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The role of Ayurveda in managing mental health affected by skin disease

BY

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INTRODUCTION

Skin is the largest organ of the body and serves as the primary protective barrier. It is also an important indicator of overall health. The skin is composed of three main layers: the **epidermis** (outer layer), the **dermis** (connective tissue layer), and the **subcutaneous tissue** (fat layer). It plays a crucial role in immune defence, the synthesis of vitamin D, and sensory perception.

Twacha / Charma (Referring to Skin in Ayurveda)

Skin (Twacha/Charma) is defined as the protective outer covering of the body and an important sensory organ responsible for the sense of touch (Sparsha). In Ayurveda, the skin (Twak) is regarded as the *Upadhatu* (secondary tissue) of *Mamsa Dhatu* (muscle tissue). It plays a significant role in maintaining body temperature and regulating heat through the sweat channels (*Swedavaha Srotas*).

Key Concepts of Skin (Twak) In Ayurveda:

- **Layers (Saptadhatuja Twak):** While Charaka describes six layers of skin, Sushruta identifies seven distinct layers, each having specific thickness and being associated with particular diseases.
- **Physiological Role:** The skin is the site of Bhrajaka Pitta, which is responsible for skin complexion, luster, and the absorption and metabolism of substances applied externally.
- **Dosha Association:** Twak (skin) is formed by the involvement of all three doshas, but it is predominantly influenced by Pitta Dosha.
- **Significance:** The skin serves as the Adhisthana (primary site) for the functioning of Pranadi Panch Vayu and plays an important role in the manifestation of skin disorders such as Kushtha.

Layers of Skin According to Sushruta (Saptatvacha):

1. **Avabhasini:** The outermost layer of the skin, responsible for reflecting complexion and radiance (Prabha).
2. **Lohita:** The layer associated with blood and vascular elements.
3. **Shweta:** Known as the white layer of the skin.

4. **Tamra:** The copper-colored layer, contributing to skin pigmentation.

5. **Vedini:** The sensory layer, responsible for the perception of sensations such as pain and touch.

6. **Rohini:** The layer involved in the process of healing and regeneration.

7. **Mamsadhara:** The innermost layer, which is connected to and supports the underlying muscle tissue (Mamsa).

Skin disorders such as Psoriasis, Eczema, Acne, and Vitiligo are chronic dermatological conditions that not only affect physical appearance but also significantly impact an individual's psychological well-being. Individuals suffering from visible skin disorders often experience:

- **Low self-esteem**
- **Social anxiety**
- **Depression**
- **Body image disturbances**
- **Social withdrawal**

In the traditional Indian system of medicine, Ayurveda classifies skin disorders under Kushtha Roga and attributes their occurrence to imbalances in the Doshas Vata, Pitta, and Kapha as well as improper diet, unhealthy lifestyle practices, and mental stress, which are considered under Manasika Nidana. Ayurveda emphasizes a **holistic approach to healing**, focusing on restoring balance by addressing both **physical and psychological aspects of health**.

Objectives of the study

Aim:
To examine the role of Ayurveda in managing **psychological distress** among individuals suffering from chronic skin disorders.

Objectives:

1. To assess the levels of **depression, anxiety, and stress** among patients with chronic skin disorders such as Psoriasis, Eczema, Acne, and Vitiligo.

2. To evaluate the effectiveness of **Ayurvedic interventions**, including **herbal medications, Panchakarma therapies, dietary regulation, and lifestyle modifications**, in reducing psychological distress.

3. To compare the **mental health status of patients before and after Ayurvedic treatment**.

4. To examine the relationship between **improvement in dermatology-related quality of life and psychological well-being**.

5. To assess changes in **self-esteem and quality of life** following Ayurvedic treatment.

6. To explore **patients' perceptions of holistic healing and mind–body balance** through Ayurvedic therapy.

REVIEW OF LITERATURE

- Ther Heidelb discussed the potential psychological impact of skin conditions. Visible medical conditions such as Psoriasis, Eczema, and Skin Cancer often have a substantial psychological and social impact on affected individuals.
- The American Psychological Association has highlighted the relationship between skin and psychological health, explaining how psychologists contribute to the management of patients with dermatological problems by addressing emotional distress, coping mechanisms, and quality of life.
- Rachel E. Christensen and Mohammad Jafferany explained the psychiatric and psychological aspects of chronic dermatological diseases. They noted that any dermatological condition with a chronic course can significantly affect a patient's quality of life and increase the risk of developing mental health disorders.
- Kavyashree, Savitha H. P., Srilatha, and Suhas Kumar Shetty discussed psychocutaneous disorders in Ayurveda. Psychodermatology is an emerging discipline that studies the interaction between the skin and the mind. Skin diseases are considered a major cause of chronic suffering as they affect both physical and psychological well-being.
- Sudesh K. S., Pramod Shet B., and Rashmi Kalkura K. stated that **psychological stress is a key etiological factor in Kushtha (skin disorders)**. In Ayurveda, Kushtha is considered a **multifactorial disorder influenced by psychological, physiological, and environmental factors**.

Previous studies indicate:

- Skin disorders are strongly associated with psychological conditions such as Depression and Anxiety.
- Psychological stress is known to **exacerbate dermatological symptoms** and worsen the progression of various skin diseases.
- **Mind–body interventions** have been shown to improve both **dermatological conditions and psychological outcomes**.
- Ayurvedic therapies such as Shirodhara, Abhyanga, herbal medications, and **dietary regulation** help in **reducing stress and improving emotional regulation**.

However, there is **limited psychological research evaluating the mental health outcomes of Ayurveda-based treatments among dermatology patients**, indicating a need for further studies in this area.

Hypotheses

H1: Ayurveda-based interventions will significantly reduce levels of depression in patients with skin disorders.

H2: Ayurvedic interventions will significantly reduce anxiety and stress levels among patients with chronic dermatological conditions.

H3: Greater improvement in dermatology-related quality of life will be associated with greater improvement in psychological well-being following the intervention.

Variables

- **Independent Variable:** Ayurveda-based treatment, including **herbal medications**, Panchakarma therapies, **dietary regulation**, and **lifestyle modifications**.

- **Dependent Variables:** Levels of **Depression**, **Anxiety**, **Stress**, among patients with skin disorders.
- **Control Variables: Age**, **gender**, and **duration of illness**, which may influence the psychological outcomes and are therefore controlled during the study.

Significance of the Study

This study is significant because chronic skin disorders affect not only physical health but also emotional and psychological well-being. Conditions such as psoriasis, eczema, acne, and vitiligo often lead to depression, anxiety, social isolation, reduced self-esteem, and poor quality of life. Although conventional treatment mainly focuses on treating skin symptoms, the psychological effects are often not adequately addressed.

Ayurveda adopts a holistic approach by emphasizing the balance between body, mind, and lifestyle. This research will evaluate whether Ayurvedic interventions can effectively improve mental health outcomes alongside skin health.

The study will also contribute to the growing field of psychodermatology by examining the relationship between skin health and psychological well-being from both modern psychological and Ayurvedic perspectives. Furthermore, the research may encourage interdisciplinary collaboration among psychologists, dermatologists, and Ayurvedic physicians in developing comprehensive treatment strategies.

This research will increase knowledge about Ayurveda-based psychological interventions and support future studies with larger sample sizes. The findings may also assist healthcare professionals and policymakers in promoting culturally relevant, evidence-based, holistic healthcare practices.

Research Methodology

Research Design

The study adopted a one-group pre-test quasi-experimental design to evaluate changes in psychological distress and dermatology-related quality of life following an Ayurveda- based intervention.

Sample

- Sample Size: 50-60 participants diagnosed with chronic skin disorders such as Psoriasis, Eczema, Acne, and Vitiligo.
- Age Group: 18–65 years
- Sampling Method: Purposive sampling

Tools

The following instruments will be used for data collection:

- Depression Anxiety Stress Scale (DASS-21) to assess levels of depression, anxiety, and stress.
- Dermatology Life Quality Index (DLQI) to evaluate the impact of skin disorders on quality of life.
- Structured Interview Schedule to collect additional qualitative information regarding patients' experiences.

- Excel sheet.

Statistical Analysis

The collected data will be analysed using the following statistical methods:

- Mean and Standard Deviation to summarize the data.
- Paired t-test to compare pre-treatment and post-treatment scores.
- Pearson Correlation to examine the relationship between improvement in dermatological symptoms and psychological well-being.

OVERALL STUDY RESULTS

DASS-21 and Dermatology Life Quality Index (DLQI)

1. DASS-21 Results

The collected data were analysed using descriptive and inferential statistical methods. Mean and standard deviation (SD) were calculated for pre-intervention and post-intervention scores. A paired-samples *t*-test was used to compare pre-intervention and post-intervention DASS-21 and DLQI scores. The level of statistical significance was set at **$p < 0.05$**.

DASS-21 Results

The pre- and post-intervention DASS-21 scores of 53 participants were compared. The mean scores of depression, anxiety and stress decreased following the intervention.

DASS-21 Domain	**Pre-test Mean ± SD**	**Post-test Mean ± SD**	**Mean Reduction**	***t*(52)**	***p*-value**
Depression	25.51 ± 8.51	17.02 ± 7.60	8.49	10.70	<0.001
Anxiety	17.43 ± 7.59	10.42 ± 5.22	7.02	10.65	<0.001
Stress	25.58 ± 6.90	15.92 ± 5.72	9.66	14.23	<0.001

The paired-samples *t*-test showed a **statistically significant reduction** in depression, anxiety and stress scores following the intervention ($p < 0.001$ for all three domains). Therefore, the findings support the hypothesis that Ayurveda-based intervention was associated with reduced psychological distress among the participants.

Your participant-level DASS data support the reductions shown above; for example, the Excel summary gives depression pre-test mean **25.51**, post-test mean **17.02**, anxiety **17.43 → 10.42**, and stress **25.58 → 15.92**.

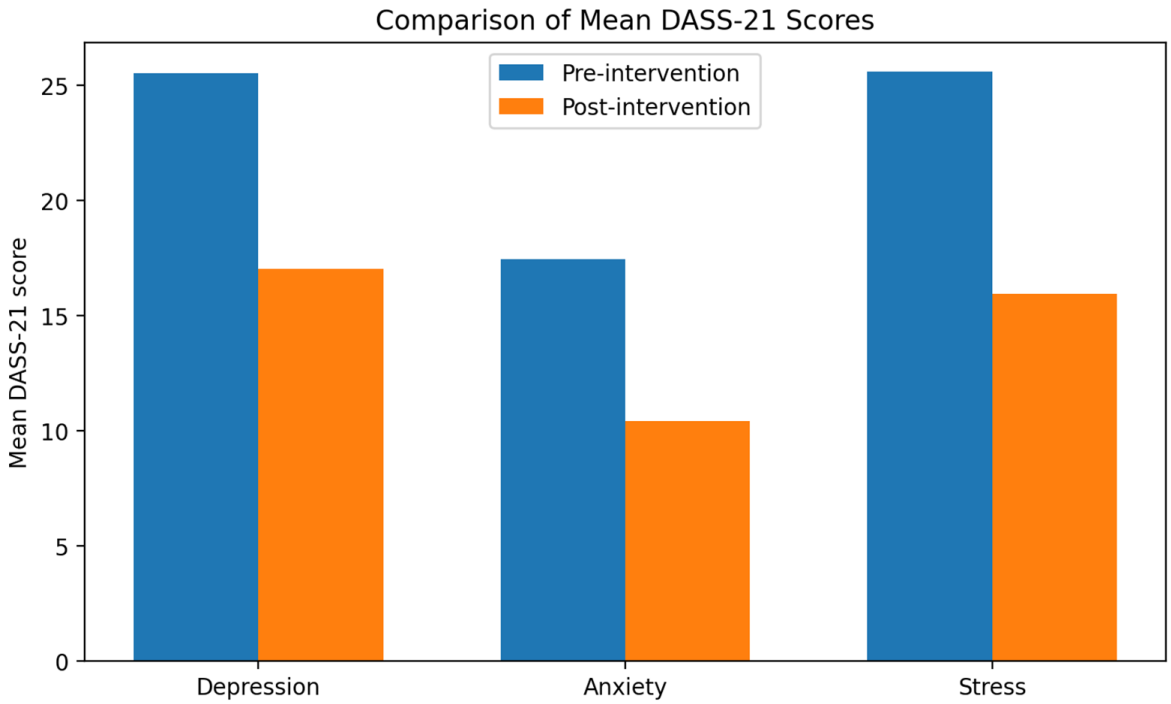

Figure 1. Comparison of mean DASS-21 scores before and after the intervention (n=53).

2. DLQI Results

The Dermatology Life Quality Index (DLQI) scores of 53 participants were compared before and after the intervention. The mean DLQI score decreased from **14.49 ± 4.81** before intervention to **8.57 ± 3.89** after intervention.

Measure	**Pre-test Mean ± SD**	**Post-test Mean ± SD**	**Mean Reduction**	***t*(52)**	***p*-value**
DLQI	14.49 ± 4.81	8.57 ± 3.89	5.92	18.80	<0.001

The paired-samples *t*-test showed a **statistically significant reduction in DLQI scores** ($t(52) = 18.80$, $p < 0.001$), indicating a significant improvement in dermatology-related quality of life following the intervention.

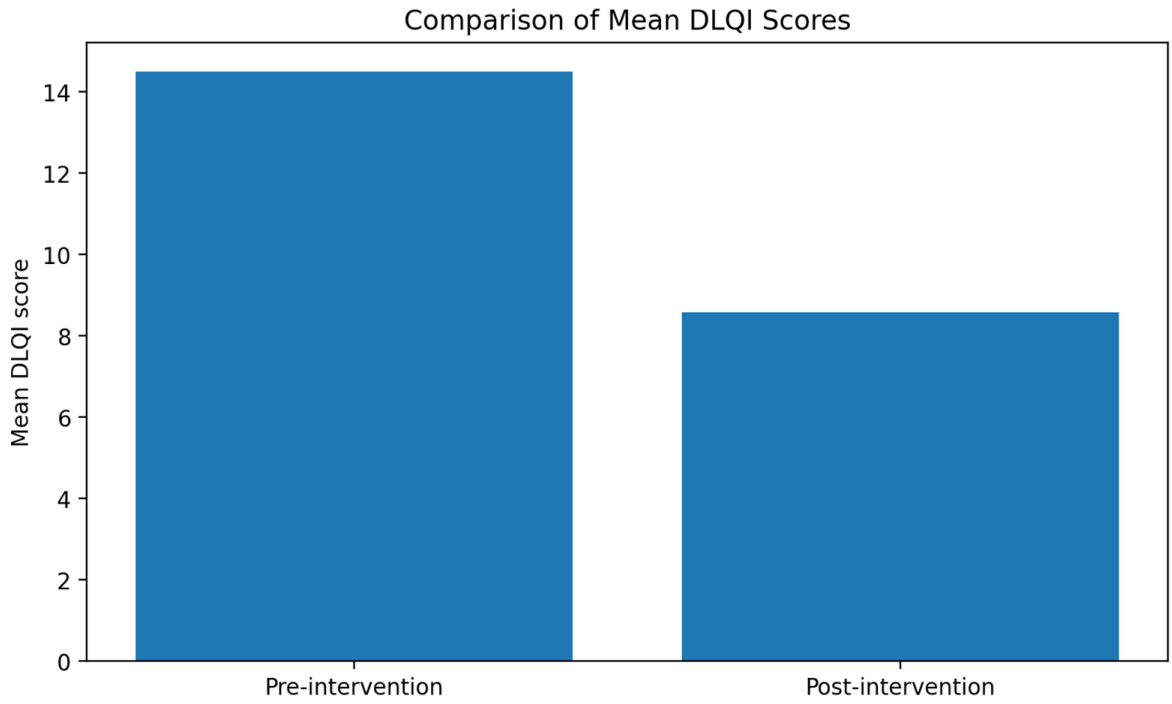

Figure 2. Comparison of mean DLQI scores before and after the intervention (n=53).

3. Overall Findings

Overall, the pre- and post-intervention comparison demonstrates a favorable reduction in psychological distress and an improvement in dermatology-related quality of life. DASS-21 scores showed reductions in depression, anxiety, and stress, while DLQI scores also decreased substantially. These findings suggest an overall beneficial effect of the intervention on both psychological well-being and quality of life among participants with skin diseases.

4. Synopsis Conclusion

The findings indicate significant reductions in depression, anxiety, stress, and dermatology-related quality-of-life scores following the Ayurvedic intervention. However, because the study used a one-group pre-test/post-test design without a control group, causal conclusions regarding the effectiveness of the intervention should be interpreted with caution.

Note: The above are descriptive pre–post results.

Limitations

- Small sample size, which may limit generalizability.
- Lack of long-term follow-up to evaluate sustained effects of treatment.
- Possible cultural bias due to the study population.
- on self-report measures, which may introduce response bias.
- The absence of a control or comparison group limits the ability to establish a causal relationship between the Ayurvedic intervention and observed changes.
- Purposive sampling may limit the generalizability of the findings.

Ethical Considerations

- Informed consent will be obtained from all participants before participation.
- Confidentiality of participants' personal information was maintained.
- Participants had the right to withdraw from the study at any stage.
- All procedures will ensure non-harmful treatment methods.

Expected Outcomes

- Patients receiving Ayurveda-based interventions are expected to show a significant reduction in levels of depression, anxiety, and stress.
- Improvement in skin condition is expected to improve psychological well-being and quality of life.
- Participants are expected to demonstrate improvements in self-esteem,body image,and confidence following Ayurvedic treatment.
- Ayurvedic interventions, including herbal medication, Panchakarma therapies, dietary regulation, and lifestyle modifications, are expected to promote holistic healing by addressing both physical and psychological aspects of chronic skin disorders.
- The study supports a holistic approach where dermatologists, psychologists, and Ayurvedic practitioners work together to improve patient care
- The research is expected to increase knowledge about the psychological benefits of Ayurveda in chronic skin diseases.

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