took place at various times. In 1986 an American study indicated that 67% of the sample selected from of American former POWs of the Second World War experienced PTSD<sup>(26)</sup>; Symptoms of PTSD were seen in (90.0% to 100%) of American POWs of the Korean conflict<sup>(27)</sup>; and another study conducted in 1993 revealed that (78.0%) of Second World War Pacific theatre POWs were inflicted with PTSD<sup>(28)</sup>. These are similar to the results from Iraq and suggest that wartime captivity is difficult experience that is very likely to result in some level of PTSD. This study reported that the level of PTSD was not affected by how old the IRPOWs were at the time of the study or at the time of their capture; how long they remained in captivity; by how long since they have been repatriated; level of education; or rank.

For PTSD the non-significant association could be explained that this disorder could affect different age groups which mean that young and old people have the same chance of being inflicted by them. Regarding the duration of captivity most of the participants had spent long periods in captivity, so we might expect not to see a significant association. These findings are supported by a local study which found in their study on 540 Iraqi repatriated prisoners of Iran-Iraq war, 1980-1988 that the levels of reported PTSD was not affected by the current age; or age at capture; or duration of captivity, and time elapsed since release<sup>(25)</sup>.

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