

# Effectiveness of Psycho Educative Intervention on Psychological Problems among Burn Patients Admitted At Pravara Rural Hospital, Loni

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## ABSTRACT

**Background:** Burn in India has distinct demographic profile, risk factor, nutrition and family problems. Psychological distress is among the most frequent and debilitating complications post-burn injury. Symptoms of depression, anxiety and PTSD are common and start to appear in the acute phase of recovery. Nurses play an important role in reducing the impact of physical and psychological problems in burn patients. The present study was undertaken with objectives of determining the effectiveness of Psycho Educative Intervention on psychological problems of burns patients.

### Aims & Objectives:

- (1) To assess the psychological problems of burn patients before implementation of psycho educative intervention.
- (2) To determine the effectiveness of Psycho-educative Intervention on psychological problems of burns patients.
- (3) To correlate the post-test level of psychological problems of burn patients with their selected socio-demographic variables.

**Materials and methods:** An quasi experimental study, where pretest, posttest design without control group approach was used in Pravara Rural Hospital, Loni (Bk), The data were collected from 30 burn patients who were selected by purposive sampling technique. A structured questionnaire (Hospital anxiety and depression scale, Emotional wellbeing scale and Post traumatic stress disorder) was prepared to collect data. After the pretest the psycho educative interventions and educative materials like (pamphlets and leaflets) was administered to patients before discharge. The post test was carried on the day of follow up first visit. The data was analyzed with descriptive and inferential statistics whenever required.

**Results:** It was found there was a significant difference between the mean scores of anxiety i.e. pre-test ( $10.03 \pm 3.9$ ) and post-test ( $8.4 \pm 1.68$ ) with the mean differences of 1.4. And depression i.e. pre-test ( $10.8 \pm 2.68$ ) and post-test ( $8.4 \pm 1.68$ ) with the mean differences of 1.43. There was a significant associations was found between depression and socio demographic variables like gender ( $\chi^2=3.87$ ); and unpleasant feelings age ( $\chi^2=3.84$ ) and post-traumatic stress disorder with ( $\chi^2=4.64$ ). A positive relationship existed between the anxiety, depression, emotional wellbeing and post-traumatic stress disorder.

**Conclusion:** The study outcomes revealed that the psycho-educative intervention was found to be effective in reducing anxiety, depression and pleasant and unpleasant feeling and post-traumatic stress disorder of burn patients. It should be emphasized that psycho-educative interventions should be practiced and used routinely to have a better outcome in burn patients.

**Key Words:** Assess, effectiveness, anxiety, depression, pleasant and unpleasant feelings and post traumatic stress disorder, Psycho-educative interventions, and burn patients.

## INTRODUCTION

Burn injuries are the injuries that result from direct contact with or exposure to any thermal, chemical, electrical or radiation source of thermal burn. [1] The estimated annual burn incidence in India is approximately 6-7 million per year. The high incidence is attributed to illiteracy, poverty and low level safety consciousness in the population. [2] In Punjab state, burn was found to be the second commonest cause of death (16.7%) while in Delhi, it was the fifth leading cause of death (6.1%) of all unnatural deaths and it was 18.1% from the Beed district of Maharashtra. Married female (house wife) within 21 to 40 years of age are commonest victims of burns of flame type. [3]

Psychological distress is among the most frequent and debilitating complications post burn injury. Preliminary reports using the burn model system (BMS) dataset indicated that one-third of patients with major burns had clinically significant psychological distress at the time of discharge. [4] Symptoms of depression and anxiety are common and start to appear in the acute phase of recovery. Acute stress disorder (occurs in the first month) and post-traumatic stress disorder (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. [5] Lawrence JW (1998) had accumulating evidence which suggested that psychological distress symptoms have a short- and long-term impact on health, function and quality of life. Prolonged functional impairment has been associated with sleep disturbance, sub-syndromal PTSD, depression, body image dissatisfaction, and syndromal PTSD. [6] Watkins et al, recommended psycho-education for burn victims experiencing psychological hardship or stress due to the condition, and that it is such individuals'

right to have information about their disorder. Thus, no matter what state a person's mind or emotions may be in, that person should receive some psycho-education, as appropriate. [7]

Therefore the need was felt to assess the psychological problems among burn patients and implement a psycho-educative intervention to see its effectiveness in improving the psychological problems experienced by these patients. This study recognizes the main psychological disorders such as depression, anxiety and post-traumatic stress disorder in burn patients. It is important that nurses are educated and recognize these issues so that a holistic approach may be adapted while treating the patients.

## Aims & Objectives

1. To assess the psychological problems of burn patients before implementation of psycho educative intervention.
2. To determine the effectiveness of Psycho-educative Intervention on psychological problems of burns patients.
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## MATERIALS AND METHODS

A quasi experimental study, where pretest, post-test design without control group approach was used to assess the effectiveness of psycho educative intervention on psycho-social problems among burn patients. Sample size was 30 burn patients who are admitted in Pravara Rural Hospital, Loni (Bk) which a rural village of Ahmednagar district in Maharashtra state. The present study was approved by the Institutional Ethics committee (IEC) and institutional Research Cell (IRC) of PIMS (DU). The protocol of study was explained to the subjects and

informed consent was obtained. The subjects were selected through random sampling technique.

A structured interview schedule was prepared to collect data from burn patients. The tool consisted of:

**Section A**– Socio Demographic profile (age, sex, education, income, incidence, religion)

**Section B**– Clinical characteristics of burn patient, type of burn, degree of burn, type of treatment

**Section C**– Assessing the psycho-social problems.

**Part 1**:- Consisted of The Zigmoid Hospital anxiety and Depression Scale, [8] to assess the anxiety and depression.

**Part 2**:- Consisted of the Emotional wellbeing scale, [9] to assess symptoms of pleasant and unpleasant feelings.

**Part 3**:- Consisted of the Post traumatic stress disorder scale, [10] to assess the symptoms of post-traumatic stress disorder.

**Pre-test**: After collecting the base line data, the assessment of psychological problems was carried out with the help of structured questionnaires.

#### **Intervention:**

The psycho education intervention was implemented by researcher through informative pamphlets:

a). Basic information of burn [11]: The causes of burns, type of burn and the first-aid measures was explained to the patients.

b). Effect of burn on health [12]: The effects on blood volume, skin, formation of scar tissue, effect on muscles, bone & joints and psychological effects was explained.

c). Role of nutrition on burn injury [13]: The importance of balanced diet was explained with respect to the loss of proteins from muscle tissue due to burns. A nutrition chart containing the daily dietary intake was given to patients

d). Measures for coping with burn injury [14]: The measures of coping with burn injuries included social support from family and support group of similar patients. Also other sources such as Spirituality, coping with physical problems, physiotherapy for

burn contractures, body image coping and social support.

The intervention was implemented for two sessions, each session comprised of 45 minutes, and the session is carried out on the day before, and on the day of discharge of patient. To provide education and support, lecture cum discussion method was used as method of teaching. Further at the end of session the self-designed pamphlets and leaflets were distributed for the further enhancement of knowledge and understanding of illness.

**Post-test**: The post test was conducted on the first follow up visit of patients.

**Data analysis**: The collected data was organized, tabulated and analyzed by using descriptive and inferential statistics methods i.e. the T test and Chi square test were used.

## **RESULTS**

**Socio-demographic profile**: The results showed that the highest percentage of subjects (40%) were in the age group of 30- 49 (Fig 1.1). Majority (57%) were females followed by males (Fig1.2). In educational qualification half of the subjects (50%) had primary education (Fig1.3). Marital status showed that more than half (56%) were married (Fig1.4).

**Clinical characteristics of burn**: According to their type of burn injuries shows that higher percentage of subjects (44%) had thermal burns, majority (70%) had second degree burn. A majority of the subjects (60%) had 26-50% of TBSA burn injuries, with a higher percentage of subjects (44%) having burns in the upper extremities.

Assessment of the effectiveness of psycho-educative interventions on psychological problems among burn patients (Table 1.1)

The mentioned table depicts that there was a changes in the emotional well being such as pleasant feeling where it was improved from very low to moderate pleasant feeling; the unpleasant feeling was reduced from moderate level to unpleasant feeling. It was

found the burn patients under study had borderline abnormal anxiety, mild depression and very low pleasant feeling and non-symptomatic post-traumatic stress disorder before the implementation of Psycho-educative interventions. The level of anxiety was significantly reduced from borderline abnormal to moderate level of

anxiety i.e. mean difference of 1.43. There was a significant difference between the mean score on depression i.e. pre and post-test levels with the mean differences of 2.4. It shows the effectiveness of psycho educative interventions among the burn patients.

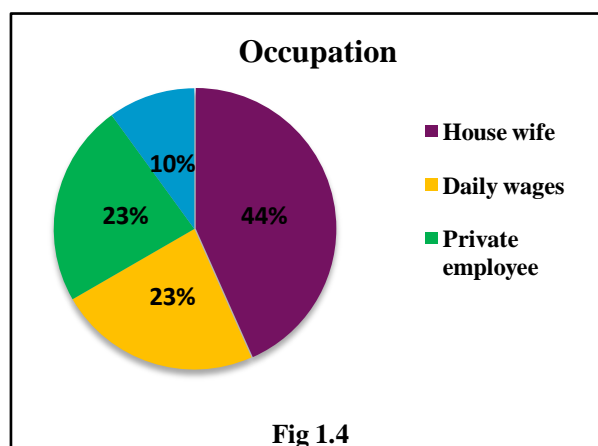
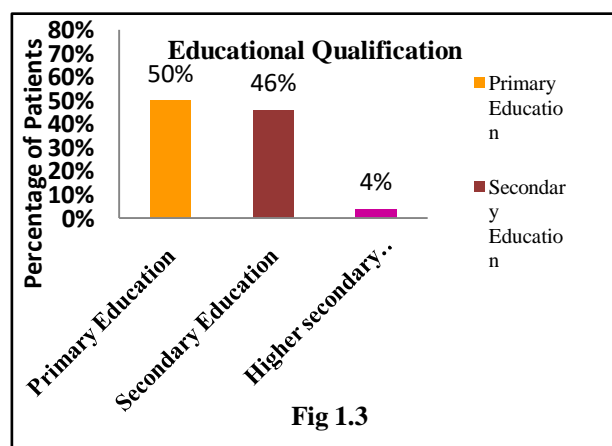
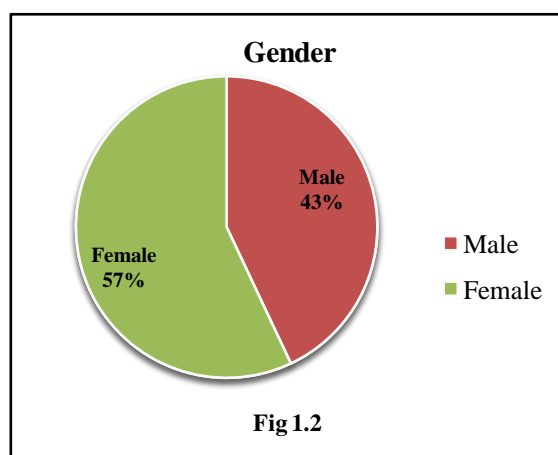
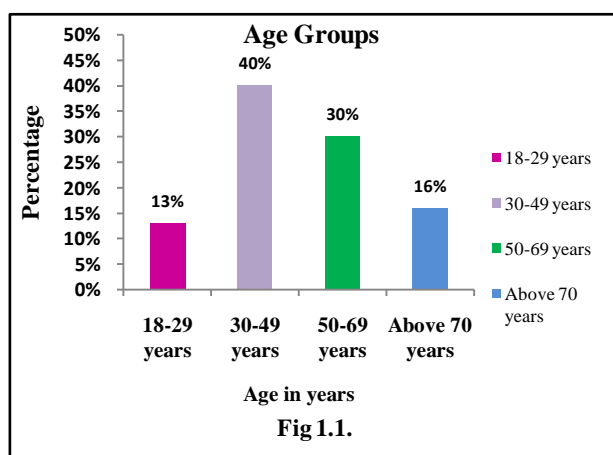


Table 1.1

SN	Area	Pre Test		Post Test		Difference in Mean	Level of significance
		Mean	SD	Mean	SD		
1	Anxiety	10.03	3.9	8.6	1.94	1.43	Significant
2	Depression	10.8	2.68	8.4	1.68	2.4	Significant
3	Emotional Well Being						
a.	Pleasant Feelings	17.5	3.81	26.17	4.5	8.67	Non-Significant
b.	Unpleasant Feelings	24.6	3.86	20.67	3.71	3.93	Non-Significant
4	Post-traumatic stress disorder	38.7	4.06	29.6	3.98	9.1	Non-Significant

Association between psychological problems and demographic variables of burn patients (Table 1.2)

Chi-square was calculated to analyze the association between psychological problems of burn patients and their demographic variables. Findings revealed that there was a significant association was found between unpleasant feeling and age, depression and gender,

post traumatic stress disorder and percentage of burn injury. However there was no significant association was found with other variables.

**Table 1.2**

Variables	Anxiety	Depression	Pleasant	Unpleasant	Post-Traumatic Stress Disorder	Level of Significance
Age	0.153	0.117	0.016	3.84 *	0.102	S*
Sex	0.209	3.87*	1.518	1.201	0.817	S*
Education	0.535	0.535	0.6	0.133	0.005	NS
Occupation	1.674	0.069	0.071	0.041	2.026	NS
Religion	0.089	0.089	0.625	0.555	0.362	NS
Marital status	1.201	1.201	1.491	0.186	1.118	NS
Type of burn	0.117	0.135	0.433	0.001	0.002	NS
Degree of burn	1.714	0.428	0.12	0.24	0.0271	NS
Percentage of burn	0.782	0.918	0.714	0.076	4.464*	S*
Site of burn	0.067	2.225	0.385	0.008	0.397	NS

S- Significant. (df – 1), Table Value – 3.84, (p<0.05) NS- Non significant

## DISCUSSION

Though the findings revealed that under study was middle age It is similar to the study conducted by Gowri S, Vijaya A N and Power R (2012), where majority of the patients were in the age group of 21-40 years. [9] Pre-test analysis of the psychological problems in relation to anxiety burn patients showed that a mean score of (10.3±3.9) which was (47.78%) was obtained in the area of ‘Anxiety’ which indicated that patients had moderate anxiety . In the present study there were 6 (20%) patients with no anxiety, 13 (43.33%) patients with borderline anxiety, and 11 (36.6%) patients with abnormal anxiety. These findings had consistent with the study done by Zoran Lonar, Marijana Bras and Vlatko Mikovi (2006) where they reported a mean score of (13.79±6.44) on Hospital Anxiety and Depression scale. The authors also reported that 9 patients (8.29%) had low anxiety, forty-seven patients (67.14%) reported moderate anxiety, and 16 patients (24.57%) reported severe anxiety. [10]

The Post traumatic stress disorder was assessed using PCL-C scale. In the present study a mean score of (38.77±4.06) i.e. around (45.6%) indicated that patients had moderate ‘Post traumatic stress disorder’ after burn injury. It is consistent with the study done by Homayoun Sadeghi-Bazargani et, al. (2011) the mean PTSD score was 23.8 ± 14.7 in the early hospitalization period and increased to 24.2 ± 14.3, three months after the burn injury was 20 %. [11]

Using the Hospital anxiety & depression scale, post-test analysis shows a mean score of (8.6±1.94) was obtained in the area of ‘Anxiety’ i.e. a difference of (1.43) as compared to pre-test levels. Post-test analysis shows a mean score of (8.4±1.68) i.e. (40.16%) was obtained in the area of depression i.e. a difference of (2.4) as compared to pre-test levels. Thus the results are indicative of reduction in the levels of anxiety & depression after the psycho-educative intervention. Similarly a study done by Zoran and Loncar et, al. (2006) have stated that if more anxious or depressed patients experienced more pain, it means that these patients could perhaps be helped with psychological methods of intervention. [10]

## CONCLUSION

The study outcomes revealed that the psycho educative intervention was found to be effective in reducing anxiety, depression and pleasant and unpleasant feeling and post-traumatic stress disorder of burn patients. It should be emphasized that psycho educative interventions should be practiced and used routinely to have a better outcome in burn patients.

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