



# EFFECT OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE IN REDUCING DEPRESSION AND IMPROVING QUALITY OF LIFE OF BURN PATIENTS

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Burns are still a severe concern in today's society, causing irreversible injuries and adverse effects to burn patients and their families. Every 30 minutes, a burn-related injury is anticipated to occur (Mehdi Harorani, *et al*, 2019).

As a traumatic experience, burn damage is the leading cause of death and disability globally. It has a significant physical, emotional, and social effects components of QOL, as well as the patient's intellectual process. Burns are a public health issue that kills roughly 300,000 people each year across the world. Every year, around 2.4 million incidents of burn damage occur worldwide, with 650,000 requiring medical attention, 75,000 requiring hospitalisation, and 8,000-12,000 dying as a result of burn injuries (Seham M. A. Elalem *et al*, 2018).

Burns can cause a variety of health issues, including physical issues such as deformities or scar contractures, alterations in the colour of the skin and the shape of the body, and body parts are lost., this can make it difficult for a patient to resume past activities. Additionally, Burn scars that are noticeable can obstruct a person's social activities and lead to social isolation. Patients with severe burn injuries go through a traumatic experience that alters their usual thinking, behavior, and way of life. The burn victim is stigmatized to the point where they are unable to recognize their quality of life and self-appraisal. Burn injuries, especially those involving the face, have a major impact on a person's psychological well-being. (Seham M. A. Elalem *et al* 2018).

Patients and healthcare providers have a unique, huge, and tough task when it comes to burn pain. Burn pain has received little treatment to far, despite breakthroughs in the care of burn-induced wounds (Soroff *et al*, 2005).

Burn patients lack of pain control has been linked to depression, the start of chronic pain, and suicidal ideation after being discharged from the hospital (Branski LK *et al*, 2018).

Pain has a detrimental impact on patients' quality of life, and pain relief can have an impact on patients' focus, job, exercise, socialization, daily routines, and sleep. Anxiety, unmanaged pain can lead to decreased social engagement, disrupted sleep, mobility issues, lack of appetite, malnutrition, agitation, and an increase in hospitalisation and healthcare costs. (Hashemi F *et al*, 2014).

Burns have the greatest impact on the QOL of patients, particularly pregnant women, and impair their physical, psychological, social, and spiritual well-being (Tirumala N *et al*, 2013).

Pruritus, or itching, is a frequent but frequently unspoken experience among those suffering from burns, similar to pain. There are a variety of ways for reducing pruritus, both pharmaceutical and non-medicinal. Pruritus occurs in around 87 percent of burn patients. It has an impact on the patients' sleep and daily activities. Thin and recently transplanted skin epithelium induce skin injury as a result of patients' reactions to it (Pouran V. Farahani *et al*, 2013).

Anxiety is a normal reaction people have after experiencing the emotional and stress of a burn injury. Anxiety is also linked to frightening or painful medical therapies that are required for burn tissue recovery. Anxiety is frequently present during the acute period of burn treatment, along with other mood abnormalities such as despair or bereavement. One source of distress will frequently exacerbate another source of discomfort (Sideli L *et al*, 2015).

An American research found that burn patients with a higher degree of anxiety felt more pain throughout their treatment sessions than those without. Hospitalized individuals often experience sleep problems (Liliane M *et al*, 2016).

In most circumstances, non-pharmacological techniques are safe and have no negative effects. As a result, non-pharmacological pain managing methods may be more effective. These behaviors are risk-free since they have no negative consequences. PMR is a non-pharmaceutical supplementary technique. Relaxation exercises can help you sleep better by relax your body, lowering your BP, and relaxing your muscles. These exercises aid in the transition from the sympathetic to parasympathetic nervous systems, resulting in physical and mental calm. Relaxation exercises can be performed without the use of any materials. As a result, they are both economical and accessible practices (Neriman T. Aksu *et al*, 2017).

## Methodology

**STUDY DESIGN:-** Quasi experimental design

**SAMPLE SIZE:-** A total of hospital discharged 10 post- burn patients were taken.

### CRITERIA FOR SAMPLE SELECTION:-

#### Inclusion Criteria:-

- The burn patients of age between 20- 60 years are included in the study
- The burn patients who were discharged from hospital are included in the study
- The subjects who have BDI score <30 are included in the study
- Male and female both are included in the study

#### Exclusion Criteria:-

- Subjects who have neurological problems like significant cognitive deficit, severe peripheral neuropathy are excluded
- Subjects cardiac or pulmonary problems are excluded from study
- The burn patients who have pressure sores are not included in the study
- The burn patients with bleeding history are excluded from study
- The subjects who have psychological disorder are excluded from study.

#### Dependent Variables

- Depression in burn patients
- Quality of life in burn patients

#### Independent variables

- Beck depression inventory (depression assessment)
- SF36 ( quality of life)

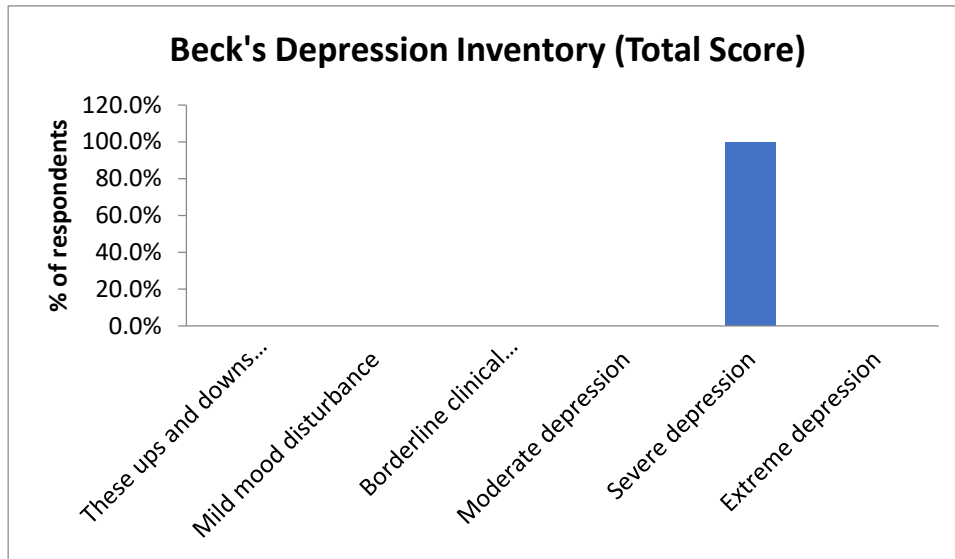
#### Tools

- Questionnaire Beck depression inventory
- Questionnaire SF-36

### Procedure

Patients were included who were discharged from the hospital till the 15<sup>th</sup> day from discharge. The study was conducted who were discharged from PGIMS, Rohtak and surrounding areas. The subjects were asked to fill the BDI and SF-36 questionnaire before starting the exercise protocol. After 2 weeks the BDI and SF-36 questionnaire again filled by the subjects. The exercise were performed for 5 days in a week for 2 weeks. The total 10 exercise sessions were performed.

Graph 1.1 showing the level of depression in burn patients.



Paired Sample Statistics						
Beck's Depression Inventory	N	Mean	Std. Deviation	Std. Error Mean	t- value	p- value
Pre Score	10	32.600	1.174	0.371	9.750	.0001**
Post Score	10	30.000	0.943	0.298		

Table 1.1 shows the pre and post intervention BDI score in burn patients. It was seen that there is significant decrease in post score as compared to pre score.

### Discussion

Mehdi Harorani *et al* found that relaxation can be used in conjunction with contemporary medicine to help burn victims reduce anxiety and improve sleep quality. M. Mahendiran *et al* found that there was a significant drop in depression and an enhance in the patients' quality of life. Pouran V. Farahani *et al* found that patients with burns can benefit from muscle relaxation techniques to relieve pain, pruritus, and vital signs. Julie Suhr *et al* found that PMR is a useful tool for dealing with mental and behavioural problems. in alzheimer's disease patients

with mild to moderate dementia. Somayeh Ghafari *et al* found that there is some evidence that the PMRT improves the QOL of patients with MS. Neriman Temel Aksu *et al* found that following pulmonary resection, PMR prevents a drop in patient-reported sleep quality. Ali H. Dehkordi *et al* found that in surgical patients, PMR may improve their pain threshold, stress and anxiety tolerance, and adaptability level. Kai Liu *et al* found that patients with COVID-19 can benefit from PMR as an additional therapy for reducing anxiety and improving sleep quality.

The goal of this Quasi experimental design was to see if PMR may help post- burn patients feel less depressed and improve their quality of life. For the study, a total of 12 patients were evaluated. The study enlisted the participation of 10 patients who met the inclusion criteria. They were randomly assigned to the experimental group (PMRT with routine physiotherapy program), which consisted of ten patients. PMRT was given one session each day for two weeks, for a total of ten sessions. PMRT is a simple relaxation method that may be mastered quickly. It is a low-cost remedy that requires little training. It is a mind and body relaxation technique that involves progressively tensing and relaxing muscle groups. The relaxation response reduces sympathetic nervous system tone by limiting the stress reaction. Muscle tension, oxygen consumption, blood pressure, heart rate, and respiratory rate are all reduced as a result of this action. The pre-assessment was done on the day of the first meeting after discharge, and the post-assessment was done after the 2-week exercise routine was completed. The patients were given an audio and leaflet with instructions, and their progress was tracked by phone calls. After a week, there was a significant improvement in depression reduction and mental components of QOL, as measured by the Beck Depression Inventory and the SF 36, respectively.

This research backs up the use of psychosomatic interventions to improve patients' psychological health and quality of life. To summarize, PMRT has shown to be effective in lowering depression and enhancing quality of life. As a result, PMRT can be incorporated into burn rehabilitation.

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