

Original Research Article


# A cross sectional study of socio-demographic profile and acute stress disorder in suicidal burn patients

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	International Archives of Integrated Medicine, Vol. 6, Issue 7, July, 2019. Copy right © 2019, IAIM, All Rights Reserved. Available online at <a href="http://iaimjournal.com/">http://iaimjournal.com/</a>	
	ISSN: 2394-0026 (P)	ISSN: 2394-0034 (O)
	Received on: 23-05-2019	Accepted on: 21-06-2019
	Source of support: Nil	Conflict of interest: None declared.
<b>How to cite this article:</b> J. Mayurnath Reddy, CH. Siva Kumar. A cross sectional study of socio-demographic profile and acute stress disorder in suicidal burn patients. IAIM, 2019; 6(7): 17-27.		

## Abstract

**Background:** The experience of being burnt and the treatment that follows for the survivors are one of the most frightening and painful experience known to humanity. It carries a huge psychological burden on patients. Acute stress disorder which occurs in the first month and post-traumatic stress disorder that occurs after one month are more common after burns than other forms of injury.

**Aim and objectives:** To study socio demographic profile in suicidal attempters by burns, to access for acute stress reaction in those patients.

**Materials and methods:** A total of 60 cases of suicidal burns patients fulfilling criteria for study were taken. Semi -structured proforma for socio demographic and clinical variables were used. Becks suicidal intent scale and impact of event scale were administered to the patients. The data was analyzed using SPSS.

**Results:** There was high preponderance of female subjects in the study and mostly of the patients belonged to lower socio economic status in the study. Most of the subjects were either illiterates or having primary education and belongs to nuclear family. There was high percentage of marital disharmony and strained inter personal relationship in the subjects. Almost all were deep burns in the study and most common vehicle used was kerosene. Patient of high risk group had more risk of developing acute stress reaction and post-traumatic stress disorders than in medium risk group. High risk group had more scores on both intrusive and avoidance subscale of impact of event scale.

**Conclusion:** There was high preponderance of female subjects in the study. There was higher representation of lower socio economic status in the study. Most of the subjects were either illiterates or having primary education. Many of the subjects belonged to nuclear family. There was high percentage of marital disharmony and strained inter personal relationship in the subjects. Patient of

high risk group had more risk of developing acute stress reaction and post-traumatic stress disorders than in medium risk group. High risk group had more scores on both intrusive and avoidance subscale of impact of event scale.

## **Key words**

Suicide, Burns, Acute stress disorder, Impact of event scale.

## **Introduction**

The experience of being burnt and the treatment that follows for the survivors are one of the most frightening and painful experience known to humanity. It carries a huge psychological burden on patients as well as caretakers.

### **Psychological Effects of Burns**

In the acute phase symptoms of anxiety and depression are common. Acute stress disorder which occurs in the first month and post-traumatic stress disorder that occurs after one month are more common after burns than other forms of injury. Patients with these disorders typically have larger burns and more severe pain and express more guilt about the precipitating event. The severity of depression is correlated with a patient's level of resting pain and level of social support. Severe cognitive changes such as delirium and brief psychotic reactions also occur, usually as a result of infections, alcohol withdrawal, metabolic complications, or high doses of drugs. Patients may begin the grieving process as they become more aware of the impact of the burn injuries on their lives. The long term stage of recovery typically begins after discharge from hospital, when patients begin to reintegrate into society. The first year after hospitalization is a psychologically unique period of high distress. Severe burn injuries that result in amputations, neuropathies, and scarring can have an emotional and physical effect on patients. In addition to the high demands of rehabilitation, patients must deal with social stressors including family strains, return to work, sexual dysfunction, change in body image, and disruption in daily life. Many people continue to have vivid memories of the incident, causing distress. There is evidence that adjustment to burn injuries

improves over time independent of the injury size.

Burns are classified in to scalds, fat burns, flame injuries, electric burns, cold injuries, ionizing radiation and chemical injury based on the mechanism of injury. Flame injuries are commonly seen in burn patients. An approximate clinical guide in wide use for assessment of burns is the "rule of nines" which indicates body surface area burnt. As a rule, an adult with more than 20% of the body surface involved requires intra venous fluid replacement. The prognosis depends upon the percentage of body surface area burnt. Burns are classified in to superficial burns and deep burns based on the depth of the burns. Superficial burns are due to loss of epidermis or superficial dermis and Deep burns are due to loss of all adnexal structures.

### **Post-Traumatic Stress Disorder in burn patients**

PTSD occurs in a significant minority of patients who are burned. Estimates range from 21% to 43%. It is usually under diagnosed because most of them are discharged before one month and less severely injured may not be seen again, and thus formal diagnosis is not made. Nonetheless, many patients develop full syndrome of PTSD, and many more have symptoms in re-experiencing cluster even though they may not fit other criteria. Fauerbach and colleagues (1999) [1] found that the personality characteristics of neuroticism increases risk and high extroversion was protective. One study found that odd of developing PTSD increases with number of previous trauma, a history of simple phobia and a sense of loss of control. In contrast odds were decreased with a sense of control, alcohol consumption, and alcohol intoxication.

Treatment of PTSD in burn patients is similar to that of PTSD in other patients. It includes psychotherapeutic techniques and medication. Increasing the sense of control and alleviating pain in patients when they are being treated at burn centre also may prevent some symptoms of PTSD.

### **Epidemiological studies on suicidal burn patients**

Venkoba Rao (1989) [2] analyzed hundred female burns patient admitted at burns ward in government Rajaji hospital Madurai. He studied the frequency of suicide, homicide and accident in burn patients and assessed causes of suicide, and management problems of burns. The results showed that 47% were between 20-25 years of age and 13 were married less than a year. There was no statistical significant difference in respect to marital status and motherhood status. The nature of burns injury included 20% suicidal, 25% accidental, 3% homicidal and 2% unclassifiable. The rate of suicidal completers to attempters was 23:1, 16% of them had psychiatric illness, 15% had physical illness (mostly abdominal pain). Mortality rates were higher in suicidal group in comparison to accidental group (96%-25%). Among suicidal group 8 patients had earlier suicidal attempts though not by burn injury. Sixteen cases have family history of psychiatric illness, suicide, physical and burn injury.

Gupta RK (1988) [3] studied 180 cases of fatal burns during the period of one year at Kanpur between October 1985 and September 1986. They constituted 10.79% of the total medico legal deaths autopsied. Majority of the victims were young Hindu housewives burnt within 5 years of their marriage. The most common source of fire was cooking apparatus like Chula, coal fire, stove or cooking gas. About half of the burn cases were accidental and among the others who died in suspicious circumstances, i.e., burnt alive or forced to commit suicide by fire, Dowry and family quarrels and marital disharmony were the two important predisposing factors. Illiteracy, arranged and child marriages, joint family

structure, oedipal dominance of mother-in-laws, unemployment and economic dependence of the husband on the parents, near complete dependence of women on their husbands and in laws, and lack of social security. Male burn deaths were few and usually accidental.

Ambade VN (2006) [4] reviewed a series of 384 victims of burn deaths to determine the trends of burn deaths in Nagpur, an urban area in Central India. It was found that deaths due to burning accounted for 21.6% of the total medico legal deaths. Female (74.2%) predominance was seen in burning with male-female ratio equal to 1:2.9. Most of the victims of burn deaths were between 11-40 years with peak at 21-30 years (47.1%). Married (79.9%) outnumbered unmarried ones in burning. Accidental burning (75%) was the commonest manner of burn deaths followed by suicidal and homicidal burning. Kerosene was the main causative factor for burning with kerosene burner as the commonest causative agent. The kitchen (69.3%) was the commonest place of burning and clothes of the body, particularly the sari as the commonest vehicle of burns.

Pham TN (2003) [5] studied the predisposing factors for self-inflicted burns and to examine their impact on society. Records of 32 adult patients admitted for self-inflicted burns at their regional burn center between January 1996 and August 2001 were retrospectively reviewed. The mean burn size was 34 +/- 29% TBSA, with the majority of burns being the result of self-immolation using a flammable liquid. There was a slight male predominance (59%) and a significant mortality rate (25%). Ninety-one percent of patients had an active psychiatric diagnosis, with 47% having had a previous suicide attempt. Two thirds had a chronic stressor, such as a chronic medical illness and/or long-term disability.

James WA (2006) [6] studied ten patients with deliberate thermal injuries evaluated by a consultation psychiatry service over a 15-year period. Schizophrenia and major depression were

the most common diagnoses, and most patients had prior psychiatric illness. When compared to 1,864 people who attempted suicide by other means, the burn subjects were older, comprised a larger percentage of African Americans, and resembled those who had jumped from high places. Stresses encountered by recovering burn patients involved dependency, body image concerns, exacerbation of pre-existing depression, pain, flashbacks of the incident, and guilt intensified by their proximity to accidentally burned victims.

Laloe V (2002) [7] did 2-year prospective study and examined the epidemiology and mortality of 345 patients admitted with burn injuries at Sri Lanka. Sixty-four percent of all burns were accidental in nature and at least 25% were self-inflicted. The rest were due to assaults or had a doubtful cause. The median age was 22 years. Forty-one percent of the accidents were due to the fall of a homemade kerosene bottle lamp. The main cause was flames, followed by scalds. Females outnumbered males in all categories of burns except cases of assault, and suffered from a higher mortality. Self-inflicted burns were most common among women aged 20-29 years. The overall median total body surface area (TBSA) burned was 16%. Self-inflicted and 'doubtful' burns were much more extensive and more often fatal than accidental ones. The overall mortality rate was 27%.

Subramanyam (1996) [8] studied 175 burns patients treated between June 1993 and February 1994 at district hospital in western India. Males formed 43 per cent and females 57 per cent. The total burns 92 per cent of the burns occurred at home. 86.8 per cent of the patients belonged to low socioeconomic groups. 47.4 per cent of them were housewives or housemaids. 44.6 per cent of burns occurred during the morning hours from 6 a.m. to 12 noon. 79.4 per cent of the burns were accidental in nature. Flame burns accounted for 92 per cent, scalds for 5.7 per cent of the total. 64.5 per cent of the patients were admitted within 4 h of injury. The overall mortality rate was 56.5 per cent, below 40 per cent surface area burned

(%BSAB) it was 6.1 per cent and above 70 per cent it was 100 per cent. Flame burns resulted in maximum deaths.

R.S. Hegde (1980) [9] studied suicide in rural community to know incidence of suicides, age and sex distribution, methods adopted for suicide and cause of suicides. It is conducted at Siddapur Taluk in Karnataka where police records formed the source of the study (1962 to 1970). The total suicides were 51; the incidence is 9.3 per 100000. Majority were in the age group of 10 to 29 years, of them 67 % were males and 33% are females. Drowning, poisoning and hanging formed a common mode of suicide. Marital discords and domestic problems ranked highest in both sexes, quarrels between spouse and in laws have been important reasons.

AK Bhatra (2003) [10] collected a total of 4042 medico legal deaths reported at an Apex medical centre of a rural health district, over a period of 5 years between 1997 and 2001. Of those 942 deaths (23.3%) were due to burns; with mortality rate of 15.1 per year per 100,000 populations. Of all burn death cases, 80.8% were females, 82.4% married ones, 71.9% belonged to the young age group of 21-40 years and 75.0% came from the rural parts of the district. Out of all burn deaths, 50.7% were accidental, 47.8% suicidal and 1.5% were homicidal in manner. In all female suicides, burns were the commonest method adopted by over 60% females. Torture by in-laws (32.1%) was the commonest reason for committing suicide by burns in married women. Religious and sociocultural reasons prevalent in the area are discussed, which play the determinant role in such a high mortality rate in burns.

#### **Post traumatic disorders with burns**

LU MK (2007) [11] conducted a cross sectional to examine the prevalence and risk factors of post-traumatic stress disorder (PTSD) after severe burn. Participants (N=82) were assessed by means of the Mini-International Neuropsychiatry Interview (MINI) scale with a structured questionnaire. Results showed that the prevalence of post-traumatic stress disorder in

burn patients who met the DSM-IV criteria for PTSD was 26.8%. The risk factors related to PTSD in burn patients were: female, unmarried, and a lack of leisure arrangements after adjusting for confounding factors. PTSD patients needed more psychological intervention than the non-PTSD patients.

## Materials and methods

The present study was conducted in a tertiary hospital in urban setting for a period of six months.

**Type of patient:** Inpatients of Burn unit were included in the study

**Type of study:** It was a cross sectional epidemiological study of all suicidal burn patients.

**Description of subjects:** Consecutive suicidal burns patients who were admitted into burns ward

### Inclusion criteria

- Age of person between 15 to 60 years of age.
- Both sexes were taken.
- Those who admit that they had attempted suicide by burning themselves were taken.
- Those who were physically fit to answer the questions in the interview.
- Persons with medical and psychiatric illness.

### Exclusion criteria

- Accidental and homicidal burn patients.
- Physically unfit person to answer in the interview.

### Becks suicidal intent scale

It assesses the seriousness and the severity of the suicidal attempt. It estimates the intentionality and lethality of the attempt. It has 12 items. All items are rated on a 0-2 scale, except for item 9 which rates 0-3. Items 11 and 12 are based on the clinician's assessment of the attempt.

SCORE	RISK
0-3	Low
4-10	Medium
>11	High

### Impact of event scale

The Impact of Event Scale is a 15 item questionnaire evaluating experiences of avoidance and intrusion which attempts to "reflect the intensity of the post-traumatic phenomena". It is a broadly applicable self-report measure designed to assess current subjective distress for any specific life event. The IES scale consists of 15 items, 7 of which measure intrusive symptoms (intrusive thoughts, nightmares, intrusive feelings and imagery), 8 tap avoidance symptoms (numbing of responsiveness, avoidance of feelings, situations, ideas), and combined, provide a total subjective stress score. All items of the IES are anchored to a specific stressor. Respondents are asked to rate the items on a 4-point scale according to how often each has occurred in the past 7 days. The 4 point on the scale is: 0 (not at all), 1 (rarely), 3 (sometimes), and 5 (often). The scores for the intrusive subscale range from 0 to 35, and is the sum of the scores for items 1, 4, 5, 6, 10, 11, and 14. The scores for the avoidance subscale range from 0 to 40, and is the sum of the scores for items 2, 3, 7, 8, 9, 12, 13, and 15. The sum of the two subscales is the total stress score.

SCORE	RISK
0 – 8	Sub clinical range
9 – 25	Mild range
26 – 43	Moderate range
44 +	Severe range

### Operational procedure

Consecutive suicidal burn patients were selected. The subjects chosen were explained about the nature of the study. Verbal consent was then obtained from each subject. These patients were screened using inclusion and exclusion criteria.

An intake Performa consisting of socio-demographic data, habits, family history, past medical and psychiatric history, details of spouse, suicidal intent, degree of burns and percentage of burns were noted. They were administered Suicidal Intent Scale and Impact of Event Scale in the order to all patients. The data was recorded on a master score sheet and analyzed.

## Results

The mean age of the subjects in the study was 28.08. Overall among the 60 participants there were 75% females and 25% were males.

In this study, we compared all variables in two groups i.e., High risk group and Medium risk group based on the severity of suicidal attempt from Beck's suicidal intent scale (**Table - 1**).

**Table - 1:** High risk group and Medium risk group based on the severity of suicidal attempt from Beck's suicidal intent scale.

		High	Medium	Total	Chi square	P value
Sex	Male	31	11	42	0.01	.09
	Female					
SES	Low	39	14	53	0.03	0.95
	Middle	3	1	4		
Domicile	Rural	24	6	30	1.3	0.8
	Urban	18	9	27		
Marital status	Divorce	1	0	1	4.6	0.09
	Married	35	9	44		
	unmarried	6	6	12		
Education	Illiterate	12	3		5.8	0.66
	Primary	18	6			
	SSC	10	5			
	Inter	2	1			
Occupation	Housewife	20	7	27	6.9	0.64
	Farmer	4	2	6		
	Coolie	11	3	14		
	Employed	6	2	8		
Family	Joint	7	2	9	0.9	.76
	Nuclear	35	13	48		
Family history	Nil	40	15	55	0.74	0.69
	Present	1	0	1		
Substance abuse	Alcohol	2	2		2.5	0.45
	Alcohol & smoking	4	0			
	Nil	36	13			
Medical illness	Nil	35	14		0.916	0.33
	present	7	1			
Marital disharmony	Nil	20	16		2.641	0.75
	Present	10	6			
Dowry related	Nil	38	9		4.823	0.34
	present	4	1			
Interpersonal problems	Nil	15	3	18	4.518	0.34
	present	27	11	38		
Impulsivity	Impulsive	30	15	45	5.43	0.019
	Planned	12	0	12		
Vehicle used	Kerosene	40	13	53	6.40	0.04
	LPG	0	2	2		
	Petrol	2	0	2		
Degree of burns	Deep	42	15	57	5.80	0.12
	Superficial	0	0	0		

As the subjects with low risk were very few (5%), we ignored the low risk subjects and divided the subjects into high risk group and medium risk group (**Table – 2**).

**Table - 2:** Frequency distribution of risk.

Risk	Count	Percent
High	42	70
Medium	15	25
Low	3	5

**Table – 3:** Comparison of sex distribution.

Risk category	F	M	Total
HIGH	31	11	42
MEDIUM	11	4	15
Total	42	15	57

CHI-SQ=0.001 df=1 P=0.9

**Table – 4:** Comparison of socio-economic status.

Risk category	LOW	MIDDLE	Total
HIGH	39	3	42
MEDIUM	14	1	15
Total	53	4	57

CHI-SQ=0.003 df=1 P=0.95

**Table – 5:** Comparison of rural –urban distribution.

Risk category	Rural	Urban	Total
HIGH	24	18	42
MEDIUM	6	9	15
Total	30	27	57

CHI-SQ=1.302 df=1 P=0.8

**Table – 6:** Comparison of religious pattern.

Risk category	CHRIS	Hindu	MUSLIM	Total
HIGH	1	34	7	42
MEDIUM	2	12	1	15
Total	3	46	8	57

CHI-SQ=3.307790 df=2 P=0.19

There was no significant difference between both groups regarding sex distribution (**Table – 3**). There was no statistical difference in socio economic status in both groups (**Table - 4**).

There was no statistical difference between the groups regarding rural – urban distribution (**Table – 5**). There was no significant difference between these groups regarding religious pattern (**Table – 6**).

**Table – 7:** Comparison of marital status.

Risk category	Divorce	Married	Un married	Total
HIGH	1	35	6	42
MEDIUM	0	9	6	15
Total	1	44	12	57

CH-SQ=4.608117 df=2 P=0.09

**Table – 8:** Comparison of number of years of married life.

Risk Category	0-10	11-20	>20
High	23	10	4
Medium	7	3	0
Total	30	13	4

CH-SQ= 22.123874 df= 18 P=0.22

**Table – 9:** Comparison in married subjects with regard to child status.

RISK category	No children	With children	Total
High	10	27	37
Medium	4	6	10
Total	14	33	47

CH-SQ=5.509902 df=5 P=0.35

**Table – 10:** Comparison of education.

Risk Category	Illiterate	Primary	SSC	Inter	Degree
High	12	18	10	2	-
Medium	3	6	5	1	-

CH-SQ=5.821497 df=8 P=0.66

**Table – 11:** Comparison of occupation.

Risk Category	House wife	Farmer	Coolie	Employed	Student
High	20	4	11	6	1
Medium	7	2	3	2	1

CH-SQ=6.902041 df=9 P=0.64

There was no statistical difference regarding the marital status in both groups (**Table – 7**). There was no significant correlation between both

groups regarding comparison of number of years of married life (**Table – 8**). There was no significant difference between the two groups regarding comparison of married subjects with child status (**Table – 9**). No statistical difference was found between the groups regarding education (**Table – 10**). There was no statistical difference between the groups regarding occupation (**Table – 11**).

**Table – 12:** Comparison of type of family.

Risk Category	J	N	Total
HIGH	7	35	42
MEDIUM	2	13	15
Total	9	48	57

CH-SQ=0.092361 df=1 df=0.76

**Table – 13:** Comparison of psychiatric illness in family.

Risk Category	Nil	PSYCHOSIS	Total
HIGH	40	1	42
MEDIUM	15	0	15
Total	55	1	57

CH-SQ=0.740260 df=2 P=0.69

**Table – 14:** Comparison of substance abuse in subjects.

Risk Category	Alcohol	Alcohol & smoking	Nil	Total
HIGH	2	4	36	42
MEDIUM	2	0	13	15
Total	4	4	49	57

CH-SQ=2.586880 df=3 P=0.45

**Table – 15:** Comparison of medical illness in subjects.

Risk Category	Nil	P	Total
HIGH	35	7	42
MEDIUM	14	1	15
Total	49	8	57

CH-SQ=0.916071 df=1 P=0.33

There was no significant difference between the groups regarding type of family (**Table – 12**). There was no statistical difference in groups regarding family history of psychiatric illness (**Table – 13**). There was no statistical difference

between the groups regarding substance abuse (**Table – 14**). There was no statistical difference between the groups regarding medical illness (**Table – 15**).

**Table – 16:** Comparison of psychiatric illness in subjects.

Risk Category	Depression	Psychosis	Nil
High	1	1	40
Medium	0	1	14
Total	1	2	54

CH-SQ=1.293127 df=3 P=0.68

**Table – 17:** Comparison of previous suicidal attempts.

Risk Category	Nil	P	Total
HIGH	39	2	42
MEDIUM	13	2	15
Total	52	4	57

CH-SQ=1.560714 df=2 P=0.45

**Table – 18:** Comparison of marital disharmony.

Risk Category	Nil	Present	Total
High	20	10	30
Medium	16	6	22
Total	36	16	52

CH-SQ=2.641270 df=5 P=0.75

**Table – 19:** Comparison of dowry related problem.

Risk Category	Nil	Present	Total
High	38	4	42
Medium	9	1	10
Total	47	5	52

CH-SQ=4.823069 df=4 P=0.3

**Table – 20:** Comparison of interpersonal problems in both groups.

Risk Category	Nil	Present	Total
High	15	27	42
Medium	3	11	14
Total	18	38	56

CH-SQ=4.518365 df=4 P=0.34

No statistical difference was found between the groups regarding psychiatric illness (**Table – 16**).



No statistical difference was found between the groups regarding previous suicidal attempts (**Table – 17**). No statistical difference was found between the groups regarding marital disharmony (**Table – 18**). No statistical difference between the groups regarding dowry related problems (**Table – 19**). No statistical difference was found between the groups regarding interpersonal problems (**Table – 20**).

**Table – 21:** Comparison of vehicle used for suicidal attempt.

Risk Category	Kerosene	LPG	Petrol	Total
HIGH	40	0	2	42
MEDIUM	13	2	0	15
<b>Total</b>	<b>53</b>	<b>2</b>	<b>2</b>	<b>57</b>

CH-SQ=6.401617 df=2 P= 0.040729

**Table – 22:** Comparison of degree of burns in both groups.

Risk Category	Deep	Superficial	Total
High	42	0	42
Medium	15	0	15
<b>Total</b>	<b>57</b>	<b>0</b>	<b>57</b>

CH-SQ=5.803636 df=3 P=0.12

**Table – 23:** Comparison of the total score of the Impact of event scale.

Variable	Count	Mean	Standard Deviation	Standard Error
Risk = High	42	12.09524	7.602341	1.173067
Risk = Medium	15	6.6	4.866797	1.256602

T value = 2.6

Probability level was 0.011737\*

**Table – 24:** Comparison of scores on impact of event scale - intrusive symptoms.

Risk Category	IES-I
High	6
Medium	3.79
<b>Total</b>	<b>9.79</b>

P= 0.039\*

Common vehicle for suicidal attempt in both groups was kerosene but kerosene use was more

in high risk group which was statistically significant (**Table – 21**). All the subjects in both groups sustained deep burn but there was no statistical difference between the degrees (**Table - 22**). The subjects in high risk group scores more in impact of event scale in comparison to medium risk group, so the chance of developing Acute stress reaction or Post traumatic stress disorder was more in high risk group and these results were statistically significant (**Table – 23**). There was statistically significant difference between both groups in intrusive symptom scale. So high risk subjects had more intrusive symptoms than medium risk group (**Table – 24**).

**Table – 25:** Comparison of scores on impact of event scale - avoidance symptoms.

Risk Category	IES-A
High	6.09
Medium	2.86
<b>Total</b>	<b>8.95</b>

P= 0.008\*

**Table – 26:** Comparison of Beck's suicidal intent scale scores.

Variable	Count	Mean	SD	Error
Risk = High	42	15.66667	3.461754	0.5341602
Risk = Medium	15	8.333333	1.98806	0.5133148

T value=7.73

Probability level was >.05

There was statistically significant difference between both groups in avoidance symptom scale. So high risk subjects had more avoidance symptoms than medium risk group (**Table – 25**). The scores in the high risk group were to the lower side of the limit and average score in the medium risk group was to higher side of limit so that is why we could not get any statistical difference between both the groups (**Table – 26**).

## Discussion

This cross sectional study was done among suicidal burnt patients. Initially socio demographic data and suicide related is collected

on intake Performa and each subject was administered. The impact of event scale and Beck's suicidal intent scale. The data obtained was analyzed by statistical methods and the results compiled.

### **Socio demographic data**

The total sample of 60 subjects included 75% females and 25% males. Two third of the subjects were female in this study which is similar to other Indian studies by Ambade V.N. (2006) [4] where the ratio is 3:2 and by Batra A.K (2003) [10] where 80% of the subjects are females. But western studies by Phan TN (2003) [5] have high representation of male subjects i.e., 59%. The mean age in this study is 28 years which is consistent with other studies by Laloe V (2002) [7] where the mean age is 22 years. In the study 75% of the subjects belong to low socio economic status which is comparable to other studies by Subrahmanyam (1997) where the incidence of social economic status is 86% [8].

There are totally 75% of married people in the study which is similar to other Indian studies by Ambade V.N (2006) [4] where the married subjects are 75%. The most commonly used vehicle is kerosene in the present study which is similar to other Indian studies by Gupta R.K (1988) [3]. In this study there are 7% subjects with psychiatric illness which is less in comparison to other study by Venkoba Rao (1989) [2] where the psychiatric morbidity is 16% and in western studies by Phan TN (2003) [5] is 91% so which shows that psychiatric morbidity in suicidal burns are more among western people in comparison to Indian population. Seventy five percent of subjects had interpersonal problems and marital disharmony which is similar to other Indian study by Venkoba Rao (1989) [2]. Dowry related problems are seen in 9% of the patients which is comparable to study by Venkoba Rao (1989) [2] where it is 8%. Most common source is kerosene which is similar to study done by Gupta R.K (1988) [3]. Suicidal ideations are seen in 15% of the patients in the present study.

In this study we have classified the subjects in to high risk group and medium risk group based on Becks suicidal intent scale this type of classification is not done in other studies but it has many implications. The patients with risk group have significant interpersonal problems in comparison to medium risk patients. In the present study 6% of subjects have psychiatric illness which was less in comparison to the study by Venkoba Rao (1989) [2] where the psychiatric morbidity was 16% and in the study by Phan TN (2003) [5] where it was 91%. This indicates that psychiatric morbidity in suicidal burns was more among western population in comparison to Indian population. In the present study one patient was diagnosed with depression while the other two subjects were diagnosed of schizophrenia. There was no significant difference with reference to psychiatric illness in high risk and medium risk group in suicidal burns.

### **Impact of event scale**

The subjects scored a mean of 10.5 on impact of event scale which falls under mild range of scoring method. The scores were significantly high in high risk group in comparison to medium risk group. Similarity on intrusive and avoidance sub scales high risk groups scored high which is statistically significant. The results were similar to those in the study by LU MK (2007) [11] where the incidence of post-traumatic stress disorder was more in severely burnt patients. This showed that there was high incidence of post-traumatic stress disorder in subjects of high risk group.

### **Conclusion**

There was high preponderance of female subjects in the study. There was higher representation of lower socio economic status in the study. Most of the subjects were either illiterates or having primary education. Many of the subjects belonged to nuclear family. There was high percentage of marital disharmony and strained inter personal relationship in the subjects. No suicidal note was written by the patients. Almost

all were deep burns in the study. Most common vehicle used was kerosene. Many of the burn occurred at home during afternoon times. Patient of high risk group had more risk of developing acute stress reaction and post-traumatic stress disorders than in medium risk group. High risk group had more scores on both intrusive and avoidance subscale of impact of event scale

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