



Original Article

Content analysis of visual, auditory and structural component affecting combat-related posttraumatic stress disorder

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Abstract

Introduction: This study aimed analysis of visual, auditory and structural contents in war zones during holy defense (Iran-Iraq war) for Posttraumatic Stress Disorder (PTSD).

Materials and Methods: This research has the librarian content analysis method and it intended all contents are related to south warfronts. So, 39 holy defense movies were chosen and analyzed through convenient sampling and Delphi method. Research instrument were the researcher made checklists of visual, auditory and structural components which evaluated and approved by 24 warriors. All of acquired data analyzed by statistical qualitative methods and content analysis.

Results: The content analysis of holy defense movies showed that wide and various components in each fields of visual, aural and structural contexts developing stress disorder in warriors.

Conclusion: Based on the results, different visual, auditory and structural components can impact on stress disorder in warriors.

Keywords: Auditory, Posttraumatic stress disorder, Structural, Visual

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Introduction

Posttraumatic Stress Disorder (PTSD) is a syndrome that happens after observing, direct experiencing, or hearing of an acute stressor and teratogen. Sometimes it is a life threatening, leads to death or severe impacts. Patient has fear and helplessness feeling about these experiences, mostly shows bizarre behaviors (representative of fidgetiness) and continually avoids remembering this incident or impact (1). Complications and consequences of war impacts are one way of developing PTSD. Physiological and psychological signs based on anxiety and temperamental moods are among the debilitating complications which have caused numerous problems in people involved in war. Some of the new therapists believe that real exposure therapy is the best tool for them; of course, this recreation is almost impossible in Combat-

Related Posttraumatic Stress Disorder but we can use some complementary remedial tools like virtual reality simulation to improve them. These systems are able to overcome real world limitations and show new horizons to these patients. First, all of the visual, auditory and structural component of real war environment should be analyzed to be used in software scenarios design and designing virtual reality software programs (2). This study aimed analysis of visual, auditory and structural contents of Iran-Iraq war.

Materials and Methods

This research has been approved and supported by Baqiyatallah University of Medical Sciences.

The video samples of Holy defense were chosen using Delphi sampling technique, based on scientific method principles of content analysis (33 movies). Basic plot of these films were related to holy defense and representing memories and remnants of it. So, all the visual, auditory and structural component of Iran-Iraq warfronts analyzed contextually through observing videos.

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Based on the convenient sampling method and inclusion criteria (at least 24 months presence in warfronts) 24 warriors were selected and they participated in all phases of selection of movies and evaluation of checklists related to the components. All items which received at least 50% of acceptance by the warriors were entered to final checklists.

Research instrument

- *Checklists of visual, auditory and structural components:* These checklists include the columns about name of components of each field, number of presence, the percentage of prevalence and the evaluator's general score (generally approved or not approved).

All data analyzed through descriptive statistics, qualitative statistics and content analysis.

Results

In this section, study findings related to visual, auditory and structural components represented separately. By "visual component" we mean all scenes, pictures and incidents related to war and wartime that screened on Holy defense movies. Visual components existed in Holy defense movies were mentioned in the following table generally as main or inferior themes.

Visual component

In this section, frequency extent and percentage frequency of main and inferior themes will be presented in tables separately. Absolute frequency and percentage frequency of war and skirmish scene have been presented in Table 1.

Table 1. Frequency of scene seen in Holy defense movies

Variable	Subthemes	Absolute frequency	Visual component
War and skirmish scene	Sudden appearing of enemy	459	11
	Bloodshed scene	468	12
	Scene of aggregation in a place	463	11
	Amputation scene	429	10
	Scene of progress in mined zone	425	10
	Scene of sudden fall	495	12
	Gun firing scene	690	16
	Explosion scene	468	11
	Torturing scene	296	7
	Total	4193	100
War and skirmish scene	Firing and heavy smoke scene	503	34
	Scene of demolished homes	289	19
	scene of Iraqi bodies and Iranian martyrs	426	29
	Car overturning scene	272	18
	Total	1490	100
Scene of war movements and tactics	Grenade and mortar scene	446	51
	Camouflage and ambush scene	121	14
	Crawling scene	293	34
	Total	1153	100
War force scene	Soldiers pictures	1280	51
	Commanders pictures	527	21
	Physicians in war scene	276	11
	Scene of national forces in war	448	17
	Total	2531	100
Armament and war instrumentation scene	Armament scene	1120	51
	War instrumentation scene	1092	49
	Total	2212	100

Auditory component

By 'auditory component' in Holy defense movies we mean all sounds and noises that existed in

wartime and generally have been represented as main or inferior themes.

Table 2. Frequencies of noises heard in Holy defense movies

Main themes	Subthemes	Absolute frequency	Percentage frequency
Noises heard before beginning of skirmish	Rustle of wireless set	368	36
	Commander's voice	349	34
	Siren and radio sounds	297	30
	Total	1014	100
Noises heard during war and skirmish	Ruction and shout	423	18
	Wailing and crying	205	9
	Tramp while running	292	13
	Sudden shout while got shot	367	16

	Military instrumentation's noises (mortar or cannon's explosion and whistle / tank direct fire /quiver noise)	623	27
	Military aircraft and helicopter' noises	387	17
	Total	2297	100
War forces' voices	Speech of commander	395	16
	Soldier's voices	1360	55
	Physician's voice	269	11
	National force's voices	429	18
	total	2453	100

Structural component

By 'Structural component' we mean all structures, buildings, places, instrumentation, ways and other Structural component related to Iran-Iraq war which existed in wartime and represented in holy defense

movies. Every local and geographic position has characteristics like requirements needed for war and facilities developed there. Holy defense movies have represented warfront's scenes.

Table 3. Frequency of structural component existed in warfronts in Holy defense movies

Main themes	Subthemes	Absolute frequency	Percentage frequency
Component existed in warfronts	Representing Rampart, forefront, background	469	11
	Representing pavilion, base and 'Salavati station'	450	11
	Representing military vehicles	321	8
	Representing canebrake, Arvand/Karoon and Karkheh Rivers	268	6
	Representing warrior's nutrition	198	5
	Representing parapets (ammunition, provisions and infirmary parapet)	597	14
	Representing military equipment and armaments (tank, gun, grenade, mortar, aircraft, helicopter, boat, military uniform, ...)	1896	45
	Total	4199	100

Discussion

Stressors in war incidents, quality of incident's experience and perception, moment of incident, location of incident, and situational and personal characteristics are effective in developing Posttraumatic Stress Disorder in warriors. Stressors include exposing to explosion, bullet hit, gun, RPG, cannon, missile, bombardment and being buried alive. 'Quality of understanding and experiencing incident' seeks to answer this question: had warrior experienced the event directly from close distance or experienced indirectly through hearing news from friends and observing scenes in media? (3). Wartime refers to time warrior spent in warfront and to happening hour (day or night) of incident. Location of incident alludes to place where incident happened, e.g. presence in forefront of war zone, in background of main warfront, in street and home beside friends and family (4). Situational and personal characteristics represent presence in warfront as soldier, voluntarily or mandatorily. Having religious viewpoints and impetus, readiness for war, education level before injury and having stress and depression symptoms play important roles in developing/preventing PTSD (5). It is worth noting that in addition to aforementioned cases, intensity of incident, exposing time and closeness to incident are effective too. It means that PTSD is severe in a warrior who attends several months or years in war and observes dreadful and anxious

scenes, in comparison with a warrior who attends 1-2 months in warfront (6).

Results of this study are in agreement with findings of Bakhshi et al (7). Mortazavi (8) concluded that some warriors observing irritant scenes seize stress; so some tensions resulted from incidents such as quarrels and accidents (which have low brunt) don't lead to PTSD necessarily. The results demonstrated that PTSD is mild in religious warriors. The disorder also is age-dependent and Childs are more vulnerable. Findings of this research are in consonance with Giviyan & Tavakolli (9) who stated that multiple factors involved in outbreak and exacerbation of PTSD. In auditory component, following noises and voices had maximum frequencies respectively: Rustle of wireless set, Commander's voice, Siren and radio sounds, Ruction and shout, Wailing and crying, Tramp while running, Sudden shout while got shot, Military instrumentation's noises, Military aircraft and helicopter' noises, Speech of commander, Soldier's voices, Physician's voice, National force's voices. So we could say that each of these scenes plays key role in developing PTSD. These findings confirm Giviyan & Tavakolli (9) who investigated holy defense movies and concluded that auditory contents constitute most important contents of holy defense movies. They mentioned to siren and radio sounds, wailing and crying, Tramp while running, Sudden shout while got shot, Military

instrumentation's noises, Military aircraft and helicopter' noises in their study which is in accordance with our research. The findings also correlate with Poursaeed et al (10) and Mortazavi et al (8). These two studies have analyzed holy defense movies and war soundtrack auditorily and investigated PTSD subsequently. PTSD patients due to sudden noises during war and generalization mechanism, experience same stressful situation by hearing phone ringtone, car horn and direful noises similar to war noises; subsequently, they would be fearful and their physiologic symptoms are indicator of disorder. While people undergoing an inconvenience, memento of the incident recorded along with what they heard, observed, smelled or sensed in their mind. Afterwards, a landscape, noise, smell or similar feeling could recover past mementos and feelings. PTSD patients need reviewing those mementos to analyze context of the incident. Harmful incidents challenge these patient's previous beliefs. For example, they think that the world is unsafe place and believe that unpleasant incidents would be happened. They consider induced psychological impact to perceive it, but thinking about that memento recovers unpleasant and dolorous feelings, which subsequently make them to subterfuge thinking about that memento. Instead of tranquility, these patients fluctuate between remembering and forgetting the memento. In structural component, following structures had maximum frequencies respectively: Representing Rampart, forefront, background, Representing pavilion, base and 'Salavati station', Representing military vehicles, Representing canebrake, Arvand/Karoon and Karkheh Rivers, Representing warrior's nutrition, Representing parapets (ammunition, provisions and infirmary parapet), Representing military equipment and armaments (tank, gun, grenade, mortar, aircraft, helicopter, boat, military uniform, ...). So we could say that each of these structures plays key role in developing PTSD. These findings are in good agreement with Bakhshi et al. (7) who studied war scenes and their representations in holy defense movies. Actually, traumatic stress disorder is a situation that its occurrence during wartime has been identified. Fifth edition of

Diagnostic and Statistical Manual of Mental Disorders (DSM) defines PTSD as 'series of exclusive symbols which emerge while encountering extremely intensive teratogen'. The encountering could be observing or attending in horrible crime scene, or could be hearing; however, patient responds to this horrible experience with fear, stress and desperation. The symptoms of incident experience should last one month leastwise and must have remarkable impacts on different aspects of patient's life, such as occupational and family position. All of the above component and their representations develop PTSD in warriors which could be treated by virtual reality. Combat-related PTSD might happen in a moment, but would have problematic consequences for patient lifelong. In Mental health, the term 'shock' or 'psychological trauma' encompass wide range of stressful experiences which are beyond the usual personal experiences and create wider level of fear and danger prorate; this level of fear is beyond the capacity of person for encountering its stressful complications and infestation of negative scenes of incident is one of indicators which identified in this study in visual, auditory and structural component' analyzes of holy defense movies.

In fact, incident is an occurrence beyond the usual life events which develop significant pathological symptoms in patients and includes war scene experiences, bombardments, observing own injuries, observing other person's violent death, war, cancer, threaten with death, sever injuries or physical threats toward own or other persons. As reported by Mirzaei et al. (11) and also Ahmadina, Hatami and Zaharakar (12), combat-related PTSD is prevalent in military personnel who attended in forefronts of holy defense. Personal responds to these traumatic experiences could result in diagnostic criteria of PTSD based on 5th edition of Diagnostic and Statistical Manual of Mental Disorders.

Conclusion

Based on the results, different visual, auditory and structural components can impact on stress disorder in warriors.

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