

Impact of Facial Burn Injury on Self Esteem of Burn Patients: A Hospital Based Study From Karachi

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ABSTRACT

Objective: The objective of this study will be to assess the self-esteem and its association with various demographic factors among patients with facial burn injury in Karachi.

Materials and Methods: This cross sectional study was conducted among burn patients with facial injury. 100 patients were selected through simple random sampling from burn unit of two tertiary care hospitals. Data was collected through interview technique by using State-Self Esteem Scale. Data was analyzed through SPSS version 17.

Results: The mean of overall score of State of Self-esteem Scale was found to be 56.94. Score for sub-components was found to be 20.42, 17.18 and 19.34 for Performance, Social and Appearance respectively. Mean of overall score and sub-components was dichotomized into two groups as above average and below average. Of all participants 66% have below average overall score while 34% have above average. Similarly for sub-components 52%, 73% and 40% have below average while 48%, 27% and 60% have above average score in Performance, Social and Appearance Self-Esteem respectively. Significant difference in mean of overall score and score of sub-components was found for gender, occupational status, nature of injury, reason of burn and injury sustained at, however all age groups also showed significant difference for overall and sub-component score except performance self-esteem. Respondents between the age brackets of 15-25 years and 46-55 years presented better scores for self-esteem in all three sub-components whereas the respondents between the age brackets of 26-35 years and 36-45 years had more below average scores. Individuals with burn injuries resulting from an accident exhibited lower self-esteem as compared to those who were injured incidentally.

Conclusion: The overall score of State of Self-esteem Scale of burn victims with facial injury was found to be low with 66% of subjects presenting below average scores as compared to 34% with above average scores. There is a significant association between facial burns and lower self-esteem at p-value 0.001.

Key words: Burn victims, facial burns, self-esteem.

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INTRODUCTION

Burn injuries rank as the fourth most frequent traumatic injury as per reported by WHO (World Health Organization) Global Diseases Burden Database¹. Burn injuries are defined as an unforeseen accident or injury caused either by heat, electricity, chemicals, light, radiation or fraction which may exert both physical and psychological impact^{1,2}. Statistics showed that approximately 186 out of 10,000 individuals belonging to low and middle income countries of the world suffer from burn injuries every year¹.

The burn injury can prove to be a traumatic experience for the victim from both physical and psychological perspective. Usually ill health, abnormal appearance and social functioning makes it difficult for the patient to have social affiliations and interactions². The trauma is pronounced if the injuries are inflicted on the face of the victim because face marks a person's identity and any change in its appearance has a deep psychological and social impact³. Persons with vast burn injuries suffer from an upsetting experience that affects both their normal thinking behavior and lifestyle. The burn victim is stigmatized to an extent that they lose the capacity to appreciate the quality of life and self-appraisal⁴.

The impaired body image and consequent low quality of life results in low self-esteem⁵. Self-esteem is the integral component of self-concept and worth of self and is determinant of a person's positive or negative attitude towards various institutes of life^{6,7}. An unstable

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person may face severe social challenges owing to the disturbance created by low self-esteem after a physical injury. The burn victim is affected emotionally as well leading to one's poor self-appraisal. This emotional devastation is the ultimate consequence of the physical injury the victim has gone through⁸. The degree of damage done by burn injuries mainly affects the psychological well-being of the person especially if it involves the facial region. Depending upon the nature and severity of burns, such patients would require both therapeutic and emotional support to deal with the pain, scarring and loss of body parts. Such trauma challenges their functional, emotional and social well-being resulting in a disturbed mental state⁹. Facial deformity causes more distress than injury to any other part of body because it is considered as an impediment from social and cultural aspects and also because they tarnish a person's identity both in appearance and in person¹⁰. Victims of burn injuries may present with varied psychological symptoms; from mild ones including fear, grief, distress, worrying and low or no self-confidence, to severe ones like depression, post traumatic stress disorder, anxiety and delirium. Burn victims with facial disfigurement most commonly complain to having problems in regular social interactions¹¹. They fear being threatened by others, are conscious of their physical appearance and what others might think of them or their injuries resulting in social anxiety and low self-confidence. As per a study conducted among burn victims, it was found that disfigured females show lower self-esteem significantly than males with disfigurement. Individuals with low self-esteem were found to spend twice as many days in bed and avoid routine social interactions than those with moderate or high self-esteem¹².

The aim of this study was to assess the impact of burn injury on the self-esteem of burn patients and its association with various demographic factors among patients with facial burn injury in Karachi. It is expected that this research would help evaluate the extent of self-esteem in patients with burn injuries and determine how they cope up with their personal and professional lives. The findings from this study may be used as a parameter for patients who are experiencing the same situations at acute stage. Moreover, the results of this study may assist in designing counteractive counseling techniques and procedures for health care practitioners dealing with burn patients. Such findings are also useful for patients at chronic stages of burn injuries requiring rehabilitation services.

MATERIALS & METHODS

Data for this cross sectional study was collected from two tertiary care hospitals of Karachi in 2013. Both the hospitals were selected by convenience and burn

patients were taken from the burn units of these hospitals. Duration of the study was six months and during that time total 100 patients were recruited through non probability consecutive sampling technique. Prior to data collection written permission and ethical approval was taken from the hospitals. Respondents selected were from both genders lying in the age bracket of 15-55 years and above. The selection criteria included patients presenting burn injuries covering 25% or greater body surface area (TBSA) involving face and neck with time lapse of 9 months to 3 years from the onset.

A questionnaire comprising of 20 item Linkert State Self – Esteem Scale was used to collect data⁵. The Items 2, 4, 5, 7, 8, 10, 13, 15, 16, 17, 18, 19, 20 of the questionnaire are reverse-scored. The items 1, 4, 5, 9, 14, 18, and 19 represent the Performance Self-esteem components, items: 2, 8, 10, 13, 15, 17, 20 represent the Social Self-esteem components and items 3, 6, 7, 11, 12, and 16 represent the Appearance Self-esteem components. Total score was given out of 100. The internal consistency of the State Self-Esteem scale for the sample was calculated using Cronbach's alpha and was found to be 0.98.

Hospital OPD records were used as sampling frame to select hospital respondents after taking due permission from the administration. An informed Consent was taken from the respondents before taking their interviews to fill out the questionnaire. Ethical considerations were undertaken and the respondents were explained the course of the data collection procedure so that their reservations can be addressed.

Data was analyzed using SPSS Version 17. All qualitative variables were presented as frequency and percentages and all quantitative variables as mean and standard deviation. The difference of the means of self-esteem of men and women is determined using the T-Test. The impact of age on self-esteem was evaluated using Regression analysis whereas the various contributing factors impacting self-esteem were determined using Factor loading.

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008. Informed consent was obtained from all patients for being included in the study.

RESULTS

Total 100 individuals participated in this study so all the results are presented in terms of percentages only. Out of 100, 53% were males and 47 % were females. Among them 7% were in age group of 15-25 years,

59% in 26-35 years, 30% in 36-45 years and 4% in 46-55 years. Regarding education status of study individuals, 5% were not formally educated, 12% were primary school passed, 15% were secondary school passed, 64% completed their high school (intermediate) and 4% had education of graduation or above. In our study 38% individuals were unemployed, 37% were employed, 4% were self employed or have own business and 21% were house wives. Study participants were asked about their family members and 77% had 5 to 7 family members, 15% had 8 to 10 and 8% had greater than 10 family members. Similarly they were also inquired about their own and family monthly income and for this 39% stated less than 10,000PKR, 54% stated between 10,000 to 25,000PKR and 7% said more than 25,000PKR. Almost all, 98% were Muslims while remaining 2% comprised of Christians and Hindus. Regarding marital status, 95% were married, 2% were single and 3% were never married.

Among all of our study individuals information related to burn injury was inquired under various headings. Regarding nature of injury, 5% had house fire, 22% had chemical or acid injury, 64% had industrial injury and 9% had electrical injury. Reason of burn was accidental as stated by 79% individuals and incidental among 21%. In 67% of the study individuals, injury sustained at workplace while in 33% at house.

The overall score of State of Self-esteem Scale was tabulated and mean score is presented in Table 1. Score for sub-components was also calculated and their information is also given in Table 1.

Table 1: Descriptive Statistics of State Self-Esteem Scale and its Components

	Total Score	Performance Self Esteem	Social Self Esteem	Appearance Self Esteem
Mean	56.94	20.42	17.18	19.34
Standard Deviation	7.38	1.69	8.10	2.30
Minimum	47	17	9	14
Maximum	72	24	33	23

Overall score of State of Self-esteem and its sub-components was tabulated with respect to various demographic variables as shown in Table 2. Significant difference in mean of overall score and score of sub-components was found for gender, occupational status, nature of injury, reason of burn and injury sustained at, however all age groups also showed significant difference for overall and sub-component score accept performance self-esteem (Table 2).

Mean of overall score and sub-components was calculated and on the basis of these mean data was dichotomized into two groups as above average and below average. Of all participants 66% have below

average overall score while 34% have above average. Similarly for sub-components 52%, 73% and 40% have below average while 48%, 27% and 60% have above average score in Performance, Social and Appearance Self Esteem respectively. Association of various demographic and burn injury related variables with Overall and sub-components Self Esteem Score is presented in Table 3.

DISCUSSION

Self-esteem is an important factor of self-concept. It specifies a person's self-evaluation for example how worthy he/she considers himself. The purpose of this study was to assess the self-esteem of burn victims with facial burns and to determine its impact on their self-esteem.

Our study revealed that in general more burn victims with facial injuries presented below average scores (66%) as compared to above average scores (34%) with a p-value of 0.001. It was a surprising finding that more females has above average scores (30 out of 47) than males (4 out of 53). However, the ratio of females (28 out of 47) with low scores in Appearance Self-esteem was found to be higher as compared to males (12 out of 53). This is in coherence with the reported finding by Andreasen et al regarding females having a more negative body image than males following severe burns¹³. The irrational pressure of the society on women to maintain a desired body image may be one of the reasons for the negative trend observed in women. On the other hand, the same society perceives it as a sign of weakness for men to worry about their image resulting in lesser men expressing their honest views¹⁴.

Poor self-esteem leads to a series of descending attitudes towards one's self; low self-appreciation creating self-defeating conduct, psychiatric helplessness, abnormal social interactions or risk behaviors¹⁵. Our study showed that respondents between the age brackets of 15-25 years and 46-55 years presented better scores for self-esteem in all three aspects of performance, social and self-image whereas the respondents between the age brackets of 26-35 years and 36-45 years had more below average scores. This finding further confirms to several cross-sectional studies that reveal that as per status quo, middle-aged adults are observed to have higher self-esteem as compared to young^{16,17}. This shows that younger and older adults are better at coping with physical and mental trauma resultant from burns as compared to middle aged group.

One thought-provoking observation was that individuals with burn injuries resulting from an accident exhibited

Table 2: State of Self-Esteem Score with respect to Demographic Variables and Burn Injury related Factors

Demographic Characteristics		Overall Score (mean + std. dev)	Sub-components (mean + std. dev)		
			Performance Self Esteem	Social Self Esteem	Appearance Self Esteem
Gender	Male (n=53)	52.6 + 2.5	19.8+ 1.2	12.3 +1.5	20.4 + 1.2
	Female(n=47)	61.8 + 7.9	21.0 + 1.9	22.6 + 8.9	18.1 + 2.6
	P- value	0.001	0.001	0.001	0.001
Age Groups	15-25 yrs (n=7)	67.3 + 2.1	21.4 + 1.1	29.5 + 1.7	16.3 + 0.7
	26-35 yrs (n=59)	58.1 + 7.9	20.5 + 1.8	18.7 + 8.6	18.9 + 2.4
	36-45 yrs (n=30)	52.6 + 3.0	20.1 + 1.4	11.9 + 1.6	20.6 + 1.2
	46-55 yrs (n=4)	54.4 + 3.0	20.3 + 1.3	13.3 + 2.1	21.0 + 0.01
	P- value	0.001	0.269	0.001	0.001
Education Level	Not Educated (n=5)	57.0 + 5.7	20.8 + 1.3	16.0 + 7.2	20.2 + 2.5
	Primary (n=12)	60.7 + 8.1	20.7 + 1.5	21.8 + 9.4	18.3 + 2.6
	Secondary (n=15)	58.3 + 8.5	20.7 + 1.8	19.1 + 8.9	18.6 + 1.9
	Intermediate (n=64)	56.1 + 7.1	20.3 + 1.8	16.3 + 7.7	19.6 + 2.3
	Graduation or above (n=4)	53.0 + 2.6	20.0 + 1.6	12.5 + 1.0	20.5 + 1.0
	P- value	0.230	0.861	0.14	0.187
Occupation Status	Unemployed(n=38)	55.1 + 6.4	20.0 + 1.4	15.1 + 6.9	19.9 + 1.8
	Employed(n=37)	53.1 + 2.7	19.9 + 1.4	12.5 + 1.5	20.6 + 1.3
	Self-employed (n=4)	51.3 + 2.9	19.3 + 0.9	12.0 + 2.4	20.0 + 0.8
	House wife(n=21)	68.1 + 1.8	22.1 + 1.4	30.0 + 1.6	15.9 + 0.8
	P- value	0.001	0.001	0.001	0.001
Marital Status	Single (n=2)	53.0 + 1.4	20.5 + 0.7	12.5 + 2.1	20.0 + 0.01
	Married(n=95)	56.8 + 7.3	20.4 + 1.7	17.0 + 8.0	19.4 + 2.3
	Separated/ Divorced(n= 3)	63.7 + 8.5	21.7 + 1.5	25.3 + 9.3	16.7 + 2.5
	P – value	0.215	0.433	0.154	0.116
Nature of Injury	House Fire (n=5)	68.2 + 2.0	22.0 + 2.1	30.2 + 2.2	16.0 + 1.0
	Chemical (acid) (n=22)	68.3 + 1.8	22.1 + 1.1	30.2 + 1.6	16.0 + 0.9
	Industrial (n=64)	52.6 + 2.7	19.7 + 1.3	12.2 + 1.4	20.6 + 1.1
	Electrical (n= 9)	53.2 + 2.1	20.2 + 1.4	13.0 + 2.3	20.0 + 1.2
	P- value	0.001	0.001	0.001	0.001
Reason of Burn	Accidental (n=79)	54.5 + 5.6	20.1 + 1.5	14.3 + 5.9	20.0 + 1.8
	Incidental (n= 21)	66.0 + 6.07	21.6 + 1.6	27.6 + 6.5	16.7 + 1.7
	P- value	0.001	0.001	0.001	0.001
Injury Sustained at	Work place (n=67)	52.8 + 2.6	19.8 + 1.3	12.5 + 1.5	20.5 + 1.2
	House (n= 33)	65.3 + 6.7	21.7 + 1.6	26.7 + 7.6	16.9 + 2.2
	P- value	0.001	0.001	0.001	0.001

lower self-esteem as compared to those who were injured incidentally. This could be explained as victims of accidental burns were more likely to blame themselves for the event whereas those with incidental burns would attribute the cause to personal enmity. This can be related to a study conducted among patients with trauma-induced facial injury that showed such individuals to suffer from psychological distress because such injuries are often perceived to be random, unnecessary and unfair³. The victim's aggression and

blaming towards one's self or others and idealizing one's pre-injury self-image makes the recovery more difficult³. This emphasizes over the need of social support and counseling to buffer the psychological grief that the injuries cause¹⁸.

CONCLUSION

The overall score of State of Self-esteem Scale of burn victims with facial injury was found to be low with 66% of subjects presenting below average scores as

Table 3: Association of Demographic Variables with State Self Esteem Effect Scale Score Groups

Demographic Characteristics		Overall Score (%)		Sub-components (%)					
				Performance Self Esteem		Social Self Esteem		Appearance Self Esteem	
		Below Average (66)	After Average (66)	Below Average (52)	After Average (48)	Below Average (73)	After Average (27)	Below Average (40)	After Average (60)
Gender	Male (n=53)	49	4	36	17	53	0	12	41
	Female (n=47)	17	30	16	31	20	27	28	19
	P- value	0.001		0.001		0.001		0.001	
Age Groups	15-25 yrs (n=7)	0	7	2	5	0	7	7	0
	26-35 yrs (n=59)	37	22	28	31	39	20	28	31
	36-45 yrs (n=30)	26	4	19	11	30	0	5	25
	46-55 yrs (n=4)	3	1	3	1	4	0	0	4
	P- value	0.001		0.22		0.001		0.001	
Education Level	Not Educated (n=5)	4	1	2	3	4	1	1	4
	Primary (n=12)	6	6	5	7	6	6	7	5
	Secondary (n=15)	8	7	7	8	9	6	9	6
	Intermediate (n=64)	44	20	35	29	50	14	23	41
	Graduation or above (n=4)	4	0	3	1	4	0	0	4
	P- value	0.272		0.735		0.138		0.087	
Occupation Status	Unemployed (n=38)	29	9	23	15	32	6	10	28
	Employed (n=37)	33	4	23	14	37	0	8	29
	Self employed (n=4)	4	0	4	0	4	0	1	3
	House wife (n=21)	0	21	2	19	0	21	21	0
	P- value	0.001		0.001		0.001		0.001	
Marital Status	Single (n=2)	2	0	1	1	2	0	0	2
	Married (n=95)	63	32	50	45	70	25	37	58
	Separated/Divorced (n= 3)	1	2	1	2	1	2	3	0
	P - value	0.292		0.804		0.206		0.053	
Nature of Injury	House Fire (n=5)	0	5	1	4	0	5	5	0
	Chemical (acid) (n=22)	0	22	2	20	0	22	22	0
	Industrial (n=64)	58	6	45	19	64	0	10	54
	Electrical (n= 9)	8	1	4	5	9	0	3	6
	P- value	0.001		0.001		0.001		0.001	
Reason of Burn	Accidental (n=79)	63	16	48	31	70	9	22	57
	Incidental (n= 21)	3	18	4	17	3	18	18	3
	P- value	0.001		0.001		0.001		0.001	
Injury Sustained at	Work place (n=67)	60	7	45	22	67	0	12	55
	House (n= 33)	6	27	7	26	6	27	28	5
	P- value	0.001		0.001		0.001		0.001	

compared to 34% with above average scores. There is a significant association between facial burns and lower self-esteem at p-value 0.001.

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