IJMRAP

International Journal of Multidisciplinary Research and Publications

ISSN (Online): 2581-6187

Seborrheic Dermatitis: Observing Quality of Life and Demographic Factors in Outpatients

Muhammad Irfan Gani Putra[1], Sawitri[2], Margarita Maria Maramis[3], Evy Ervianti[4]

[1]Faculty of Medicine, Airlangga University, Surabaya

[2]Faculty of Medicine, Airlangga University, Department of Dermatology and Venerology, Dr. Soetomo General Academic Hospital, Surabaya

[3]Faculty of Medicine, Airlangga University, Department of Psychiatric Medicine, Dr. Soetomo General Academic Hospital, Surabaya

[4]Faculty of Medicine, Airlangga University, Department of Dermatology and Venerology, Dr. Soetomo General Academic Hospital, Surabaya

Email address: sawitri@fk.unair.ac.id / muhammad.fan.gani-2019@fk.unair.ac.id

Abstract— *The aim of this study was to describe the quality of life of patients with seborrheic dermatitis at Dr. Soetomo General Hospital using the Indonesian version of the DLQI questionnaire, along with their demographic characteristics and clinical conditions. This research used a descriptive quantitative design with a cross-sectional survey, collecting data from new seborrheic dermatitis patients who met the inclusion criteria between 2017 and 2021. These patients were then asked to complete the Dermatology Life Quality Index (DLQI) through a Google Form. Results showed that several demographic groups had higher average DLQI scores, including male patients, those aged 40–49 years, individuals living in East Surabaya, patients with a high-school education level, and private-sector employees. Overall, seborrheic dermatitis had a considerable impact on patients' quality of life, with a mean DLQI score of 14.34. The highest scores were found in the questions related to symptoms, embarrassment, and social activities. Patients with genital lesions, immune-related conditions, and those in the 40–49 years age group reported the greatest impact. These findings concludes that seborrheic dermatitis can occur across all demographic groups, while certain demographic group showed higher DLQI scores, reflecting a heavier impact on quality of life.*

Keywords— *Demographic Factors: DLQI: Quality of Life: Seborrheic Dermatitis.*

I. Introduction

Seborrheic dermatitis (SD) is a chronic inflammatory skin condition that commonly appears in areas with plenty of sebaceous glands, such as the scalp, face, and skin folds. Globally, SD affects approximately 1–3% of the adult population, although prevalence varies between countries. In Indonesia, SD represents 0.99–5.8% of dermatological cases reported from 2013 to 2015. This condition may negatively influence patients' quality of life (QoL), defined by the World Health Organization as an individual's perception of their position in life within the framework of cultural norms, value systems, personal objectives, and expectations. Several studies using the Dermatology Life Quality Index (DLQI) have shown that SD patients often experience noticeable emotional and social problems.

This study uses the Indonesian version of the DLQI to assess the QoL of SD outpatients at Dr. Soetomo General Hospital. Demographic factors such as age, gender, and educational level are also included, as these characteristics have been shown to influence QoL in chronic conditions. The hope is that the results can give doctors a better picture of how SD affects patients' daily lives and what their demographic backgrounds look like, so healthcare services and patient education for SD in Indonesia can be improved.

II. Methods

This study was a quantitative descriptive cross-sectional survey conducted at the Dermatology and Venereology Outpatient Clinic (URJ Kulit dan Kelamin), Dr. Soetomo General Hospital, Surabaya, Indonesia. New patients diagnosed with seborrheic dermatitis (ICD-10 L21) recorded in clinic medical records for the 2017–2021 period were identified, then recruited using purposive, non-random sampling during a 2-month implementation period, with recruitment intended to include as many eligible patients as possible. In general, participants were adults aged 18–65 years who agreed to join the study and were able to complete the questionnaire independently; patients who could not complete the questionnaire on their own due to language or reading barriers, inability to use the required device, or other conditions that prevented independent responses were excluded. Demographic data were obtained from medical records and included sex, age group (18–29, 30–39, 40–49, 50–65), residence area (Surabaya regions and outside Surabaya), highest education level (SD, SMP, SMA, diploma, sarjana), and occupation categories (e.g., government employee, private employee, student, teacher/lecturer, housewife). Additional variables recorded included patient-perceived seborrheic dermatitis severity on an ordinal scale (very mild to very severe) and the presence of other skin diseases besides seborrheic dermatitis (e.g., atopic dermatitis, contact dermatitis, psoriasis) based on records and the data collection form. Eligible patients were contacted by telephone to provide study information and obtain informed consent, and participants completed the Dermatology Life Quality Index (DLQI) through a Google Form using their personal device; the form was set as required to reduce missing item responses. The DLQI consists of 10 items with response options scored from 0 to 3, producing a total score of 0–30, and DLQI

banding was used to describe the level of impact on quality of life (0–1, 2–5, 6–10, 11–20, 21–30). After data collection, responses were checked for completeness, coded (including conversion of DLQI responses to numeric scores), entered, and cleaned; results were analyzed descriptively and presented as grouped distributions (frequency tables) for participant characteristics and DLQI outcomes.

III. Results

A total of 1,276 new patients were diagnosed with seborrheic dermatitis (SD) from 2017 to 2021, consisting of 381 patients in 2017, 233 in 2018, 373 in 2019, 148 in 2020, and 141 in 2021. Most of them were women (60.55%), and the average age was 39.6 years. The youngest SD patient was only 7 days old, while the oldest reached 91 years. Many of the patients lived in Surabaya (68.25%), had high school education (48.12%), and worked as private employees (27.75%).

Of the 1,276 patients, 774 did not meet the study's inclusion criteria. Reasons for exclusion included age outside the required range, not being an outpatient, having other skin diseases that could affect DLQI scoring, and the absence of a contactable phone number. Of the 502 eligible patients who were subsequently contacted, only 41 were successfully reached and gave consent to participate.

TABLE I. Demographic Distribution of SD Outpatients

Category	Year					Total	Percentage (%)
	2017	2018	2019	2020	2021		
Sex							
Man	125	101	155	58	68	507	39,45
Woman	256	132	218	90	73	769	60,55
Age							
<18	58	34	56	15	23	186	14,57
18-29	62	49	79	39	24	253	19,82
30-39	43	20	54	24	21	162	12,69
40-49	75	48	53	25	20	221	17,32
50-65	110	55	96	36	39	336	26,33
>65	33	27	35	9	14	118	9,24
Domicile							
Central Surabaya	9	14	7	10	14	54	4,25
North Surabaya	11	9	25	12	12	69	5,4
East Surabaya	23	21	32	24	15	115	9
South Surabaya	14	13	21	15	24	87	6,8
West Surabaya	8	38	67	5	14	132	10,36
Outside Surabaya	86	78	138	53	50	405	31,75
Surabaya City	230	61	82	29	12	414	32,44
Education							
Unschooled	39	12	27	6	13	97	7,6
Elementary	48	23	38	15	17	141	11,05
Middle	36	23	36	24	18	137	10,75
High	181	122	180	70	61	614	48,12
Diploma	9	12	8	7	5	41	3,24
Undergraduate	42	22	54	18	16	152	11,94
Unspecified	25	19	29	8	13	94	7,3
Proffesion							
Civic Employee	16	8	13	3	6	46	3,6
Private Employee	107	57	102	46	42	354	27,75
Students	57	37	52	24	13	183	14,35
Teachers	7	6	10	2	3	28	2,2
Police or Military	1	0	2	0	0	3	0,25
Farmer	2	6	5	2	4	19	1,5
Housewife	100	59	92	30	27	308	24,15
Pensiunan	15	9	12	4	5	45	3,5
Unemployed	30	20	38	8	12	108	8,45
Unspecified	46	31	47	29	29	182	14,25

Male patients showed a higher average DLQI score (15) compared with female patients (14.03). The age group with the highest total DLQI score was 40–49 years, with an average of 16.8. Based on place of residence, patients living in West Surabaya had the highest DLQI score (16.2), while those in Central Surabaya had the lowest (13). In terms of education, individuals with a high-school level of education had the highest DLQI mean score (16.46). Private-sector employees, representing the most common occupational category, also exhibited the highest DLQI score (16.21).

DLQI scores were also grouped by other patient conditions. Table 3 shows the average scores based on how severe patients think their condition is, where the lesions appear, whether they had been given medication before, and whether they have immune-related diseases. The data showed that fhe higher the perceived severity, the higher the DLQI

score. Most respondents rated their condition as moderate (15 people), while only one person reported very mild symptoms, and three people reported very severe symptoms.

TABLE II. DLQI Score with Demographic Distribution

Category	Respondents (n: 41)	Percentage (%)	Mean DLQI
Sex			
Man	13	31,7	15
Woman	28	68,3	14,03
Age			
18-29	20	48,78	14,45
30-39	11	26,82	12,181
40-49	5	12,2	16,8
50-65	5	12,2	16,2
Domicile			
Surabaya Center	1	2,44	13
North Surabaya	5	12,2	14,2
East Surabaya	7	17,07	15,85
South Surabaya	3	7,32	14,67
West Surabaya	5	12,2	16,2
Outside Surabaya	20	48,78	13,4
Education			
Elementary	0	0	
Middle	1	2,44	13
High	13	31,7	16,46
Diploma	4	9,74	14,33
Undergraduate	23	56,12	13,39
Occupation			
Civic Employees	5	12,2	11,2
Private Employees	23	56,12	16,21
Students	5	12,2	10
Teachers	4	9,74	13
Housewife	4	9,74	14,25

TABLE III. DLQI Score with Additional Condition

Category	Respondents (n: 41)	Percentage (%)	Mean DLQI
Severity Perception			
Very mild	1	2,44	10
Mild	11	26,82	11,9
Moderate	15	36,58	13,07
Severe	11	26,82	18
Very Severe	3	7,32	17,67
Lesion*			
Scalp	13	31,7	13,07
Face	7	17,07	10.85
Neck	4	9,74	12.5
Nose and/or ear fold	5	12,2	16
Chest and/or Back	8	19,51	15
Hands and/or feet	10	24,39	15.9
Genitals	12	29,26	17
Single	20	48,78	13,05
Multiple	21	51,22	15,85
Medication			
Very rarely	0	-	-
Rarely	5	12,2	14
Sometimes	7	17,07	15
Often	11	26,82	13,09
Always	18	43,9	14,95
Immune Disorder			
SLE	2	4,87	17
HIV/AIDS	1	2,44	14
Asthma	4	9,74	13
Allergy	19	46,34	15,26
Memiliki	23	56,1	15,3
Tidak memiliki	18	43,9	13,1

The lesion location with the highest average DLQI score was the genital area (17), while the neck had the lowest average score (12.5). The scalp, despite being the most common lesion site, showed a relatively moderate DLQI score (13.07). Patients with immune-related conditions had higher DLQI scores (15.3) compared to those without such conditions (13.1). The most common immune condition was allergy, found in 19 people. Immune condition with the highest DLQI score was SLE (17), followed by allergy (15.26).

IV. Discussion

Seborrheic dermatitis (SD) was diagnosed in 1,276 new patients at Dr. Soetomo General Hospital during the 2017–2021 period, most were women (60.55%). Globally, SD is reported more often in men due to the influence of androgen hormones, while this study found a higher number of female patients. This finding may be explained by a tendency among women to pay attention to their appearance and health and therefore to seek medical care earlier, where as men are more likely to disregard their symptoms until the disease has become more advanced[1].

The most common age group among patients with seborrheic dermatitis (SD) was 50–65 years (26.33%), which is consistent with previous studies reporting that the peak occurance of SD occurs between 30 to 60 years of age[2]. This pattern is thought to be related primarily to physiological changes in the skin, including reduced sebum production and alterations in skin pH, which may increase susceptibility to Malassezia sp. infection[3]. In contrast, hormone levels in older indivduals are lower, reducing sebum production that is commonly considered to be a risk factor of developing SD[4].

Most SD patients came from Surabaya (68.25%), but many also came from out of town because Dr. Soetomo General Hospital is a main referral hospital. Environmental factors, including temperature and humidity, are known to influence the development of SD[5]. However, incomplete information on patients' residence limited the ability to assess the association between environmental characteristics and SD prevalence. A more complete and systematic recording of demographic data is needed.

Most seborrheic dermatitis (SD) patients had completed senior high school (48.12%), followed by those with a bachelor's degree (11.94%) and elementary school (11.05%). This proportion reflects the national distribution of education level, where high-school graduates are the largest group. Better health knowledge among individuals with an undergraduate degree may partly explain their relatively higher representation, as this group is more likely to seek medical attention compared to those with lower educational levels[6].

The most frequent occupations among SD patients were private employees (27.75%), followed by housewives (24.15%) and students (14.35%). Certain types of work have been discussed for its correlation to skin diseases, particularly jobs that involve exposure to chemicals, high temperatures, or humid conditions[7,8]. However, the available data did not include detailed job descriptions, which limit further exploration.

The mean DLQI score among SD patients was 14.34, higher than those reported in previous studies from Turkey (4.3), Netherlands (7.2±5.5), and Indonesia (8.73–9.3)[9–11]. This higher value is possibly because patients only seek treatment when their symptoms are already severe, so the impact on their quality of life is bigger. The main problems reported were itchyness, embarrassment, and discomfort in social environment.

The DLQI score was higher in men (15) than in women (14.03), possibly because men tend to ignore symptoms until the disease becomes more severe before seeking treatment[12]. The greatest impact on quality of life was observed in the 40–49-year age group (16.8), consistent with the peak incidence of SD[2]. Patients living in West Surabaya had the highest DLQI scores (16.2). This region is commonly viewed as having a relatively high socio-economic status, which may influence how strongly skin disease is perceived to interfere with daily life. Further studies are needed to determine the underlying causes more clearly.

Lesions of DS were most commonly found on the scalp, but those located in the genital area had the greatest impact on quality of life, with the highest DLQI score (17). This finding may be related to greater feelings of embarassment or discomfort due to the sensitive location of the lesions[13]. Higher DLQI scores were also seen in patients reporting greater perceived disease severity, multiple lesion sites, and additional risk factors particularly immune system disorders.

Overall, DS outpatients at Dr. Soetomo General Hospital had quality of life that was heavily affected by their disease, with an average DLQI score of 14.34. The highest DLQI scores were found among male patients aged 40–49 years, living in West Surabaya, with a senior high school education and employment in the private sector. Factors that appeared to contribute to higher DLQI scores included a perception of more severe disease, multiple lesion sites, irregular medication use, and the presence of comorbid conditions.

V. LIMITATIONS

The relatively small number of respondents compared with the overall SD patient population may restrict the generalizability of the results. Patients filled in the questionnaire themselves may cause some form of subjectivity bias. Additional data, such as disease severity and relapse history, were not completely recorded in the medical records. Therefore, further studies with larger sample sizes and more detailed data collection are needed to obtain a deeper understanding of the quality-of-life profile of patients with SD.

REFERENCES

[1] Novak JR, Peak T, Gast J, Arnell M. Associations Between Masculine Norms and Health-Care Utilization in Highly Religious, Heterosexual Men. *Am J Mens Health*. 2019;13(3). doi:10.1177/1557988319856739

[2] Galizia G, Belloni Fortina A, Semenzato A. Seborrheic Dermatitis: From Microbiome and Skin Barrier Involvement to Emerging Approaches in Dermocosmetic Treatment. *Cosmetics*. *Multidisciplinary Digital Publishing Institute (MDPI)*. 2024;11(6). doi:10.3390/cosmetics11060208

[3] Sowell J, Pena SM, Elewski BE. Seborrheic Dermatitis in Older Adults: Pathogenesis and Treatment Options. *Drugs Aging*. *Adis*. 2022;39(5):315-321. doi:10.1007/s40266-022-00930-5

[4] Howard B, Bascom CC, Hu P, et al. Aging-Associated Changes in the Adult Human Skin Microbiome and the Host Factors that Affect Skin Microbiome Composition. *Journal of Investigative Dermatology*. 2022;142(7):1934-1946.e21. doi:10.1016/j.jid.2021.11.029

[5] Ozkok Akbulut T. Is the frequency of seborrheic dermatitis related to climate parameters? *SiSli Etfal Hastanesi Tip Bulteni / The Medical Bulletin of Sisli Hospital*. Published online 2021. doi:10.14744/semb.2021.67503

[6] Hilmi IL, Alfian SD, Abdulah R, Puspitasari IM. Factors Associated with Health-Seeking Behavior in Indonesia: Evidence from the Indonesian Family Life Survey 2014. *Medicina (Lithuania)*. 2024;60(10). doi:10.3390/medicina60101607

[7] Hamann CR, Hoxworth NC, Hamann D. Occupational Seborrheic Dermatitis in a Steel Worker. *Dermatitis*. 2023;34(3):254-255. doi:10.1097/DER.0000000000000923

[8] Altun E, Topaloglu Demir F. Occupational facial dermatoses related to mask use in healthcare professionals. *J Cosmet Dermatol*. 2022;21(6):2535-2541. doi:10.1111/jocd.14415

[9] Rousel J, Nădăban A, Saghari M, et al. Lesional skin of seborrheic dermatitis patients is characterized by skin barrier dysfunction and correlating alterations in the stratum corneum ceramide composition. *Exp Dermatol*. 2024;33(1). doi:10.1111/exd.14952

[10] Ozcan Y, Sungur MA, Ozcan BY, Eyup Y, Ozlu E. The Psychosocial Impact of Chronic Facial Dermatoses in Adults. *Dermatol Pract Concept*. 2023;13(1). doi:10.5826/dpc.1301a29

[11] Agustin T, Rahmayunita G, Astriningrum R, Miranda E, Pusponegoro EH, Widaty S. *Quality of Life Assessment in Patients with Dandruff and Scalp Seborrheic Dermatitis at a Tertiary Hospital in Indonesia*. Vol 22. 2019.

[12] Ballering A V., Olde Hartman TC, Verheij R, Rosmalen JGM. Sex and gender differences in primary care help-seeking for common somatic symptoms: a longitudinal study. *Scand J Prim Health Care*. 2023;41(2):132-139. doi:10.1080/02813432.2023.2191653

[13] Temel B, Orenay OM, Yigit D, Kaymak D, Karaosmanoglu N, Eksioglu HM. Evaluation of dermatology life quality index, depression-anxiety-stress scores of patients with genital dermatoses. *Indian J Dermatol*. 2023;68(4):399-404. doi:10.4103/ijd.ijd_424_23.

Muhammad Irfan Gani Putra, Sawitri, Margarita Maria Maramis, and Evy Ervianti, “Seborrheic Dermatitis: Observing Quality of Life and Demographic Factors in Outpatients,” *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, Volume 8, Issue 11, pp. 80-83, 2026.