

Post-traumatic Stress Disorders and Perceived Social Support in Patients with Burn Injury; A Study of Pak Italian Modern Burn Center Multan

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Abstract

Objective: The purpose of this research was to explore the pervasiveness of PTSD and the level of social support experienced by patients in who had suffered burn injuries.

Methodology: This cross-sectional research was conducted at Pak Italian Modern Burn Center Mutlan. Eighty burn injury patients were questioned using a specialised questionnaire that contained demographic questions as well as those from the Impact of Events Scale-Revised (IES-R) and the Multidimensional Scale of Perceived Social Support (MSPSS). Hundred people were included in the analysis; 70 were women and 30 were men. Many subjects reported high levels of ego resilience, high levels of perceived social support from friends and high level of PTSD scores. No noteworthy disparity found in the percentages of participants who described high levels of social support, total social support, or symptoms of arousal.

Results: Our results demonstrate a significant prevalence of PTSD symptoms and low levels of social support among the patients we studied who had sustained burn injuries. When these things occur, the patient's physical injury may worsen, which in turn slows down their mental and physical recovery.

Conclusion: We found that PTSD symptoms were common and that social support was low. The majority of patients reported substance abuse, and several also spoke of marital conflict and suicidal thoughts. The patient's physical and psychological recovery are both slowed by these variables, which compound the difficulties already presented by the injury itself. As a result, a high standard of clinical, psychological, and social care for burn victims necessitates a multidisciplinary approach to their therapeutic management.

Keywords: Burn injuries, social support, post-traumatic stress disorder

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Introduction

Burns are physically manifested as wounds to the skin and underlying tissues from contact with combustible or unstable materials, but they also have psychological and social consequences.¹ Annually, an estimated 265,000 people lose their lives due to burns.² Data on the mental health effects of burn injuries are especially rare in underdeveloped countries, despite the well-established link between burn harm and death rate and morbidity rates.

The mortality, physical and mental health problems with

burn injuries are more common in the poor world than in the developed world. Stove burns, domestic violence, and unintentional burns have all been on the rise in recent years in Pakistan. In Pakistan, burn injuries are commonly attributed to accidents and family conflicts.³ These behaviours not only endanger society as a whole, but they also cause individuals emotional distress due to diminished self-worth, an unflattering perception of their physical appearance, and the burden of stigma.^{4,5} These causes also contribute to the onset of psychological disorders in these people. Burn patients have been found to have a significantly higher prevalence of psychological disorders such as depression, sleep

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problems, sexual dysfunction, marital problems, anxiety, drug dependence and PTSD.⁴⁻⁶

Twenty percent of people who have suffered serious burns may develop PTSD later in life, according to studies. Nightmares, unsettling thoughts, anguish, avoiding situations, poor sleep, and flashbacks are all examples of these disturbing symptoms.⁸ According to research by Waqas et al.⁹, 69 percent of burn patients suffer from post-traumatic stress disorder. Severe scarring due to burn, female gender, importance of burn area of the body, depressed behaviours, low level of resilience, and lack of social support have all been linked to increased risk and severity of post-traumatic stress disorder.⁹ People who receive emotional support and palliation have lower chances to suffer from PTSD.⁹

Researchers have found that having social support is a significant stress buffer for burn patients, which speeds up their recovery and reduces the length of time they need to spend in the resuscitation and post-traumatic recovery phases.¹⁰ This highlights the need for a more holistic approach to caring for burn victims, one that includes the patients' loved ones as well as the focus on wound care.³ These patients report low levels of social support in Pakistan¹⁰, which is likely owing to a lack of knowledge about their condition and the lack of opportunities for adequate education, counselling, and psychosocial interventions. Surprisingly, the lack of social support has a molecular impact, causing a significant drop in the body's level of interleukins that are critical for healing in burn victims.¹¹

The lack of information on the prevalence of PTSD and the low levels of social support in Pakistan prompted this investigation. The study's goals were to shed light on how prevalent PTSD is among burn injury patients in PIBC, and how different types of social support play a role in their recovery.

Material and Methods

The data for this cross-sectional study was gathered from Pak-Italian Modern Burn Center Multan. The convenience sampling technique was used in this cross sectional study. The sample of the study was consisted of 100 burn patients, from which 30 were males and 70 were female burn patients. Each participant received a briefing on the goals of the study and they were assured the confidentiality, and were given assurances that no

information identifying them as a person would be shared.

Three interviewers conducted the interviews with the participants in Urdu using a specialized questionnaire. Items from the Urdu versions of the Impact of Events-Revised Scale (IES-R) and the Multidimensional Scale of Perceived Social Support were included in the instrument with standard demographic questions (MSPSS). The Urdu version of the Multidimensional Support Perceptions Scale (MSPSS).¹² Among females, this version has been confirmed to be authentic and credible.¹² It is a 12 items 7 point Likert scale. It has high reliability and validity in Pakistani population.¹² By adding the scores for each item, we get a total score from 12 to 84, with higher scores indicating more social support.¹² The scale also breaks down into friend, family, and partner scores.¹²

In Pakistan, the IES-R translated into Urdu has demonstrated high levels of reliability and construct validity. It has 22 questions that can be used to measure intrusion, avoidance, and hyperarousal. Its scores range is 0-88 with the 33 cut-off score.^{14,15}

SPSS version 23 was used for the analysis of all data. For both quantitative and qualitative variables, descriptive statistics were calculated. Deviations in the prevalence of PTSD symptom and ratings of social support were analysed using the chi-squared test of proportions. Correlations between PTSD severity and individual subscales of the MSPSS were analysed using Pearson's coefficient. Average scores of variables were compared across groups, and a t-test for independent samples was used to establish the statistical significance.

Results

Eighty people were included in the analysis; 70 were women (70.0%) and 30 were men (30.0%). 70% of the participants were married. The vast majority were Muslims (96%), had some level of education (73%), and lived in an urban areas (83%). Table I

Seven people (8.60%) said they had suffered additional significant traumas, such as the death of family member or experience to a natural disaster. The percentage of respondents who said they had encountered relationship issues or domestic abuse was low (n = 5; 6.2%; 2; 2.5%). Three (3.7% of the sample) reported having suicidal thoughts; nine (11.10% of the sample)

had burns to their faces; and seventy-six (93.8%) had burns to other parts of their bodies.

Table I: Demographic Information of the Respondents

Variable	Category	N	%
Gender	Male	30	30.0
	Female	70	70.0
Marital status	Single	20	20.0
	Married	70	70.0
	Divorced	7	7.0
	Separated	3	3.0
Monthly	Low	65	65.0
	High	35	35.0
Religion	Islam	96	96.0
	Other	4	4.0
Education	Illiterate	27	27.0
	Literate	73	73.0
Residence	Rural	17	17.0
	Urban	83	83.0

Overall, participants' averaged IES-R scores were 38.61. (11.27). The avoidance scale averaged 1.75 (0.54), the intrusion scale 1.78 (0.53), and the hyperarousal scale 1.73 (0.58). The average overall score on the MSPSS scale was 4.14 (0.56). The analysis of the subscales revealed a mean score of 4.06 (0.56) for perceived social support from partners, 4.14 (0.64) from families, and 4.22 (0.61) from friends.(Table II)

Overall, 64% of participants were classified as having PTSD symptoms, with avoidance at 67%, intrusion at 65.0%, and hyperarousal at 55%. As measured by the Multidimensional Self-Reporting Scale (MSPSS), 48.8% of respondents said they have sufficient social support from their immediate family, 73.82% from their extended family and friends, and 46.2 percent from their romantic partners.

Those who reported higher degrees of ego resilience, social support from friends, and avoidance and intrusive symptoms were more likely to score higher on the chi-squared test. In terms of reported social support from romantic partners or family members, overall social support, or hyperaroused symptoms, there were no statistically significant differences between individuals who scored high and low

Table II: Frequency Percentage and chi-square of the PTSD

Variable	Category	N	%	Chi squared
Significant other	<4.00	53	53.0	43.00 ⁴
	+4.01	47	47.0	
Family	<4.25	61	61.0	49.00 ⁴
	+4.26	39	39.0	
Friends	<3.75	21	21.0	21.00 ¹
	+3.76	79	79.0	
Social support	<4.25	51	51.0	41.00 ⁴
	+4.26	49	49.0	
Ego resilience	<2.64	24	24.0	19.00 ¹
	+2.65	76	76.0	
Avoidance	<1.38	33	33.0	54.00 ²
	+1.39	67	67.0	
Intrusion	<1.50	35	35.0	52.00 ²
	+1.51	65	65.0	
Hyper-arousal	<1.67	55	55.0	36.00 ⁴
	+1.68	45	45.0	
PTSD	<33.00	36	36.0	51.00 ³
	+34.00	64	64.0	

¹ denotes P < 0.001, ² denotes P < 0.01, ³ denotes P < 0.05, and ⁴ denotes

Just one person (1.3% of the total) mentioned having a mental health diagnosis and attending both individual and group therapy sessions. Twenty-four people admitted to taking illegal substances, with the most common being tobacco (22.5%), followed by sleeping medications (3.75%), antidepressants (2.5%), and cocaine (1.3%). Peer pressure was cited as a contributing factor to drug dependence by (n = 18, 22.5%), along with depression and stress (n = 1, 1.3% each). Only 5.25 percent of the people involved in this study wanted to stop using drugs or alcohol.

According to t-tests on independent samples, people with higher incomes and more rural upbringings reported greater social support and fewer PTSD symptoms, respectively. There were no significant variations in PTSD or social support ratings between male and female participants, or between participants of different religious affiliations or educational attainment (Table III).

Discussion

Patients in Lahore, Pakistan, who had burn injuries were found to have a high prevalence of PTSD and low social support. Many patients mentioned that they abused drugs and had little social support; some mentioned marital problems and suicidal thoughts.

Table III: Group differences of respondents in Variables							
Variable	Category	PTSD		t-statistic	Social support		t-statistic
		Mean	SD		Mean	SD	
Gender	Male	37.08	11.57	-0.79*	4.21	0.37	0.69*
	Female	39.27	11.18		4.11	0.63	
Marital Status	Single	38.79	13.91	0.78*	4.04	0.93	0.56*
	Other	38.56	10.44		4.17	0.39	
Income	Low	39.00	13.29	0.79*	3.96	0.76	-2.68 ¹
	High	38.30	9.44		4.29	0.25	
Ethnicity	Punjabi	36.89	13.12	-1.24*	4.15	0.65	0.07*
	Other	40.09	9.29		4.14	0.48	
Religion	Islam	38.57	11.42	-1.16*	4.15	0.57	0.62*
	Other	39.67	7.77		3.94	0.32	
Education	Illiterate	36.64	12.99	-0.97*	4.04	0.50	-0.98*
	Literate	39.36	10.57		4.18	0.58	
Residence	Rural	30.21	12.48	-3.25 ¹	4.13	1.00	-0.05*
	Urban	40.39	10.23		4.14	0.43	

Hyperarousal is the least reported symptom of PTSD, with avoidance and intrusion being the most common. These findings corroborate those of another study [20] on the incidence of PTSD among Gaza's medical staff following the Israeli attacks. Intrusion symptoms include the sudden resurfacing of traumatic memories (flashbacks), which might trigger the same feelings as the original damage.²⁰ The trauma leads towards the presence of social avoidance and emotional insensitivity, anger and grief.²¹ Sleeplessness, angry outbursts, anxiety, panic attacks, self-destructive conduct, and shame and remorse are all indicators of hyperarousal.²²

Most respondents with burn injuries also reported having a drug addiction. Higher incidences of post-traumatic stress disorder (PTSD) are also linked to widespread substance abuse.¹⁹ In their meta-analysis, Giannoni-Pastor et al.¹⁹ found a moderate to weak correlation between PTSD and alcohol and drug abuse. Therefore, drug abuse exacerbates the difficulties these patients already face as a result of their psychological harm and increases their risk for developing psychiatric co-occurring disorders.

Among Pakistani burn patients in this study, social support from peers was more prevalent than support from family and close relationships. The most significant social component for burn victims, according to a prior Pakistani study, was family structure.¹⁰ An intricate combination of social, psychological, and biological factors affects the strength of social support networks for burn victims. According to Waqas et al, male gender,

Punjabi ethnicity, higher levels of education, a larger burn surface area, aesthetic surgery, and psychological toughness are all associated with greater social support among Pakistani patients with burn injuries.¹⁰

According to our findings, higher incomes are linked to higher levels of social support. Multiple reasons may account for this finding; for instance, patients from higher socioeconomic groups may have easier access to burn management programmes, mental health services, and resources to capitalise on strong social support networks.¹⁰ In addition, these communities will benefit from increased social support from family and friends and an enhanced sense of well-being if they are able to seek aesthetic surgery treatments thanks to improved access to healthcare.¹⁰

The study has certain weaknesses, but it also has some strengths. The study's primary contribution is that it fills in some of the gaps in knowledge on burn injuries and post-traumatic stress disorder (PTSD) in Pakistan. However, the results should not be extrapolated to the overall population of Pakistan due to the study's small sample size and the fact that it only looked at patients from a single city in the country. Due to the limited number of participants, statistical tests for differences between groups could not be conducted. This study's cross-sectional design also precludes drawing any conclusions about cause and effect.

However, future epidemiological research and psychosocial interventions targeting the mental health of individuals with burn injuries can benefit from the insights provided by this study.

Conclusion

In our sample of Pakistani patients with burn injuries, we found that PTSD symptoms were common and that social support was low. The majority of patients reported substance abuse, and several also spoke of marital conflict and suicidal thoughts. The patient's physical and psychological recovery are both slowed by these variables, which compound the difficulties already presented by the injury itself. As a result, a high standard of clinical, psychological, and social care for burn victims necessitates a multidisciplinary approach to their therapeutic management.

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