



## RELAXATION TECHNIQUES FOR STRESS REDUCTION IN PSORIASIS

### KEYWORDS

Psoriasis, PASI score, Relaxation techniques, Stress score.

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### ABSTRACT

Sudha.S1, Karthikeyan.R2. Introduction: The skin along with clothes and cosmetics improve the visual appeal of humans. So, chronic diseases affecting the skin like Psoriasis have a significant negative impact on patient's quality of life leading to significant stress. Hence the relaxation techniques that reduce the stress may be effective in alleviating the symptoms of psoriasis. Aims: To analyze the effects of relaxation techniques on stress score and PASI score. Methods: twenty four psoriasis patients were selected and their Psoriasis Area Severity Index (PASI) score and stress scores were assessed. They were trained for deep breathing exercises and Shavasana to be practiced at their home daily along with pharmacological treatment for 12 weeks. Their stress scores and PASI scores were compared with the initial scores after 12 weeks. Result: There was a significant reduction in the stress and PASI scores.

### Introduction:

Psoriasis is a chronic inflammatory disease affecting 2-4% of adult population<sup>1,2</sup>. In contrast to disorder of other organs or systems in our body, dermatological diseases are characterized by their visibility contributing to considerable stress in the individuals. Psoriasis patients often experience difficulties like maladaptive coping responses, problems in body image, self esteem, and self concept. They also have feelings of stigma, shame and embarrassment regarding their appearance<sup>3</sup>. Psoriasis, the disease proved to be aggravated by stress, itself has effect on patients' relationship, social life and mental health which in turn affects the skin constituting a vicious cycle. Hence the present study is undertaken to know the effects of relaxation techniques in reducing the stress along with the routine treatment.

### Aims and Objectives:

1. To assess the stress level of the selected study group using the Perceived Stress Scale questionnaire.
2. The disease severity was assessed by Psoriasis Area Severity Index (PASI).
3. To train the individuals to do the deep breathing exercises and Shavasana daily for 30 minutes in the morning and evening.
4. To compare the stress scores and PASI scores before and after practicing the relaxation techniques.

### Methodology:

The study has been started after getting clearance from the Institutional Ethical Committee. This is a hospital based study done in the Department of Dermatology, Tirunelveli Medical College Hospital, Tirunelveli.

Twenty four patients in the age group of 30-60 years diagnosed as Psoriasis Vulgaris were selected for the study. After getting the written informed consent, the proforma for details such as personal details, history related to skin disease and history related to stress are filled up. A thorough clinical examination was done and the disease was assessed by PASI score.

The stress level was assessed by Perceived Stress Scale designed by Sheldon and Cohen<sup>4</sup>. It consists of 10 items instrument designed to measure the degree which situation in

one's life are appraised as stressful. After reading the questions, they were asked to answer how often they felt or thought the way over the past one month for questions. Higher scores are associated with increased vulnerability to stress induced illness.

After analyzing the history, clinical examination and stress scores counselling was done individually regarding the importance of reducing the stress. Then the individuals were trained for performing deep breathing exercises and Shavasana daily for 30 minutes along with routine pharmacological treatment. The patients were reviewed once in 2 weeks for assessing the skin disease and adherence to the relaxation techniques. This is continued for 12 weeks. As the follow up of cases were done, 4 patients were dropped out from the study after a month. Remaining 20 patients were regular and at the end of 12 weeks, Perceived Stress Score and PASI score were repeated. The results were tabulated, compared and analyzed statistically to find out the significance of variations in them before and after the relaxation techniques.

### Result Analysis:

The results were analyzed by student's t test, paired t test and the chi-square test by statistical package SPSS 11.

### Relaxation Techniques for Stress Reduction in patients with Psoriasis

Table 1 Age Sex Distribution

Age/sex	Male	Female
31-40	5	3
41-50	4	2
51-60	5	1
Total	14	6

Table 2 Effects of relaxation techniques on stress level scores

Stress score	Mean	Sd	t	Df	p	Significance
Pre test	Post test					
18.4±3.3	15.4±2.2	3.05	2.01	6.7	19	<0.05 Significant

When the stress level scores are compared before and after the relaxation techniques followed for a period of 12 weeks, there is significant reduction in the stress levels.

**Table 3 Effects of relaxation techniques on disease activity PASI scores**

PASI score	Mean	Sd	t	Df	p	Significance
Pre test	Post test					
14.1±11.3	3.7±4.2	10.4	8.3	5.5	19	<0.05 Significant

When the PASI scores are compared before and after the relaxation techniques followed for a period of 12 weeks, there is a significant reduction in the disease activity.

#### Discussion:

Stress is an unavoidable consequence of life. As the skin and the nervous system share a common embryological origin, there is a close relation between skin diseases, mental status and psychopathology. The present day physical and mental challenges have altered the lifestyle and increased the stress, taking their toll in people's health. In this context, it becomes imperative to derive benefits from stress relaxation techniques like deep breathing exercises and asanas.

During each breath, we take up oxygen which is vital for the cellular activity. By practicing slow and deep breathing, diaphragm moves well and the oxygen taken up by us is increased. The deep breathing also reduces the dead space ventilation<sup>5</sup>. The deep breathing exercises reset the autonomic nervous system towards parasympathetic dominance through stretch induced inhibitory signals and hyper polarization currents<sup>6</sup>.

Since psychosomatic disease stem from inability to control the mind, yogic techniques in general and Shavasana in particular are known to promote psychosomatic health and enhance one's ability to combat stressful situations. Shavasana relaxes the body because the muscles are completely relaxed voluntarily. It also relaxes mind through deep and conscious breathing and autosuggestion<sup>6</sup>.

The present study involves the patients of Psoriasis Vulgaris, the disease to be strongly aggravated by stress. All the patients in this study confirmed that stress is an initiating or exacerbating factor. Among the selected individuals 5 gave history of death of close family member, 2 gave history of major illness in the family member and 3 gave history of job stress. In a study by Malhotra et al<sup>7</sup> it is shown that 26% of the patients gave history of similar life events precipitating the illness.

The study group individuals were followed up every 15 days and verified for their adherence to relaxation techniques and clinical status. Among 20 patients 2 persons got completely cured from the disease and their scores of 4 and 2.7 became zero. Sixteen patients have recovered to the considerable extent with their PASI score reduced to less than 5 from maximum score of 51. Two out of 20 had an exacerbation during the 8th week because of inter current infection and they were showing improvement at the end of study. When the stress level scores and the disease activity were compared before and after the stress relaxation techniques, they have shown a significant reduction in the stress and PASI scores.

The reduction in stress as indicated by lowered stress scores can be considered to normalize the HPA and sympathoadrenomedullary responses. As a result the vascularity of skin is restored to normal and hence the disease

activity (i.e) inflammatory changes have been reduced. Stress not only worsens Psoriasis but it also adversely affects the treatment outcome, which is proved by Fortune et al<sup>8</sup>. There is also a study showing that mindfulness meditation based stress reduction intervention increases the rate of resolution of psoriatic lesions by Kabat et al<sup>9</sup>.

In patients with chronic stress, stimulated HPA axis increases cortisol levels, which in turn shift the normal Th1 response to Th2 response<sup>10</sup> leading to the disease manifestations. The relaxation techniques by modifying the state of anxiety reduces stress induced sympathetic over activity and helps in clearing of lesions.

**Limitations:** The small sample size and lack of a control group were the limitations.

**Conclusion:** The study has shown statistically significant reduction in disease severity and stress level scores after practicing the relaxation techniques. Awareness of advantages of the stress- relaxation techniques can be promoted among the doctors and the patients suffering from stress related skin diseases.

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