# Prevalence of Anxiety and Depression Among the Iraqi Repatriated Prisoners of the Iran-Iraq War, 1980-1988

أنتشار القلق والكآبة بين الأسرى العراقيين العائديين من الحرب الإيرانية-العراقية، ١٩٨٠-١٩٨٨

Maan H. I. Al-Ameri, PhD\*
Ivan Gee, PhD \*\*
Eqbal G. A. Ma'ala, PhD \*\*\*
Akhtar H. Wallymahmed, PhD\*\*\*\*

#### المستخلص.

الأهداف: لإيجاد مدى انتشار القلق والكآبة بين الأسرى العراقيين العائدين من الحرب العراقية-الإيرانية، ١٩٨٠-١٩٨٨ وكذلك لمعرفة العلاقة بين مستويات هذين الإضطرابين وبعض المواصفات الديموغرافية لهؤلاء الاسرى العائدين.

المنهجية: دراسة وصفية تم إنجازها من تاريخ ١٨ تشرين الثاني، ٢٠٠٩ الى العاشر من كانون الثاني، ٢٠١٠، تم أستخدام الطريقة غير الأحتمالية المستندة على الكرة الثاجية في جمع عينة البحث البالغة ٩٢ أسير عائد من الذين كانوا في زيارة لوزارة حقوق الأنسان في بغداد. من أجل جمع المعلومات الخاصة بالبحث فقد تم أستخدام إستبيان خاص لهذا الغرض وبأستعمال المقابلة المختصرة ويتضمن قسمين: الأول يتكون من ستة من المواصفات الديمو غرافية للأسرى العائديين، والقسم الثاني يحتوي على ١٤ فقرة مخصصة لقياس مستويات إضطرابي القلق ةالكآبة. تم تحليل المعلومات التي جمعت بتطبيق التحليل الوصفي والذي تضمن الترددات والنسبة المئوية؛ وأيضا الأحصاء التحليلي.

النتائج: كشفت الدراسة بأن غالبية الأسرى العراقبين العائديين (٦٢,٠%) لديهم بعض المستويات من إضطراب القلق منها البسيط (٢٨,٠%)؛ والمتوسط (٢٠,٠٠%)؛ والمتوسط (٢٠,٠٠%)، أما الكآبة فأن (٦٣,٠٠%) منهم مصاب بهذا الإضطراب: منها البسيط (٢٧,٠٠%) والمتوسط (٢٠,٠٠%) والمتوسط (٢٠,٠٠%). ولم تجد الدراسة أي علاقة أحصائية ما بين هذين الإضطرابين وأي من المواصفات اليموغرافية للأسرى العائديين.

التوصيات: أوصت الدراسة بضم مراكز خاصة للصحة النفسية ضمن مراكز العناية الصحية الأولية لمعرفة ومتابعة وعلاج هؤلاء الأسرى العانديين، وكذلك العمل بالأستمرار بأنجاز الدراسات لمتابعة تطور حالاتهم الصحية الجسمية والنفسية.

# Abstract:

**Objective:** To find out the prevalence of anxiety and depression among Iraqi repatriated prisoners of Iran-Iraq war (IRPOWs), and the relationship with some variables.

**Methodology:** A descriptive study was carried out from Oct. 18th, 2009 through Jan. 10th, 2010. A Snowball sampling as a non-probability sampling technique was used to recruit 92 repatriates who had visited Ministry of Human Rights. An instrument was constructed for this purpose. The constructed instrument consisted of six demographic characteristics, and fourteen items to measure the level of anxiety and depression in prisoners of war (POWs). Data were collected with using the constructed instrument and the process of the interview as means for data collection. Data were analyzed through the application of descriptive statistical analysis, which are; percentages, frequencies and inferential statistic analysis (Pearson correlation coefficient).

Results: The study revealed that the majority of IRPOWs have some levels of; anxiety (62.0%) with the levels of: mild (28.3%), moderate (25.0%), and severe (8.7%); and depression (63.0%) with the levels of: mild (27.2%), moderate (29.3%), and severe (6.5%). The findings also indicated that there is no significant relationship between anxiety and depression relative to; current age, age at capture, duration of captivity, marital status, and level of education.

**Recommendations:** The study recommends that it is very important to establish special mental health services centres within the primary health care centres deal with those repatriates for counselling and in order to diagnose and treat them and further studies in this field with follow-up studies for the POWs.

Keywords: prevalence, anxiety, depression, Iraqi prisoners, war.

<sup>\*</sup> Instructor, Mental Health Nursing Department, College of Nursing, University of Baghdad, hmh\_57@yahoo.com.uk

<sup>\*\*</sup> Asst. Professor, Faculty of Health and Applied Social Sciences, Liverpool John Moores University, UK

<sup>\*\*\*</sup> Professor, Paediatric Nursing Department, College of Nursing, University of Baghdad

<sup>\*\*\*\*</sup> Professor, Faculty of Health and Applied Social Sciences, Liverpool John Moores University, UK

#### Introduction:

he literature related to war captivity has reported that most former prisoners of war are still distressed by memories of traumatic experiences of their capture and captivity decades after repatriation.

Psychological reactions after traumatic experiences have been acknowledged during the last decades and the vulnerability of repatriated prisoners of war (POWs) to psychological difficulty has been a topic of ongoing study in modern times. This is primarily because former POWs have reported more severe psychological disturbances and more problems in functioning than the other combatants <sup>(1)</sup>. War imprisonment and war captivity are traumatic experiences perpetrated on human beings that are experienced subsequent to brutal combat.

This prolonged and repeated traumatisation is generally considered to have the potential to cause various psychological difficulties, in particular anxiety, depression, and PTSD <sup>(2, 3, and 4)</sup>.

Following repatriation some former POWs develop psychological disorders, most commonly; depression; anxiety disorders; and substance abuse. The severity of captivity and the presence or absence of social supports during and after the POW experience play major roles in the recovery or illness that may occur after repatriation (5, 6, 7, 8, and 9). A considerable amount of research from various wars all over the world found consistently that traumatic experiences suffered the servicemen captured as prisoners of war are among the most stressful war-related events. In addition, clinical findings revealed a high prevalence of psychiatric disabilities as well as alteration in learning, memory, and other problem-solving performances after more than 40 years after interment (10).

These findings point to frequently occurring depressive and anxiety disorders and particularly posttraumatic stress disorder among 56% of surviving prisoners held in Germany during the Second World War, at least 50% of POWs survivors of Japanese captivity during the Second World War, and in 90% to 100% of servicemen captured in the Korean Conflict (11, 12, and 13).

### Methodology:

Non-probability conveniences sample of 92 the Iraqi repatriate prisoners of war (IRPOWs) who visited Ministry of Human Rights/ POWs and Missing section. The sample of this study was taken from Iraqi repatriated prisoners of Iran-Iraq war, 1980-1988 who had been captured during the 8-year war between the two countries and were set free from 1990 to 2003. This sample was recruited using snowball sampling. The constructed questionnaire as an instrument for data collection consists of two parts. Firstly; the Demographic data sheet which consists of 6 items which included; current age, age at capture, duration of captivity, rank, marital status, level of education, , and secondly: 14 items Hospital Anxiety and Depression Scale (HADS)<sup>(14)</sup>. This scale measures the Anxiety and Depression levels among IRPOWs, these items were measured, scored and rated of 3-level Likert rating scale "3" indicates that the status was (persistent) as (always), "2" indicates (presence) of the status as (sometimes), and "1" indicates (absence) of the status as (never). The rating scale was implicated to rate the frequency and extension of the status (15). Data were analyzed through the application of the descriptive data analysis (frequency, and percentage), and inferential data analysis (correlation coefficient) (15, 16, and 17).

#### **Results:**

Table 1. Demographic Characteristics of IRPOWs

Sample Demographic Cha	racteristics							
Current Age			Age at Capture	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%			
Total	92	100%	≥40	4	4.4%			
			Total	92	100%			
<b>Duration of Captivity</b>			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			
Total	92	100%	Total	92	100			
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%	Primary	26	28.3%			
Civilian	3	3.3%	Total	92	100%			
Total	92	100%	Marital status					
	<u> </u>		Status	f	%			
			Married	92	100%			

IRPOW: Iraqi repatriated prisoners of war, f → frequency, % → percentage, ≤ → Equal or less, ≥ → Equal or more

Most of the participants of this study were middle aged at the time of recruitment in 2009. The highest percentage is located in the age group 50-59 year (48.8%). The age at capture, 74% of the participants were aged between 20 to 39 years,

Regarding the period of time the IPOWs had spent in captivity the study indicates that the period ranges from 8 to 21 year and 68.5% of them spent between 16 and 21 years.

With regard to the time elapsed since release from captivity, the study revealed that the time ranged from 6-20 years and about 60% of the sample ranged 6-10 years. This time is calculated from the year of release until the time of recruitment

For the rank of the participants of this study the results show that 33.7% of the sample was from the reserved; 27.2% were officers; 19.6% were recruit; 13.0% were from public army; and 3.3% is the same percentage of the sub-officer and civilians.

The levels of education of IRPOWs, the study indicates that 28.3% have primary school (six years); 17.4% have intermediate school (nine years).

Table 2. Distribution in levels of Anxiety according to demographic characteristics

Disorder		Anxie	ty Levels	5							
Demographics		No Anxiety		Mild		Moderate		Severe		Total	
		f	%	f	%	f	%	f	%	f	%
ge	40-49	10	10.9	4	4.3	6	6.5	2	2.2	22	23.9
± a	50-59	17	18.5	17	18.5	8	8.7	3	3.3	45	48.9
Current age	≥60	8	8.7	5	5.4	9	9.8	3	3.3	25	27.2
3	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100
re	≤19	5	5.4	3	3.3	4	4.3	2	2.2	14	15.2
ptu	20-29	16	17.0	14	15.0	9	9.8	1	1.1	40	43.5
t ca	30-39	13	14.1	9	9.8	8	8.7	4	4.3	34	37.0
Age at capture	≥40	1	1.1	0	0.0	2	2.2	1	1.1	4	4.3
Ag	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100
of '	8-11	5	5.4	8	8.9	8	8.7	0	0.0	21	22.8
Duration of captivity	12-15	2	2.2	2	2.2	3	3.3	1	1.1	8	8.7
rati apti	≥16	28	30.4	16	17.0	12	13.0	7	7.6	63	68.5
م م	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100
75 4	6-10	26	28.0	11	12.0	10	10.9	8	8.7	55	59.8
Time elapsed Since release	11-15	4	4.3	7	7.6	4	4.3	0	0.0	15	16.3
Tin Ilap Sin	≥16	5	5.4	8	8.7	9	9.8	0	0.0	22	23.9
9 _	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100
	Bachelor/ postgraduate	12	13.0	7	7.6	10	10.9	5	5.4	34	37.0
<b>ب</b> ۾	Diploma	3	3.3	3	3.3	2	2.2	0	0.0	8	8.7
el o atic	Secondary	3	3.3	2	2.2	2	2.2	1	1.1	8	8.7
Level of Education	Intermediate	5	5.4	5	5.4	4	4.3	2	2.2	16	17.4
L 53	Primary	12	13.0	9	9.8	5	5.4	0	0.0	26	28.3
	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100
	Officer	8	8.7	7	7.6	7	7.6	3	3.3	25	27.2
Rank	Sub-officer	1	1.1	1	1.1	1	1.1	0	0.0	3	3.3
	Reserved	14	15.2	10	10.9	4	4.3	3	3.3	31	33.7
	Recruit	8	8.7	3	3.3	6	6.5	1	1.1	18	19.6
<u> ~</u>	Public army	3	3.3	4	4.3	4	4.3	1	1.1	12	13.0
	Civilian	1	1.1	1	1.1	1	1.1	0	0.0	3	3.3
	Total	35	38.0	26	28.3	23	25.0	8	8.7	92	100

IRPOW: Iraqi repatriated prisoners of war,  $f \rightarrow$  frequency, %  $\rightarrow$  percentage,  $\leq \rightarrow$  Equal or less,  $\geq \rightarrow$  Equal or more

Table (2) shows that 38.0% (n= 35) have no anxiety and 62.0% (n= 57) have different levels of anxiety; 28.3% (n= 26) have mild level; 25.0% (n= 23) have moderate level; and 8.7% (n= 8) have severe level. The table shows also that 27.2% of IRPOWs in the age range 50-59 years at the time of the study have mild and moderate levels of anxiety. And 24.8% within the age range 20-29 years at the time of capture have mild and moderate levels of anxiety. For those who spent 16 years and more in captivity 30% of them have mild and moderate levels of anxiety. And 22.9% of IRPOWs who were released 6 to 10 years ago (at the time of the study) have mild and moderate levels of anxiety. 20.7% of IRPOWs with monthly income 500,000 and less reported having mild and moderate levels of anxiety. 18.5% of IRPOWs with Bachelor degree and 15.2% with primary school have mild and moderate levels of anxiety.

Table 3: Distribution in levels of Depression according to demographic characteristics

Disorder		Depression Levels										
Demographics		No Depression		Low		Medium		High		Total		
			%	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	19	20.7	11	12.0	13	14.1	2	2.2	45	48.9	
re	≥60	8	8.7	9	9.8	8	8.7	0	0.0	25	27.2	
3	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	
re	≤19	4	4.3	3	3.3	5	5.4	2	2.2	14	15.2	
ptu	20-29	15	16.0	11	12.0	10	10.9	4	4.3	40	43.5	
Age at capture	30-39	14	15.0	10	10.9	10	10.9	0	0.0	34	37.0	
e e	≥40	1	1.1	1	1.1	2	2.2	0	0.0	4	4.3	
A 8	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	
of _	8-11	4	4.3	8	8.7	8	8.7	1	1.1	21	22.8	
Duration of captivity	12-15	1	1.1	2	2.2	3	3.3	2	2.2	8	8.7	
	≥16	29	31.6	15	16.0	16	17.4	3	3.3	63	68.5	
	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	
se se	6-10	27	29.4	10	10.9	13	14.1	5	5.4	55	59.8	
laps elea	11-15	3	3.3	7	7.6	5	5.4	0	0.0	15	16.3	
Time elapsed Since release	≥16	4	4.3	8	8.7	9	9.8	1	1.1	22	23.9	
Sin	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	
	Bachelor	10	10.9	9	9.8	11	12.0	4	4.3	34	37.0	
~ <u>=</u>	Diploma	4	4.3	4	4.3	0	0.0	0	0.0	8	8.7	
atio	Secondary	3	3.3	1	1.1	3	3.3	1	1.1	8	8.7	
Level of Education	Intermediate	5	5.4	2	2.2	8	8.7	1	1.1	16	17.4	
D B	Primary	12	13.0	9	9.8	5	5.4	0	0.0	26	28.3	
	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	
	Officer	7	7.6	7	7.6	7	7.6	4	4.3	25	27.2	
J	Sub-officer	0	0.0	1	1.1	2	2.2	0	0.0	3	3.3	
	Reserved	14	15.0	7	7.6	9	9.8	1	1.1	31	33.7	
Rank	Recruit	8	8.7	3	3.3	6	6.5	1	1.1	18	19.6	
~	Public army	3	3.3	6	6.5	3	3.3	0	0.0	12	13.0	
	Civilian	2	2.2	1	1.1	0	0.0	0	0.0	3	3.3	
	Total	34	37.0	25	27.2	27	29.3	6	6.5	92	100	

IRPOW: Iraqi repatriated prisoners of war, f → frequency, % → percentage, ≤ → Equal or less, ≥ → Equal or more

Table 3 shows that 37.0% (n= 34) have no depression and 63.0% (n= 58) have different levels of depression; 27.2% (n= 25) have mild level; 29.3% (n= 27) have moderate level; and 6.5% (n= 6) have severe level. This table indicates that 26.1% and 18.5% of IRPOWs in the age groups 50-59 years and ≥60 at the time of study have mild and moderate levels of depression respectively. And for the age at capture, 22.9% and 21.8% of IRPOWs in age groups 20-29 years and 30-39 years have mild and moderate levels of depression respectively. 33.4% of IRPOWs who spent 16 years and more in captivity have mild and moderate levels of depression, and 25.0% of IRPOWs who were repatriated six to ten years ago (in the time of study) have mild and moderate levels of depression. 21.8% of IRPOWs with Bachelor and postgraduate degree have mild and moderate levels of depression. And 16.2% of officers and 17.4% of reserved have mild and moderate levels of depression.

**Table 4.** Distribution of the sample regarding to the levels of reported anxiety and Depression

Anxiety oo.		No Anxiety		Anxiety Levels								
	No.	INO A	NO Allxiety		Mild		Moderate		Severe		Total	
Ě		f	%	f	%	f	%	f	%	f	%	
,	92	35	38.0	26	28.3	23	25.0	8	8.7	57	62.0	
on		No Don		Depression Levels								
Depression	No.	ио рер	ression	Mild		Moderate		Severe		Total		
pre		f	%	f	%	f	%	f	%	f	%	
De	92	34	37.0	25	27.2	27	29.3	6	6.5	58	63.0	

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

Table 4 reveals that 62.0% of IRPOWs have reported; anxiety in different levels: 28.3% of them have mild level; 25.0% have moderate level; and 8.7% have severe level of anxiety; and reported depression: 27.2% of the IRPOWs have mild level; 29.3% have moderate level; and 6.5% of them have severe level of depression.

Table 5. Association between demographic characteristics and Anxiety and Depression

Correlation coefficient									
Variables	Anxi	Anxiety Depre							
Demographics	r	sig	r	sig					
Age now	0.01	0.94	-0.17	0.10					
Age at capture	0.09	0.64	-0.15	0.15					
Duration of captivity	-0.07	0.51	-0.15	0.14					
Time elapsed	0.01	0.92	0.09	0.42					
Level of education	-0.14	0.18	-0.21	0.06					
Rank	-0.03	0.81	-0.12	0.10					

IRPOW: Iraqi repatriated prisoners of war,  $f \rightarrow$  frequency, %  $\rightarrow$  percentage,  $r \rightarrow$  correlation coefficient

Table (5) shows a non-significant relationship between demographic characteristics and anxiety and depression

#### **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 ≤19-≤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 (21); 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 (23). 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 (21) 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 (25). 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 1990<sup>(26)</sup>, meaning in released 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 (26). According to the study conducted in1989 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 (22). 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 (22). 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 Anxiety:

Regarding the levels of reported Anxiety the study revealed a high percentage of reported anxiety (62.0%) (Table 4). The results are supported by a study achieved in 2005 which revealed that 78% of sample (n= 540) were inflicted with anxiety (29). But the

differences in percentage between the two studies could be as result to the time elapsed since release and the time of the studies. Another study indicated that (45%) of the sample selected from American former POWs of the Korean Conflict had anxiety (12). This lower level might again be due to the reduced duration of captivity, the circumstances of imprisonment and the different time elapsed since release. However, a local study conducted in1994 indicated that only 15% of another sample of Iraqi repatriated POWs was inflicted with anxiety (19). This discrepancy may be because the researcher interviewed those repatriates immediately after their release (One Week) and the actual psychological symptoms might have been masked by the happiness of repatriation to their homeland and families; anxiety may have therefore emerged as these positive feelings subsided.

#### 3. Discussion of the reported Depression:

The results of table 4 indicate that 63.0% of the sample has reported varying degrees of depression. The results of Phase one for both groups are supported by a local study which was in 2005 indicated that 72% of the sample selected suffered from depression (29). This percentage is considered extremely high in comparison with the prevalence in the general population (3-4%) (19); 75% of American former POWs in the Korean Conflict suffered from different levels of depression (12). 41.5% of Iraqi repatriates suffered from depressive disorder; 26.9% of repatriates of Vietnam War had suffered from depression (30), and 49% of the former American POWs of Vietnam War suffered from depression (31). These previous studies tend to have lower prevalence for depression which could be due to different circumstances of the studies, different duration of captivity, different rank, different age at capture, and how long since they were released from captivity.

#### **Recommendations:**

The study recommends that it is very important to establish special mental health services centres within the primary health care

centres deal with the Iraqi repatriated prisoners of war for counselling and in order to diagnose and to treat any mental disorders or even symptoms. The study recommends also for further studies in this field with follow-up studies for the IRPOW.

#### **References:**

- Port CL, Engdahl B, Frazier B. A Longitudinal and Retrospective Study of PTSD among Older Prisoners of War. American Journal of Psychiatry. 2001.158; 1474-1479.
- Dent OF, Richardson B, Wilson S, Goulston KJ, Murdoch, CW. Post-war mortality among Australian World War II prisoners of the Japanese. Med J.1989; 150:378-382.
- Hunter EJ. The Vietnam POW veteran: Immediate and long-term effects. In C.R.Figley (Ed, stress disorders among Vietnam veterans, New York: Brunner. 1978 / Mazel/.
- Summerfield D. The psychological legacy of war and atrocity: the question of long-term and trans-generational effects and the need for a broad view. J N and Ment Dis. 1996; 184, 375-377.
- Engdahl B, Dikel TN, Eberly R, Blank A. 'Posttraumatic stress disorder in a community group of former prisoners of war: a normative response to severe trauma', American Journal of Psychiatry. 1997; 154, 1576-1581.
- Kang HK, Bullman TA, Taylor J W. Risk of Selected Cardiovascular Diseases and Posttraumatic Stress Disorder among Former World War II Prisoners of War. Annals of Epidemiology. 2006; Vol. 16, Issue 5, 381-386.
- 7. Page WF, Miller R N. Cirrhosis mortality among former American prisoners of war of World War II and the Korean conflict: results of a 50-year follow-up, Mil Med. 2000; 165(10): 781-785.
- Robson D, Welch E, Beeching NJ, Gill GV.
   Consequences of captivity: health effects of Far East imprisonment in World War II; 2009; 102 (2): 87-96.

- Ursano R J, Rundell JR. The prisoner of war, Department of Psychiatry, Uniformed services University of the Health Sciences, Bethesda, and Mary-land; 1990; 155 (4): 439-442.
- 10. Sutker PB, Allain AN, Johnson JL. Clinical Assessment of Long-term Cognitive and Emotional Sequelae to World War II Prisoner-of-war Confinement: Comparison of Pilot Twins (Case Study). Psychological Assessment, 1993; Vol. 5. No. 1, pp. 3-10.
- 11. Goldstein G, van kammen W, Shelly C, Miller DJ, van Kammen DP. Servivors of imprisoment in the Pacific Theatre during World War II. American Journal of Psychology. 1987; 144, 1210-1213.
- 12- Sutker PB, Winstead DK, Galina ZH, Allain AN. Assessment of long-term psychosocial sequelae among POW servivors of the Korean Conflict. Journal of Personality Assessment; 1990; 54. 170-180.
- 13 .Zeiss RA, Dickman HR. **PTSD 40 years later:** Incidence and person-situation correlates in former **POWs**. Journal of Clinical Psych. 1985; 45 (1), 80-87.
- 14. Zigmond AS, Snaith, RP. **The hospital anxiety and depression scale**. Act Psychiatr Scand. 1983; 67 (6): 361-370.
- 15. Polit D, Hungler B. **Nursing Research:** principles and Methods, 5th edition, Philadelphia: Lippincott co. 1999; 484-488
- 16. Spiegel MR. **Statistics**, Schaam's outline series. 1972; 45-48, 67-72
- 17. Shavelson R. (1988). **Statistical Reasoning for the Behavioral Science**, 2nd edition, Boston: Allqu and Bacon. 1988; 271-295.
- Hassan HS, Hassan KS. Posttraumatic Stress Disorder (PTSD) Among Iraqi Prisoners of War, Military Medical Journal. 1995; Vol.7 N.1-2. 10-23.
- 19. Al-Samarai MA. Psychiatric Disorder among Iraqi Repatriated Prisoners of Iraq-Iran War after one week of their Repatriation', Iraqi Medical Military Journal. 1994; Vol. 6-N: 1, 39-48.
- 20. Hamzah KM. Captivity and POW, a study in changing the identity of IPOWs in Iran,

- dissertation presented to University of Baghdad-college of Arts. 1994; P.18.
- 21. Rintamaki LS, Weaver FM, Elbaum PL, Klama EN, Miskevis SA. **Persistence of Traumatic Memories in World War II Prisoners of War**, J Am Geriatr Soc. 2009; 57: 2257-2262.
- 22. Miller TW, Martin W, Spiro K. Traumatic Stress Disorder: Diagnostic and Clinical Issues in Former Prisoners of War. Comprehensive Psychiatry. 1989; Vol. 30, No. 2: 139-148.
- 23. Feder A, Southwick SM, Goetz RR, Wang Y, Alonso A, Smith BW, Buchholz KR et al. Posttraumatic Growth in Former Vietnam Prisoners of War, Psychiatry. 2008; 71 (4), 359-369.
- 24. Skelton WP. American Ex-prisoners of War, Veterans Health Initiative, Department of Veterans Affair. 2002.
- 25. Al-Ameri MHI. "Self-concept" consideration related to war captivity for Iraqi former prisoners of Iraq-Iran war, 1980-1988. 2008; Sci. J. Nursing, Vol. 21, No. 1, p 2-14.
- 26. ICRC, International Committee of the Red Cross. Iran and ICRC review issue of Prisoners of War (POW) from the 1980-1988 Iran-Iraq War. 2004.
- 27. Hourani LL, Hilton SM. The long-term psychiatric Sequelae of the prisoners of War Experience: Findings from operation Homecoming Vietnam Veterans. Naval Health Research Centre, Report. 2002; No. 02-18.
- 28. Mandic N. Post-Traumatic stress Disorder, Psihijatrijska Klinicke bolnice Osijek, Lijec-Vjesn. 1995; 117 (1-2), 47-53 (Medline) (R) on CD 1995 Part (B).
- 29. Al-Ameri MHI, Mohammed SH. Assessment of psychosocial aspects of Iraqi repatriated prisoners of Iraq-Iran war, 1980-1988. Dissertation of Master Degree. 2005.
- 30. Tennant C, Fairly MJ, Dent OF, Sulway MR, Broe GA. Declining prevalence of psychiatric disorder in older former prisoners of war. J Nerv Dis. 1997; 185 (11): 686-689.
- 31. Escobar JT, Randolph ET, Puenta G, Spiwack F, Asamen JK, Hough RI. **Depression in**

Hispanic Vietnam veterans: Clinical phenomenology and socio-cultural characteristics, J.Nerve. Ment. Dis. 1983: 171: 583-95.