

Reaction to Terror-related Posttraumatic Stress Disorder (PTSD) among the Students of Nursing College/ University of Baghdad

رد الفعل لإضطراب الكرب ما بعد الصدمة المرتبط بالإرهاب بين طلبة كلية التمريض / جامعة بغداد

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الخلاصة

خلفية البحث: إضطراب الكرب ما بعد الصدمة هو مصطلح يطبق على الأختلالات النفسية والعاطفية والتي تنتج أثر تجربة أو مشاهدة أو التعرض الى حدث أو أحداث صدمية. هذه الأحداث تكون ذات مواصفات تهديدية حقيقية للحياة أو أصابات جسمية خطيرة أو تهديد للكمال الفسلجي للإنسان كالحوادث الطبيعية، الحروب، التعذيب، القتل، الأذى الشديد للنفس أو الآخرين أو الأغتصاب أو الإهانة.

الهدف: معرفة نسب الإصابة بإضطرابات ما بعد الصدمة بين طلبة كلية التمريض/ جامعة بغداد وقياس وإيجاد العلاقة ما بين هذه الإضطرابات وبعض المتغيرات الديموغرافية لهؤلاء الطلبة.

المنهجية: أجريت دراسة وصفية لطلبة كلية التمريض/ جامعة بغداد ابتداءً من الرابع من كانون الأول ٢٠١٣ الى السابع عشر من أيار، ٢٠١٤ لمعرفة مستويات الإصابة بإضطراب الكرب ما بعد الصدمة النفسية لجميع المراحل الدراسية في الكلية، أستخدمت طريقة الملء الذاتي للأستبانة في جمع بيانات البحث لـ ٢٠٠ طالب وطالبة. لجمع المعلومات فقد تم استخدام إستبيان خاص لهذا الغرض ويتضمن قسمين: الأول يتكون من أربعة من المواصفات الديموغرافية وهي الجنس، العمر، المرحلة الدراسية والإقامة، و١٧ فقرة الممتلة لمقياس ديفدسون المعتمد على تصنيف (DSM-IV) لقياس مستويات إضطراب ما بعد الصدمة. تم تحليل البيانات بتطبيق التحليل الوصفي والذي تضمن التكرارات والنسبة المئوية؛ وأيضاً الإحصاء الاستدلالي.

النتائج: أشارت الدراسة بأن غالبية الطلبة (٦٣.٠%) لديهم إضطراب ما بعد الصدمة منها البسيط (٢٩.٠%) والمتوسط (٢١.٥%) و العالي (١٢.٥%)؛ كذلك أظهرت النتائج بأن الطالبات هن أكثر عرضة للإصابة (٣٥.٠%)؛ وأن ٢١.٠% من المصابين هم من أعمار ٢٤ سنة وأكثر، وأن طلبة المرحلة الأولى هم النسبة الأكبر عن المراحل الأخرى بالإصابة (١٨.٠%).

الأستنتاج: توصلت الدراسة بأن أكثر من نصف طلبة كلية التمريض في عمر ٢٢ وأكثر، ونصفهم من الطلبة الذكور، وغالبيتهم يعيشون في بغداد. أوضحت الدراسة أيضاً بأن نسبة عالية منهم مصابون بإضطراب ما بعد الصدمة النفسية وبدرجات متباينة.

التوصيات: توصي الدراسة الحالية على توجيه الطلبة بتعلم بعض تدابير السيطرة على الإجهاد النفسي من خلال حضور جلسات تدريبية و جلسات الأسترخاء النفسي.

Abstract:

Introduction: Posttraumatic Stress Disorder (PTSD) is a term applied to psychological and emotional disturbance that develops after experiencing, witnessing or being exposed to a traumatic event. 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.

Objective: To determine the infliction levels of Posttraumatic Stress Disorder (PTSD) among the students in the college of Nursing/ University of Baghdad, and to find out the relationship between these levels and some demographic characteristics.

Methodology: Observational design study of undergraduate nursing students has been achieved from December 4th, 2013 to the May 17th, 2014 in order to identify the Post-traumatic Stress Disorder in all stages in the College of Nursing University of Baghdad. A non-probability of two hundred students in all four stages of the college of Nursing/ University of Baghdad was recruited. To meet the study objectives a questionnaire was constructed. This questionnaire consisted of two parts: firstly, four demographic characteristics: gender, age, stage, and residency; and 17 items represent Davidson Trauma scale-DSM-IV for diagnosing and measuring levels of PTSD within the civilians. Data were analyzed by applying: descriptive statistical analysis: frequencies and percentages and distribution; and inferential analysis: Correlation Coefficient, Chi-square, and independent *t*-test.

Results: The study indicates that the majority of the students (63.0%) has PTSD: low (29.0%), medium (21.5%), and high (12.5%); and only 37.0% of them have no PTSD. The results indicate that 35.0% of the participants who have different levels of PTSD (63.0%) are female; and 21.5% of those who have PTSD are in age group (≥ 24); for the stages: the first stage shows having more PTSD (18.0%) than the other stages; and finally, 42.0% of those who live in Baghdad have levels of PTSD than those who do not live in Baghdad.

Conclusions: The results of present study indicated that more than half of participated students were at age 22 years and more old; half of them were male students; and the majority live in Baghdad. The study showed that a high percentage of those students have had PTSD in different levels

Recommendations: The present study recommends that students are to be advised to learn some coping strategies and stress managements by attending training and relaxation sessions.

Keyword: Reaction, PTSD, terror, related, students, college, nursing.

INTRODUCTION:

Posttraumatic Stress Disorder (PTSD) is not only a problem for veterans, however. Although there are unique cultural- and gender-based aspects to the disorder, it occurs in both men and women, adults and children, Western and non-Western cultural groups, and all socioeconomic strata. A national study of American civilians conducted in 1995 estimated that the lifetime prevalence of PTSD was 5% in men and 10% in women⁽¹⁾.

Over the last decade, research has shown that posttraumatic stress disorder (PTSD) is a common mental health problem among people exposed to various forms of trauma. Epidemiological studies have estimated lifetime prevalence of PTSD that ranges from 8% to 12%^(2,3).

More recently, there has been a growing awareness that PTSD is often a chronic illness. Although much of this research comes from studies of war-related trauma⁽⁴⁾, research with community-based samples suggests that 50% of individuals with PTSD are in an episode with this illness for more than one year^(1,5). Previous studies on the longitudinal course of PTSD have used retrospective designs to assess the course of PTSD in civilians^(5,6).

The situation is almost certainly quite different in less developed countries, where it is well-known that exposure to traumatic events involving internal violence is much more common. Many less developed countries are either controlled by repressive political regimes or are in the midst of armed conflicts involving political, racial, or ethnic violence. There are well over 100 countries of this sort in the world today⁽⁷⁾. Large proportions of the populations in these countries have been exposed either directly or indirectly to terrorist acts, torture, sexual assault, and forced relocation⁽⁸⁾.

OBJECTIVE:

To determine the infliction levels of Posttraumatic Stress Disorder (PTSD) among the students in the college of Nursing/ University of Baghdad, and to find out the relationship between these levels and some demographic characteristics.

METHODOLOGY

Observational design study of undergraduate nursing students has been achieved from December 4th, 2013 to the May 17th, 2014 in order to identify the Post-traumatic Stress Disorder in all stages in the College of Nursing University of Baghdad. A non-probability of two hundred students in all four stages of the college of Nursing/ University of Baghdad was recruited. To meet the study objectives a questionnaire was constructed. This questionnaire consisted of two parts: firstly, four demographic characteristics: gender, age, stage, and residency; and 17 items represent Davidson Trauma scale-DSM-IV⁽⁹⁾ for diagnosing and measuring levels of PTSD within the civilians. All respondents have to meet Criterion A, with the existence of an identifiable stressor. To achieve a diagnosis of PTSD, the author required that respondents also specify currently being troubled by two descriptors from Group B, being troubled by the two items in Group C, and being troubled by the two items in Group D. The second measure was the severity of PTSD-related problems which was obtained by scoring responses for each of the 17 items on the questionnaire on the three point scale, reflecting degree of current difficulty and ranging from '0' Not at all to '2' troubled me a great deal. These 17 scores were then summed to give a Sum of PTSD score which is used in many of the analyses that follow. For the present study, and according to the previous criteria for reported PTSD it was found that 126 have met the above criteria for PTSD i.e. these participants had

minimum score of 17 and maximum score of 34. So the sum of 17 scores for PTSD in this study were measured, scored, and rated on 3-level rating scale⁽¹⁰⁾; low with cut-off point ranged (17-20) that indicates that the level of PTSD is low; medium with cut-off point ranged (21-25) that indicates that the level of PTSD is medium; and high with cut-off point ranged (25-34) that indicates that the level of PTSD is high. The rating scale was implicated to rate the frequency and extension of the status. Data were analyzed using SPSS version 19 using descriptive data analysis (frequency, and percentage), and inferential data analysis (χ^2 , and correlation coefficient)⁽¹¹⁾.

RESULTS:

Table (1) Demographic Characteristics of the Students participating in the Study

Age			Stages		
Year	f	%	Stage	f	%
18-19	43	21.5%	First	56	28.0%
20-21	47	23.5%	Second	52	26.0%
22-23	46	23.0%	Third	47	23.5%
≥ 24	64	32.0%	Fourth	45	22.5%
Total	200	100%	Total	200	100%
Gender			Residency		
Gender	f	%	Residency	f	%
Male	109	54.5%	Baghdad	135	66.5%
Female	91	45.5%	Other	65	32.5%
Total	200	100.0%	Total	200	100.0%

Table 1 indicates that the students are between 18 to 24 years old and more and 32% of them are 24 years old and more; male students are more than female students: 54.5% and 45.5% respectively; first stage students are more likely (28.0%) than other stages which are approximately equal; and finally, 66.5% of those students live in the city of Baghdad.

Table (2) Distribution of levels of PTSD according to the total Sample

Total No.	No any Levels of PTSD		PTSD Levels within the Students							
			Low Level of PTSD		Medium Level of PTSD		High Level of PTSD		Total with PTSD	
	f	%	f	%	f	%	f	%	f	%
200	74	37.0%	58	29.0%	43	21.5%	25	12.5%	126	63.0%

Table 2 reveal that the majority of the students (63.0%) has different levels of PTSD: low (29.0%), medium (21.5%), and high (12.5%); and only 37.0% of them have no PTSD.

Table (3) Distribution in Levels of PTSD according to Demographic Characteristics of the Students participating in the Study and association between these levels and Demographic characteristics.

		No.of Sample	PTSD levels among Students										Chi ²		
			Has No PTSD		Has Low level		Has Medium Level		Has High Level		Total with PTSD		df	p-value	
			f	%	f	%	f	%	f	%	f	%			
Demographic Characteristics	Gender	Male	200	53	26.5%	22	11.0%	18	9.0%	16	8.0%	56	28.0%	1	0.004
		Female	21	10.5%	36	18.0%	25	12.5%	9	4.5%	70	35.0%			
		Total	74	37.0%	58	29.0%	43	21.5%	25	12.5%	126	63.0%			
	Age	18-19	200	16	8.0%	13	6.5%	11	5.5%	3	1.5%	27	13.5%	3	0.068
		20-21		19	9.5%	12	6.0%	10	5.0%	6	3.0%	28	14.0%		
		22-23		18	9.0%	11	5.5%	12	6.0%	5	2.5%	28	14.0%		
		≥ 24		21	10.5%	22	11.0%	10	5.0%	11	5.5%	43	21.5%		
		Total		74	37.0%	58	29.0%	43	21.5%	25	12.5%	126	63.0%		
	Class	First	200	20	10.0%	16	8.0%	12	6.0%	8	4.0%	36	18.0%	3	0.083
		Second		22	11.0%	13	6.5%	10	5.0%	7	3.5%	30	15.0%		
		Third		16	8.0%	16	8.0%	9	4.5%	6	3.0%	31	15.5%		
		Fourth		16	8.0%	13	6.5%	12	6.0%	4	2.0%	29	14.5%		
		Total		74	37.0%	58	29.0%	43	21.5%	25	12.5%	126	63.0%		
	Residency	Baghdad	200	51	25.5%	39	19.5%	30	15.0%	15	7.5%	84	42.0%	1	0.003
		Other		23	11.5%	19	9.5%	13	6.5%	10	5.0%	42	21.0%		
		Total		74	37.0%	58	29.0%	43	21.5%	25	12.5%	126	63.0%		

Table 3 indicates that 28.0% of the participants who have different levels of PTSD (63.0%) are males and 35.0% are females; and 21.5% of those who have PTSD are at age group (≥ 24); for the stages: the first stage shows having more PTSD (18.0%) than the other stages; and finally, 42.0% of those who live in Baghdad have levels of PTSD than those who do not live in Baghdad. Regarding the association between the levels of PTSD and demographic characteristics of the students the study reveals that gender and residency have high significant association.

Table (4) Comparison between stages: first, second, third and fourth stages and Levels of PTSD

	Stages				Independent <i>t</i> -test	
	First		Second		<i>t</i>	<i>p</i>
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>		
Levels of PTSD	28	8	24	6	1.4	0.36
	First		Third		Independent <i>t</i> -test	
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>	<i>t</i>	<i>p</i>
	28	8	22	9	- 2.9	0.05
	First		Fourth		Independent <i>t</i> -test	
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>	<i>t</i>	<i>p</i>
	28	8	21	8	3.6	0.01
	Second		Third		Independent <i>t</i> -test	
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>	<i>t</i>	<i>p</i>
	24	6	22	9	- 1.2	0.62
	Second		Fourth		Independent <i>t</i> -test	
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>	<i>t</i>	<i>p</i>
	24	6	21	8	3.3	0.05
	Third		Fourth		Independent <i>t</i> -test	
	<i>mean</i>	<i>St. d.</i>	<i>mean</i>	<i>St. d.</i>	<i>t</i>	<i>p</i>
	22	9	21	8	1.1	0.74

Regarding the differences in levels of PTSD table 4 indicates that there are significant differences between first stage and third and fourth stage $p= 0.05$; and $p= 0.01$ respectively; and between second and fourth stages $p= 0.05$. There are no differences for the clinical outcomes of PTSD between first stage and second stage; and between third stage and fourth stage.

DISCUSSION

1. Discussion of the demographic characteristics

The results of the study show (table 1) that the age of participants range between 18 years and more than 24 years. This might be due to different stages of the college which consists of four classes and in Iraq the minimum age of the student to be accepted at university level is 18 years old after getting the Baccalaureate. In addition, the maximum age of graduation is supposed to be at 22 years old but according to different reasons some students are more than 22 years old and they are still students.

For the gender of the participants the results of table 1 shows that: 54.5% of them are male student. This percentage is unexpected because the gender criteria for acceptance in the college are 70% for female student and 30% for male. This can be interpreted that the college has morning and evening times so the evening time is not submitted to the same criteria of

morning time. In evening time most of the students are male, this give the real reason for this unexpected percentages.

Regarding the number of each class the table 1 indicates that within the four classes the percentages are approximately close. This is because the number of students to be accepted is about to be the same with some little differences in some years.

According to results of table 1 the majority of the participants live in the City of Baghdad (66.5%). This could be as a result to high population of the city of Baghdad as a capital.

2. Discussion of the levels of PTSD

The most important consequence of this study is that 63.0% of the students have different levels of PTSD and 37.0% have no PTSD. This result is supported by many researchers such as North and his colleagues (2004) who found in a follow-up study up on the survivors of Oklahoma bombing that near to 52.2% of those survivors still have PTSD⁽³⁾; and Howgego and his colleagues (2005)⁽¹²⁾ who found in their study that 24% of the men and 39% of the women met criteria for PTSD, which was the most prevalent psychiatric disorder. In addition, most subjects who developed PTSD had no history of psychiatric illness.

3. Discussion of levels of PTSD according to demographic characteristics

The study reveals many facts related to prevalence of PTSD within the students of college of Nursing/ University of Baghdad in spite of some exceptions which are not supported by other studies over all around the world. The results show that the participants are young (18-24 years) and have different levels of PTSD (table 3). In addition, the age group of ≥ 24 has the highest level of PTSD (21.5%), this result is supported by Karamet al. (2006)⁽¹³⁾ and Raphael (2004)⁽¹⁴⁾ who revealed that most civilians, during war time, were inflicted with different levels of PTSD especially the young people.

Regarding the gender, the study shows that female students are more exposed to have PTSD (35.0%) during the wartime. This is supported by Hobfoll (2006); Raphael (2004); and Kilpatrick (2003)^(1,14,15).

The study reveals that the students living in the city of Baghdad have more levels of PTSD (42.0%) than the students from other governorates (21.0%). This might be due to the long way those students need to reach to the college every day but the other students live in places around the college.

4. Discussion the association between levels of PTSD and demographic characteristics

The study finds an association between levels of PTSD and gender ($p= 0.004$); and residency ($p= 0.003$). This could be explained as PTSD is a disorder that affects female more than male due to the many causes such as the physiological and psychological nature of females which react greatly by the surroundings and by bad circumstances; and this disorder can affect civilians living in the city of Baghdad because most of the terror attacks are in different regions of this city.

5. Discussion of the differences in levels of PTSD among the classes

The results show that there is a significant difference among the levels of PTSD within the students (Table 4) in different stages. The highest levels of PTSD are found in the first

stage which is different from the other three stages. This indicates that the new students has more levels of PTSD than other students within the rest stages, this could be as a result to the resilience that have by the progress of time in the college.

CONCLUSIONS

The results of present study indicated that more than half of participated students (55.0%) were at age 22 years and more old; 54.5% were male students; 28.0% of them at first class; and 66.5% live in Baghdad. The study showed that 63.0% of those students have had PTSD in different levels: 29.0% with low level, 21.5% with moderate level, and 12.5% with severe level. The study found differences in levels of PTSD between students at stages one and three ($p= 0.05$); between students at stages two and four ($p= 0.01$); and between stages one and four ($p= 0.05$).

RECOMMENDATION

The study recommends that to let the students learn some stress managements which help them managing their stress during or after such terror actions. Try to increase the security activities at and around the college building in order to promote the students' feeling of secure and safety.

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