

# Original Article

## Evaluation of Psychiatric Comorbidity in Burn Patients: A Clinical Study

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### ABSTRACT

**Background:** Data from the past literature shows that most of the burned patients who were clinically examined had associated psychiatric problems. Hence; the present study was planned to assess Psychiatric Comorbidity in Burn Patients. **Materials & methods:** The present investigation included assessment of Psychiatric Comorbidity in Burn Patients. A total of 100 burn patients were included in the present study. Interviewing of the patients was done by experienced psychiatrist for assessing the presence of absence of psychiatric comorbidity. All the results were summarized and analyzed by SPSS software. **Results:** Psychiatric comorbidity was present in 44 percent of the patients, among which, 25 percent were males while the remaining 19 percent were females. Anxiety and depression were the most commonly observed psychiatric comorbid condition in the present study, seen in 35 percent of the patients. **Conclusion:** Burn patients suffer significant psychiatric problems. Therefore; psychiatric treatment should be initiated as soon as possible for improving the quality of life in these patients.

**Key words:** Burn, Comorbidity, Psychiatry.

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### Introduction

Burn scars after dermal injury are cosmetically disfiguring and forced the scarred person to deal with an alteration in body image or appearance. Also the traumatic nature of the burn accident and the painful treatment induce psychopathological responses. Problems in mental area are more disabling than physical problems. Social problems include difficulties in sexual life and social interactions. Few studies have focused on psychiatric diagnostic examination of burn victims during their hospitalization, using specific clinical diagnostic criteria.<sup>1-3</sup> Most of the investigators presented either reports of cases diagnosed as suffering from posttraumatic stress disorder (PTSD) or samples of burn patients where the majority of them met the criteria for PTSD. Additionally, past emotional disturbances were also found to be linked with the prevalence of current major depression. Some investigators supported the view that most of the burned patients who were clinically examined had a preburn psychiatric diagnosis of depression.<sup>4-6</sup> Hence; the present study was planned to assess Psychiatric Comorbidity in Burn Patients.

### Materials & methods

The present investigation was conducted in the department of psychiatry of the medical institute and it included assessment of Psychiatric Comorbidity in Burn Patients. A total of 100 burn patients were included in the present study. Complete demographic details along with past medical and family history in all the patients were obtained. Inclusion criteria for the present study included:

- Patients with burns involving more than 20 percent of the total body surface area (TBSA),
- Patients with in full state of consciousness,
- Patients who gave informed consent,
- Patients in between the age group of 25 to 60 years
- Patients with thermal burn

Ethical approval was obtained from the institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol. Interviewing of the patients was done by experienced psychiatrist for assessing the presence of absence of psychiatric comorbidity. All the results were summarized and analyzed by SPSS software. Mann

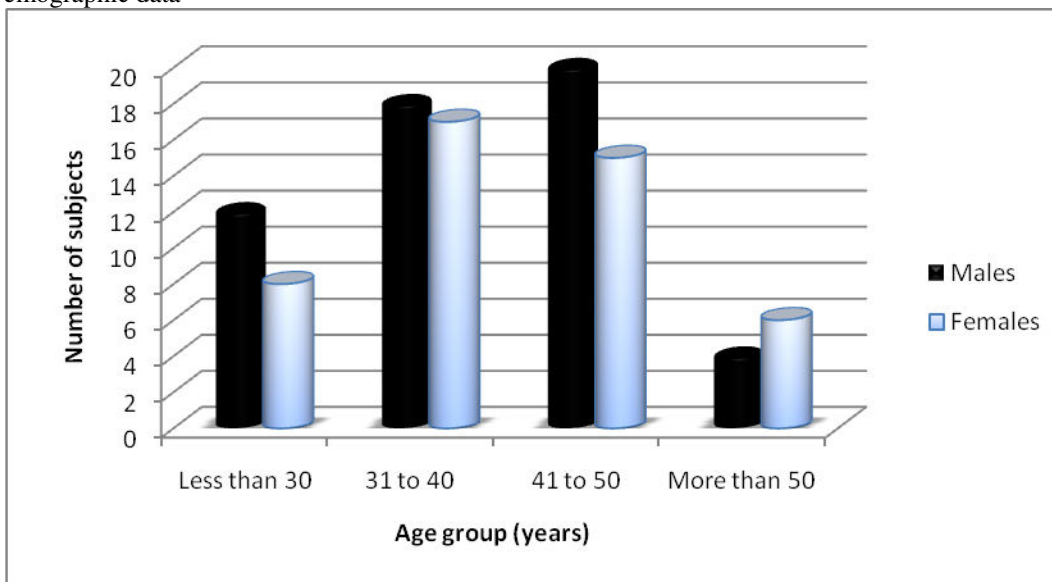
Whitney U test was used for assessment of level of significance.

**Results**

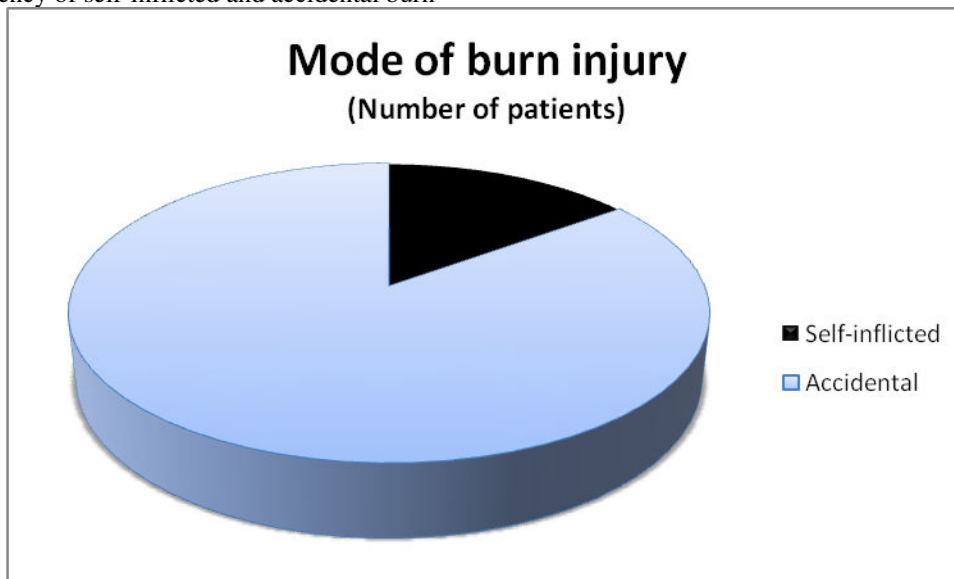
A total of 100 burn patients were included in the present study, among which 54 were males while remaining 46 were females. 20 patients were of less than 30 years of age, 35 patients were between 31 to 40 years of age and another 35 patients were between 41 to 50 years of age. 10 patients were of more than 50 years of age. In 15 patients, the burns were self-inflicted while in the remaining 85 patients, the

burns were accidental. In 65 patients, there was 20 to 40 percent burn, while in 33 patients, there was 41 to 60 % burn. Psychiatric comorbidity was present in 44 percent of the patients, among which, 25 percent were males while the remaining 19 percent were females. Anxiety and depression are the most commonly observed psychiatric comorbid condition in the present study, seen in 35 percent of the patients. Other psychiatric comorbid conditions seen in the present study were substance abuse, bipolar disorder and PTSD.

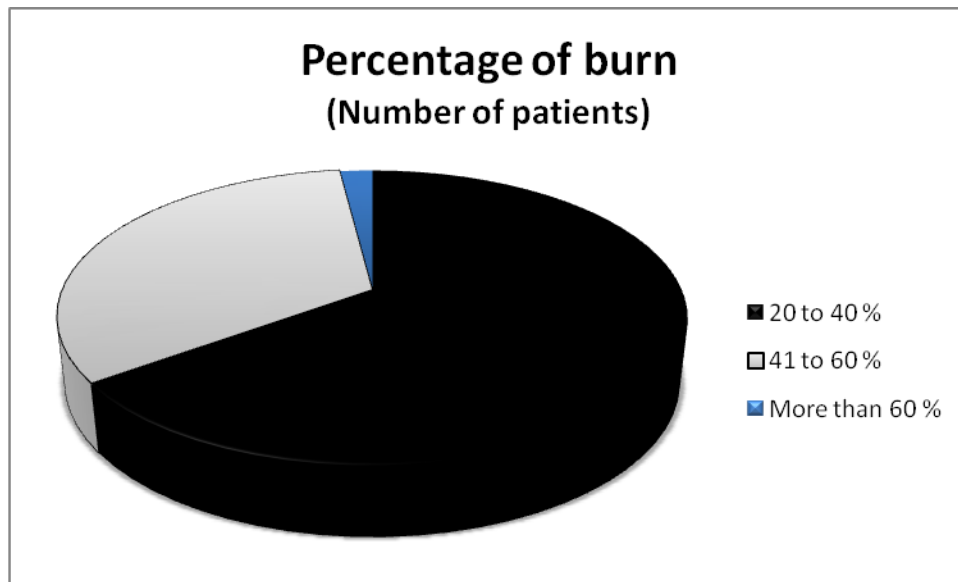
**Graph 1:** Demographic data



**Graph 2:** Frequency of self-inflicted and accidental burn



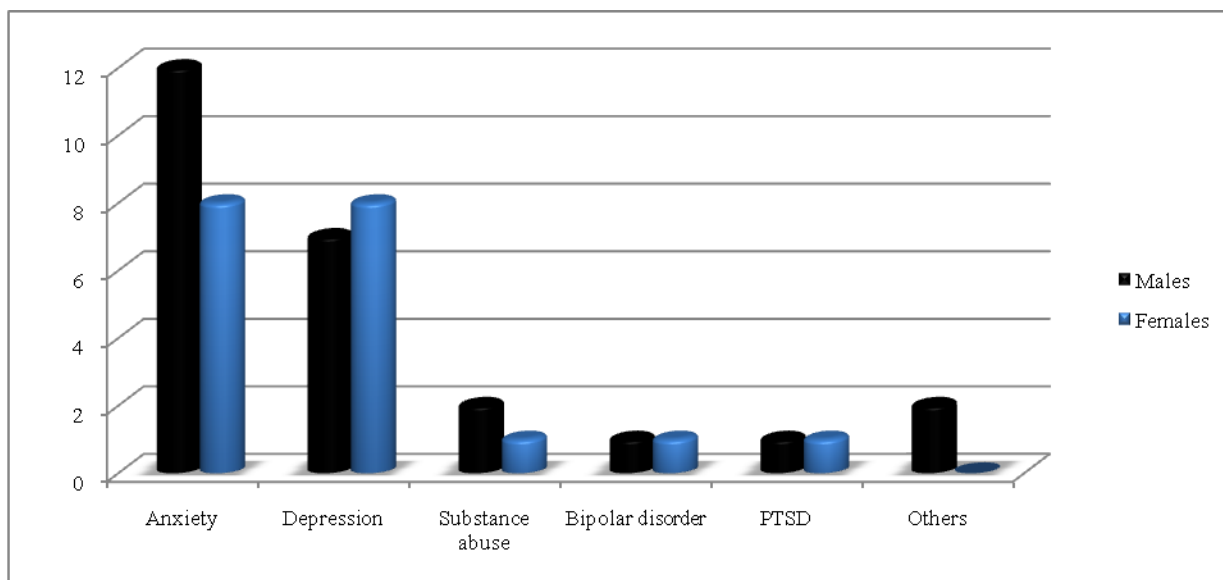
**Graph 3:** Distribution of patients according to the total body surface area (TBSA)



**Table 1:** Prevalence of psychiatric comorbidity among burn patients

Psychiatric comorbidity	Males	Females	Total
Anxiety	12	8	20
Depression	7	8	15
Substance abuse	2	1	3
Bipolar disorder	1	1	2
PTSD	1	1	2
Others	2	0	2
Total	25	19	44

**Graph4:** Prevalence of psychiatric comorbidity among burn patients



## Discussion

The literature on psychological disorders resulting from exposure to fire or burn injury is reviewed. Despite methodological difficulties and the possible changing patterns of psychological morbidity due to improvements in medical care, estimates indicate that at least 30% to 40% of burn injury patients will suffer from marked and persistent psychological disorders.<sup>7-8</sup> Hence; the present study was planned to assess Psychiatric Comorbidity in Burn Patients.

In the present study, a total of 100 burn patients were included in the present study, among which 54 were males while remaining 46 were females. 20 patients were of less than 30 years of age, 35 patients were between 31 to 40 years of age and another 35 patients were between 41 to 50 years of age. 10 patients were of more than 50 years of age. Madianos MG et al explored the prevalence of psychological and psychiatric disorders among burn survivors. The sample comprised all consecutive cases of adult burn patients in a 6-month period. Personal interviews were conducted by the administration of the Langner scale and the DSM-III-R Structured Clinical Interview. Twelve months later, 30 patients of the baseline sample were reexamined. Psychological impairment was found to be 45.5 and 40% at the baseline and follow-up assessments, respectively. The extent of burns was found to be associated with psychological impairment. The prevalence of psychiatric disorders (any DSM-III nosological entity) reached 46.6% at both baseline and follow-up examinations. Posttraumatic stress disorder was diagnosed in 17.8 and 20.0% of burn survivors at the baseline and the 12-month follow-up assessments, respectively. Logistic regression analysis revealed that face disfigurement was the only burn characteristic significantly associated with the presence of psychiatric morbidity. The results of the study suggested that the extent of burns is not so important when compared to the possibility of disfigurement from the point of risk of developing a psychiatric disorder.<sup>9</sup>

In the present study, in 15 patients, the burns were self-inflicted while in the remaining 85 patients, the burns were accidental. In 65 patients, there was 20 to 40 percent burn, while in 33 patients, there was 41 to 60 % burn. Ter Smitten MH et al examined the prevalence of DSM-IV Axis I disorders in burn patients 1-4 years after burn, using a standardized structured clinical interview and comparing findings with a representative general population sample. Ninety patients admitted to five burn centres were assessed with the 12-month Composite International Diagnostic Interview. Results were compared to an age and gender matched nation based norm group. Twelve-month prevalence for any DSM-IV study disorder was 39%. Prevalence for any after burn onset disorder was 28%. Most prevailing were major depression (10%), generalized anxiety disorder (10%), and PTSD (7%). The comorbidity-proportions for PTSD and generalized anxiety disorder were the highest. Fifty-seven percent of all burn onset disorders started within 1 year after the trauma and 21%

within the next year. Burn patients had significantly higher prevalence rates for DSM-IV disorders than people from the general population sample. Psychiatric morbidity among burn patients, 1-4 years after burn, is considerable and higher than what may be expected in the general population.<sup>10</sup>

In the present study, psychiatric comorbidity was present in 44 percent of the patients, among which, 25 percent were males while the remaining 19 percent were females. Anxiety and depression were the most commonly observed psychiatric comorbid condition in the present study, seen in 35 percent of the patients. Other psychiatric comorbid conditions seen in the present study were substance abuse, bipolar disorder and PTSD. Dyster-Aas J et al studied psychiatric history in a population-based burn sample and its impact on symptomatology of depression and posttraumatic stress disorder (PTSD) at a 12-month follow-up. Seventy-three consecutive patients admitted to the Uppsala Burn Unit were assessed with the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition for psychiatric disorders, of whom 64 were also assessed after 12 months. Forty-eight patients (66%) presented with at least one lifetime psychiatric diagnosis; major depression (41%), alcohol abuse or dependence (32%), simple phobia (16%), and panic disorder (16%) were most prevalent. At 12-months postburn, 10 patients (16%) met criteria for major depression, 6 (9%) for PTSD, and 11 (17%) for subsyndromal PTSD. Patients with lifetime anxiety disorder and with lifetime psychiatric comorbidity were more likely to be depressed at 12 months, whereas those with lifetime affective disorder, substance use disorder and psychiatric comorbidity were more likely to have symptoms of PTSD. Two-thirds of burn survivors exhibit a history of lifetime psychiatric disorders. Those with a psychiatric history had a higher risk of postburn psychiatric problems.<sup>11</sup> Sveen J et al investigated whether there are different posttraumatic stress disorder (PTSD) symptom trajectories after burns. Ninety-five adults with burns were enrolled in a prospective study from in-hospital treatment until 12 months after burn. Symptoms of PTSD were assessed with the Impact of Event Scale-Revised and scores at 3, 6, and 12 months after the burn were used in a cluster analysis to detect trajectories. Four clusters were identified: (1) resilient, with low levels of PTSD symptoms that decreased over time; (2) recovery, with high levels of symptoms that gradually decreased; (3) delayed, with moderate symptoms that increased over time; and (4) chronic, with high levels of symptoms over time. The trajectories differed regarding several risk factors for PTSD including life events, premorbid psychiatric morbidity, personality traits, avoidant coping, in-hospital psychological symptoms, and social support. The resilient trajectory consistently had fewer of the risk factors and differed the most from the chronic trajectory. There are subgroups among patients with burns

that had different patterns of PTSD symptom development.<sup>12</sup>

### Conclusion

Under the light of above obtained data, the authors conclude that burn patients suffer significant psychiatric problems. Therefore; psychiatric treatment should be initiated as soon as possible for improving the quality of life in these patients. However; further studies are recommended.

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