International Research Journal of Ayurveda & Yoga Vol. 8(10), pp. 13-17, October, 2025
Available online at http://irjay.com
ISSN: 2581-785X
DOI: 10.48165/IRJAY.2025.81003

SURVEY STUDY

Unraveling *Darunaka* (Dandruff): A Survey-Based Insight into its Psychosocial Impact

Elisha Bhusal[1]*, Vishnu Kumar Jajoriya[1], Ravi Kumar[2], Sunita Choudhary[1], Akshay Sharma[3]

[1]PG Scholar, Department of Swasthavritta and Yoga, National Institute of Ayurveda, Jaipur, Rajasthan, India.
[2]Associate Professor, Department of Swasthavritta and Yoga, National Institute of Ayurveda, Jaipur, Rajasthan, India.
[3]BNYS, Department of Yoga, Om Shiv Sansthan College of Yoga and Naturopathy Sciences, Mangalwad, Chittorgarh, Rajasthan, India.

ARTICLE INFO

Article history:
Received on: 11-09-2025
Accepted on: 13-10-2025
Published on: 31-10-2025

Key words:
Dandruff,
Darunaka,
Dermatology life quality index,
Psychosocial impact,
Quality of life

ABSTRACT

Background: Dandruff, being a common condition with a global prevalence of 50% and a prevalence of 60.1% in South Asia, is not only an issue of physical symptoms. It influences the quality of life (QoL) of an individual suffering from it. Hence, to analyze the effect of this condition on the dermatological QoL of the affected person, this survey study has been conducted. This study incorporates the Dermatology Life Quality Index (DLQI) developed by the Department of Dermatology at Cardiff University, UK.

Objectives: To assess the QoL of patients with dandruff and to perform a subclass analysis of the DLQI questionnaire.

Methods: This quantitative, observational study was carried out in the Department of Swasthavritta and Yoga at the National Institute of Ayurveda, Jaipur, Rajasthan, India, from July 2024 until January 2025. Data were collected through a Google form using the validated English version of the Dermatology Life Quality Index (DLQI).

Results: A total of 301 patients participated in the study. It was observed that 3% of the participants had an extremely large effect, 15% had a very large effect, 29% had a moderate effect, 26% had a small effect, and 27% had no effect of dandruff on their QoL. The mean DLQI of the participants was seen to be 6.42, with a minimum value of 0 and a maximum value of 30. Among the six subclasses, it was seen that dandruff affected symptoms and feelings the most, followed by daily activities, then treatment, then personal relationships, then work and school, and finally leisure.

Conclusion: Dandruff (*Darunaka*) significantly affects the QoL, particularly in domains related to symptoms, emotional well-being, and daily activities. This survey-based study using the DLQI highlights the need for holistic management approaches that address both physical and psychosocial aspects of the condition. Ayurvedic insights offer valuable frameworks for personalized care, and further research is recommended to explore integrative treatment strategies.

1. INTRODUCTION

Dandruff is a very common condition that has affected almost all individuals at least once in their lifetime. It is a global problem, with a prevalence of 50% worldwide and 60.1% in South Asia,[1] and is recognized as one of the main causes of hair fall. It is not only an issue of physical symptoms and discomfort; it also largely influences the mental, emotional, and social aspects of a human. It causes itchy, flaking skin of the scalp, which makes it susceptible to hair fall. It can lead to low self-esteem, embarrassment, and avoidance of social gatherings due to fear of being called unhygienic or poorly groomed. The stubbornness against treatment shown by dandruff can be really frustrating.[2]

According to Ayurveda, *Darunaka* is classified as one among *Kapalagata Roga* by Acharya *Vagbhatta* and *Sharangdhara*, and one among *Kshudraroga* by Acharya *Sushruta, Bhava Mishra*, and *Madhavkar*. *Darunaka* is characterized by *Kandu* (itching), *Keshbhoomi Prapatyate* (scaling of the scalp), *Rukshata* (dryness and roughness of the scalp), etc., and all these symptoms are due to the vitiation of *Kapha* and *Vata* doshas.[3]

Corresponding Author:
Elisha Bhusal, PG Scholar,
Department of Swasthavritta and Yoga, National Institute of Ayurveda,
Jaipur, Rajasthan, India. Phone: +91-8107132944.
Email: bhusalelisha@gmail.com

We can see that dandruff is a condition that clearly affects the quality of life (QoL) of individuals.[4] Hence, an attempt was made to perform a survey study to analyze the effect of *Darunaka* (Dandruff) on QoL using the Dermatology Life Quality Index (DLQI).

2. MATERIALS AND METHODS

2.1. Participants and Study Design

This is a cross-sectional study investigating the relationship between QoL and disease severity of patients with dandruff. Consecutive sampling was performed on people who fulfilled the inclusion criteria, which were having dandruff, aged between 18 and 60 years, and willing to fill out the questionnaire. The exclusion criteria were patients suffering from systemic diseases, neurological disorders, pregnant and lactating mothers.

2.2. Questionnaire

The Dermatology Life Quality Index (DLQI), developed by the Department of Dermatology at Cardiff University, UK, was used in this study. The DLQI questionnaire consists of 10 questions, each designed to assess a different aspect of how skin disease affects a patient's life. The questions address areas such as symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment.[5] The answers are scored on a scale from 0 to 3, and the total score can range from 0 to 30, with higher scores indicating a greater impact on the QoL.

2.3. Scoring

The DLQI consists of 10 questions that ask about symptoms, feelings, daily activities, leisure, work, school, personal relationships, and treatment.[6] The questionnaire consists of each question having four alternative responses: "not at all," "a little," "a lot," or "very much" with corresponding scores of 0, 1, 2, and 3, respectively. The answer "not relevant" is scored as 0. The DLQI is calculated by summing the score of each question, resulting in a maximum of 30 and a minimum of 0. The higher the score, the greater the impairment of QoL. The DLQI can also be expressed as a percentage of the maximum possible score of 30.[7]

A total score greater than 21 indicates an extremely large effect, 11–20 indicates a very large effect, 6–10 indicates a moderate effect, 2–5 indicates a small effect, and 0–1 indicates no effect.[8]

2.4. Sample Characteristics

The study population included students, teachers, and staff of various colleges in and around Jaipur. Consecutive sampling was performed on people who fulfilled the inclusion criteria, which is having Dandruff. The sample size was 301.

2.5. Survey Administration

This Google Form-based survey started in July 2024 and ended in January 2025. Since this was a web-based survey, multiple participation was prevented by not allowing multiple responses from the same email ID.

2.6. Ethical Considerations

The names of the participants were not asked, and the mail ID was not recorded for the maintenance of anonymity and confidentiality.

3. RESULTS

A total of 301 participants were a part of this survey study. Among those, six participants were omitted due to missing data. In question no 10, an additional eight participants had missing data, but, since in the questionnaire analysis, missing data in one question was suggested to be used as 0, the calculations were done according to the same. The study participants included people suffering from dandruff and within the age group of 18–60 years. Since the survey consisted of 10 questions, each with a maximum score of 3 and a minimum score of 0, the results can be summarized as follows.

The DLQI scoring can be summarized as follows shown in Table 1.

We observed that among the total participants of our study, 3% individuals had their QoL extremely affected by dandruff, 15% were very largely affected, 29% had a moderate effect, 26% had a small effect and in turn, and 27% individuals did not effect whatsoever on their QoL. This summarizes that there was a maximum number of participants who complained of having a moderate effect of dandruff on their QoL [Figures 1-3].

3.1. Statistical Analyses

3.1.1. Descriptive statistics

To understand the overall distribution.

The tools used were as follows are shown in Table 2:

3.1.2. Subclass analysis

The 10 questions of DLQI can further be divided into six subclasses to analyze the effect of any dermatological condition on different domains of life, such as question no. 1 and 2 in regards to symptoms and feelings, question no. 3 and 4 for daily activities, question no. 5 and 6 for leisure, question no. 7 for work and school, question no. 8 and 9 for personal relationships, and question no. 10 for treatment.

Dermatologically, dandruff sits on the spectrum that ranges from mild to severe,[9] and there are differences in the effect of dandruff with regard to the six subclasses as well. To analyze these differences, the results in different subclasses were calculated and compared as in Figure 4 and 5:

We saw that dandruff affected symptoms and feelings the most, with 46.44% participants having a mild effect, 24.1% having a moderate effect, and 10.5% having a severe effect, followed by daily activities, then treatment, then personal relationships, then work and school, and finally leisure.

4. DISCUSSION

This study offers a comprehensive survey-based analysis of the psychosocial impact of *Darunaka* (dandruff) among individuals aged 18–60 years, using the dermatological life quality index (DLQI) as a validated tool. With a mean DLQI score of 6.42, the findings indicate that dandruff exerts a moderate impact on the QoL for a significant portion of the population. Specifically, 29% of participants reported a moderate effect, whereas 15% and 3% experienced very large and extremely large effects, respectively.

The subclass analysis revealed that the domain most affected was "symptoms and feelings," followed by "daily activities" and "treatment." This suggests that the physical discomfort and emotional distress associated with dandruff, such as itching, embarrassment, and

frustration with treatment, are central to its psychosocial burden. These findings are consistent with previous literature,[10] which highlights the stigmatizing nature of visible dermatological conditions and their potential to impair self-esteem and social functioning.

Interestingly, domains such as "leisure" and "work/school" were less affected, possibly indicating that while dandruff influences personal and emotional well-being, its impact on professional or recreational engagement may be comparatively limited. However, the presence of even mild symptoms in these areas underscores the pervasive nature of the condition.

The Ayurvedic perspective, which classifies *Darunaka* under *Kapalagata Roga* and *Kshudra Roga*, attributes its pathogenesis to the vitiation of *Kapha* and *Vata dosha*. The symptoms described in classical texts, such as *kandu* (itching), *Rukshata* (dryness), and *Keshabhoomi prapatyaye* (scaling), correlate well with the domains most affected in the DLQI, reinforcing the relevance of traditional diagnostic frameworks in understanding modern psychosocial outcomes.

Limitations of the study include its reliance on self-reported data and the use of a web-based survey, which may introduce selection bias. In addition, the cross-sectional design precludes causal inference. Future studies could benefit from longitudinal designs and inclusion of clinical severity grading to correlate physical symptoms with psychosocial impact more precisely.

5. CONCLUSION

This study underscores the significant psychosocial burden posed by *Darunaka* (dandruff), particularly in domains related to symptoms, emotional well-being, and daily functioning. While often dismissed as a minor dermatological issue, dandruff can substantially impair QoL, as evidenced by DLQI scores. The findings advocate for a more holistic approach to dandruff management – one that integrates symptomatic relief with psychological support and patient education.

Ayurvedic insights into the etiology and symptomatology of *Darunaka* provide a valuable framework for personalized care, especially in culturally rooted healthcare settings. By acknowledging both the physical and emotional dimensions of the condition, clinicians can better address patient needs and improve overall outcomes.

Further research is warranted to explore therapeutic interventions – both conventional and Ayurvedic – that can mitigate the psychosocial effects of dandruff and enhance dermatological QoL.

6. ACKNOWLEDGMENTS

Nil.

7. AUTHORS' CONTRIBUTIONS

All authors have contributed equally to conception, design, data collection, analysis, drafting, and final approval of the manuscript.

8. FUNDING

Nil.

9. ETHICAL APPROVALS

This study does not require ethical clearance as it is a survey study.

10. CONFLICTS OF INTEREST

Nil.

11. DATA AVAILABILITY

This is an original manuscript, and all data are available for review purposes only from the principal investigators.

12. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliations.

REFERENCES

1. Keragala RK, Kasunsiri T, Kempitiya K, Kumarapeli N, Kumara K, Gunathilakha S. A study on the extent, aetiology and associated factors of dandruff in a group of medical students and the *in vitro* effects of antidandruff preparations. Sri Lankan J Infect Dis. 2020;10:134-45. doi: 10.134.10.4038/sljid.v10i2.8291
2. Ranganathan S, Mukhopadhyay T. Dandruff: The most commercially exploited skin disease. Indian J Dermatol. 2010;55(2):130-4. doi: 10.4103/0019-5154.62734
3. Shastri A. Nidansthan. In: Sushruta samhita (ayurveda tattva sandipika). Chapter 13, Kshudraroga-Nidan verse 34. Varanasi: Chaukhamba Sanskrit Sansthan; 2011.
4. Chan CS, Smith T, He Z, Garter C. The sequelae and moderators of influence of dandruff on mental health among mainland Chinese adults. Clin Cosmet Investig Dermatol. 2024;17:1333-46. doi: 10.2147/CCID.S459498
5. Hongbo Y, Thomas CL, Harrison MA, Salek MS, Finlay AY. Translating the science of quality of life into practice: What do dermatology life quality index scores mean? J Invest Dermatol. 2005;125:659-64.
6. Vyas J, Johns JR, Abdelrazik Y, Ali FM, Ingram JR, Salek S, Finlay AY. The dermatology life quality index (DLQI) used as the benchmark in validation of 101 quality-of-life instruments: A systematic review. J Eur Acad Dermatol Venereol. 2025;39(3):631-79. doi: 10.1111/jdv.20321.
7. Finlay AY, Khan GK. Dermatological life quality index (DLQI) - a simple practical measure for routine clinical use. Clin Exp Dermatol. 1993;19:210-6.
8. Nast A, Smith C, Spuls PI, Avila Valle G, Bata-Csorgo Z, Boonen H, De Jong E, Garcia-Doval I, Gisondi P, Kaur-Knudsen D, Mahil S, Mälkönen T, Maul JT, Mburu S, Mrowietz U, Reich K, Remenyik E, Rønholt KM, Sator PG, Schmitt-Egenolf M, Sikora M, Strömer K, Sundnes O, Trigos D, Van Der Kraaij G, Yawalkar N, Dressler C. EuroGuiDerm Guidelines on the systematic treatment of psoriasis vulgaris-part 1: Treatment and monitoring recommendations. J Eur Acad Dermatol Venereol. 2020;34(11):2461-98.
9. Borda LJ, Wikramanayake TC. Seborrheic dermatitis and dandruff: A comprehensive review. J Clin Investig Dermatol. 2015;3(2):10.13188/2373-1044.1000019. doi: 10.13188/2373-1044.1000019.
10. Lakum M. The Hidden struggle: Understanding the psychosocial impact of dermatological diseases. Indian J Postgrad Dermatol. 2024;2:74-9. doi: 10.25259/IJPGD_23_2024

How to cite this article:
Bhusal E, Jajoriya VK, Kumar R, Choudhary S, Sharma A. Unraveling *Darunaka* (Dandruff): A Survey-Based Insight into its Psychosocial Impact. IRJAY. [online] 2025;8(10);13-17.
Available from: https://irjay.com
DOI link- https://doi.org/10.48165/IRJAY.2025.81003

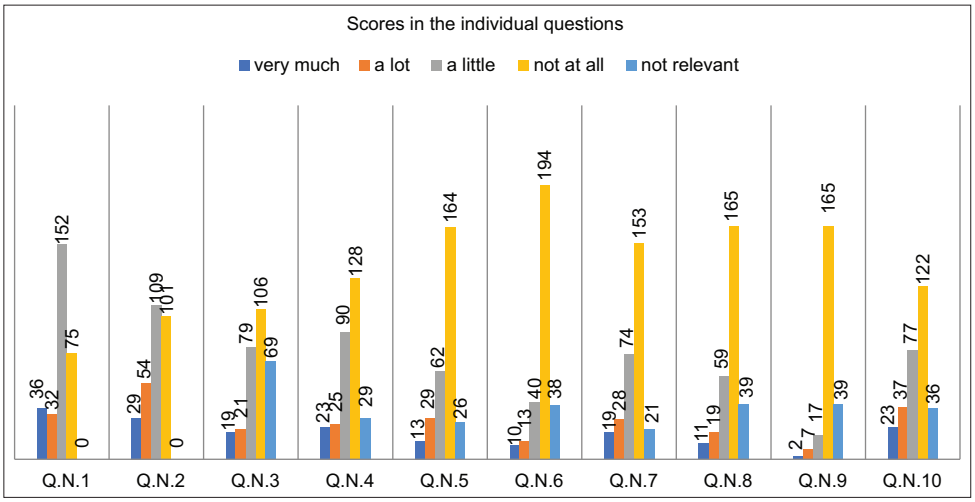

Figure 1: Scores according to questions

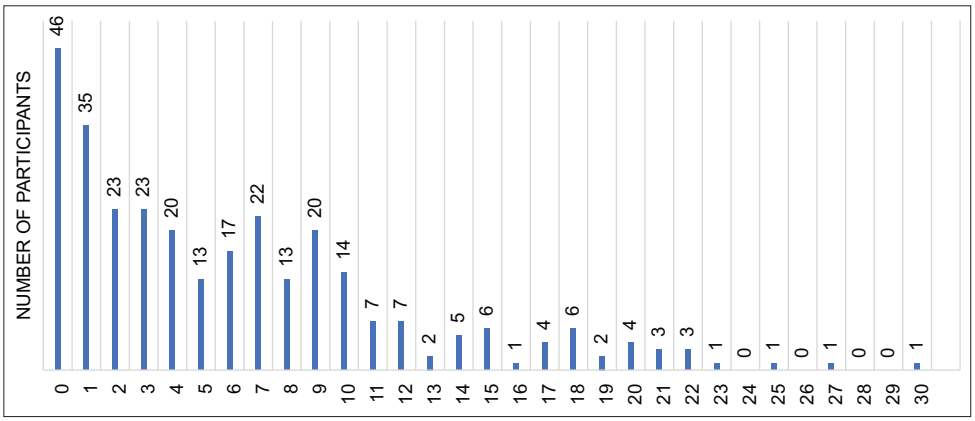

Figure 2: Summary of DLQI scores

Table 1: Summary of DLQI scores

S. No.	Question	Very much (%)	A lot (%)	A little (%)	Not at all (%)	Not relevant (%)
1	Over the last week, how itchy, sore, painful, or stinging has your scalp been?	36 (12.2)	32 (10.8)	152 (51.5)	75 (25.4)	-
2	Over the last week, how embarrassed or self-conscious have you been because of your dandruff?	29 (9.9)	54 (18.4)	109 (37.2)	101 (34.5)	-
3	Over the last week, how much has your condition interfered with you going shopping, or looking after your home or garden?	19 (6.5)	21 (7.1)	79 (26.9)	106 (36.1)	69 (23.5)
4	Over the last week, how much has your dandruff influenced the clothes you wear?	23 (7.8)	25 (8.5)	90 (30.5)	128 (43.4)	29 (9.8)
5	Over the last week, how much has your condition affected any social or leisure activities?	13 (4.4)	29 (9.9)	62 (21.1)	164 (55.8)	26 (8.8)
6	Over the last week, has your condition made it difficult for you to do any sport?	10 (3.4)	13 (4.4)	40 (13.6)	194 (65.8)	38 (12.9)
7	Over the last week, how much has your condition been a problem in working or studying?	19 (6.4)	28 (9.5)	74 (25.1)	153 (51.9)	21 (7.1)
8	Over the last week, how much has your condition created problems with your partner or any of your close friends or relatives?	11 (3.8)	19 (6.5)	59 (20.1)	165 (56.3)	39 (13.3)
9	Over the last week, has your dandruff caused any sexual difficulties?	2 (0.1)	7 (2.4)	17 (5.8)	165 (56.3)	102 (34.8)
10	Over the last week, how much of a problem has the treatment of your dandruff been, for example, products too expensive, too much time taking, etc?	23 (7.8)	37 (12.5)	77 (26.1)	122 (41.4)	36 (12.2)

DLQI: Dermatology Life Quality Index

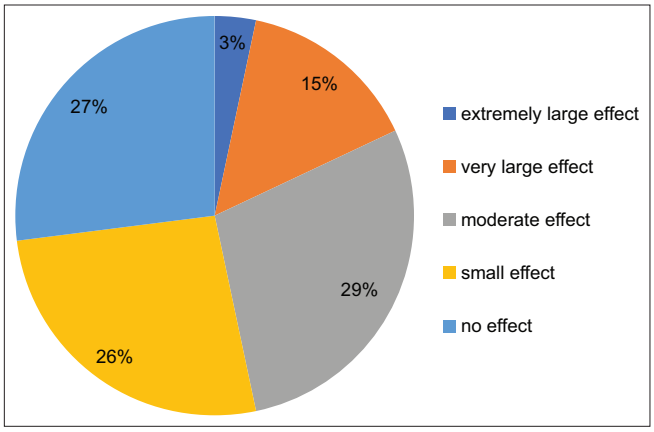

Figure 3: Effect of dandruff on quality of life

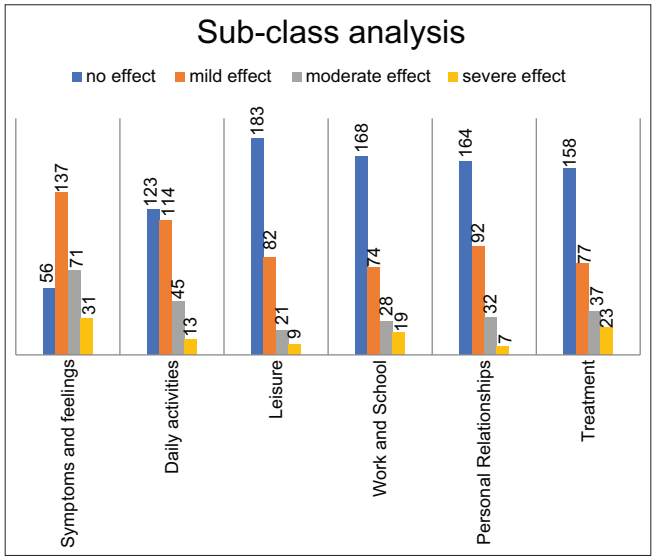

Figure 4: Subclass-wise effect on quality of life

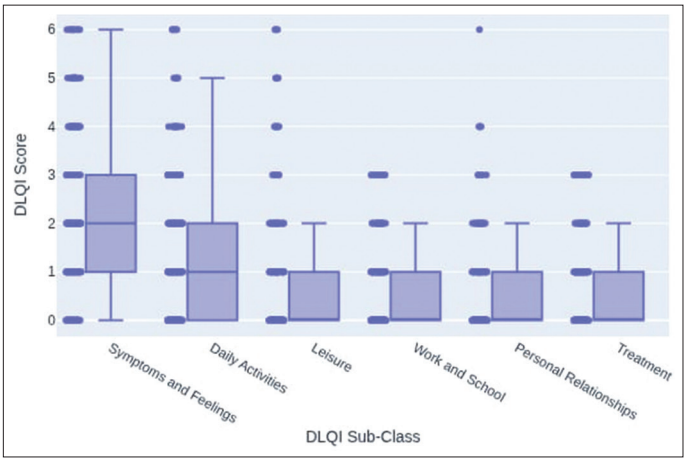

Figure 5: Distribution of QLQI subclass scores

Table 2: Descriptive statistics

Statistic	Value
Total number of participants	301
Mean DLQI	6.42
Median DLQI	5
Standard deviation	5.27
Minimum DLQI	0
Maximum DLQI	30