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IMPACT OF PSORIASIS ON QUALITY-OF-LIFE: AN ANALYSIS FROM A TERTIARY CARE HEALTH CENTRE.

Dermatology

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ABSTRACT

Introduction: Psoriasis is a chronic, autoimmune disorder characterized by the rapid overproduction of skin cells, leading to the formation of erythematous plaques covered with silvery-white scales. These lesions, which often appear on the elbows, knees, scalp and lower back, can cause significant itching, pain and burning. It seeks to characterize the comprehensive burden of psoriasis within the unique ecosystem of our tertiary care centre, to dissect its core clinical and psychological correlates, and to generate actionable insights that can bridge the gap between clinical signs and patient suffering. **Objective:** To study the impact of Psoriasis on Quality-of-Life at tertiary care health centre. **Material & Method:** This cross-sectional observational study was conducted over 18 months in the Department of Dermatology, Venereology and Leprosy at Muzaffarnagar Medical College and Hospital. The study population consisted of 100 patients, aged 16-70 years, newly diagnosed with psoriasis recruited from the Dermatology outpatient department. **Results:** The analysis identified that while demographic factors such as age, gender, residence, education and family history showed no statistically significant association with quality-of-life impact, the clinical severity of psoriasis (PASI score: Psoriasis Area and Severity Index) demonstrated a strong and significant positive correlation. Patients with higher PASI scores were more likely to report severe impairment, underscoring the direct link between objective disease severity and subjective patient burden. **Conclusion:** This study confirms the profound and universal burden psoriasis imposes on patient's lives, a burden that is most strongly dictated by the clinical severity and chronicity of the disease. The findings emphasize that effective management must extend beyond controlling physical symptoms to incorporate routine assessment of quality of life using tools like the DLQI (Dermatology Life Quality Index).

KEYWORDS

Psoriasis, PASI, Quality of Life (QoL), DLQI

INTRODUCTION

Psoriasis is a long-term autoimmune condition that causes skin cells to multiply rapidly. This results in raised, red patches covered with silvery-white scales. These patches commonly appear on the elbows, knees, scalp, and lower back and can be very itchy, painful, and burning[1]. The condition stems from a malfunction in the immune system that mistakenly accelerates the skin's growth cycle, preventing cells from shedding normally[2].Psoriasis is a chronic inflammatory skin disease linked to the immune system and poses a significant health concern worldwide, affecting about 2-3% of the global population[3]. In India, psoriasis affects an estimated 0.44% to 2.8% of the population. Dermatologists in India have reported a noticeable rise in daily psoriasis cases, with a trend of the condition affecting a younger demographic.[4]In tertiary care centres, which often manage the most severe, complex and treatment-resistant cases, understanding the full scope of this burden is paramount. The impact of psoriasis extends far beyond the skin, affecting psychological well-being, social functioning and economic stability, thereby making HRQoL (Health-Related Quality of Life) a critical outcome measure in clinical practice and research[5]. The connection between clinical severity (measured by PASI) and quality of life issues is often weak[6]. This means that even patients with mild skin symptoms can experience severe psychological distress, highlighting that the visible severity of lesions does not always reflect the internal burden[7]. Assessment tools are vital for capturing this subjective burden. Instruments like the DLQI & the Hospital Anxiety and Depression Scale (HADS) are widely used in clinical studies to quantify the impact that objective clinical measures alone cannot capture[8]. Research consistently shows a significant link between higher PASI scores and lower scores on quality of life questionnaires[9]. However, other factors are also strong predictors of poor QoL (Quality of Life), including longer disease duration, involvement of visible or high-impact sites like the hands and feet and lower socioeconomic status[10].

Aim

The primary objective of this study is to assess the effect of psoriasis on quality of life (QoL) at a tertiary care health centre by calculating the Dermatology Life Quality Index (DLQI) score. The secondary objectives are: first, to explore the correlation between DLQI scores and demographic characteristics, type of psoriasis, and disease-severity variables; and second, to evaluate the impact of psoriasis on QoL using the DLQI score and correlate it with the PASI.

MATERIAL AND METHODS

This cross-sectional observational study was conducted at the Department of Dermatology, Venereology and Leprology, Muzaffarnagar Medical College and Hospital over 18 months (12 months for data collection and 6 months for analysis) with a sample size of 100 newly diagnosed psoriasis patients aged 16–70 years of both genders attending the Dermatology OPD. Exclusion criteria included significant systemic disease, other skin conditions confounding quality of life (QoL) measurement, psoriasis treatment within the prior three months, inability to comprehend the DLQI questionnaire, age under 16 years, or unwillingness to consent. Clinico-demographic data were recorded, psoriasis severity was assessed using the PASI, and QoL impact was measured using the validated DLQI (10 items, total score 0–30). DLQI scores were interpreted as: 0–1 (no effect), 2–5 (small effect), 6–10 (moderate effect), 11–20 (very large effect), and 21–30 (extremely large effect). Correlations between DLQI scores, PASI, type of psoriasis, and demographic characteristics were examined.

RESULTS

A total of 100 patients with newly diagnosed psoriasis, aged 16–70 years, were enrolled in this cross-sectional observational study over an 18-month period.

The mean age of the study population was 36.3±13.8 years. The majority of patients were in the 21–30 years age group (27%, n=27), followed by the 41–50 years (21%, n=21) and 31–40 years (19%, n=19) groups. Overall, over 80% of patients were between 16 and 50 years of age as shown in Table1 below;

Table 1: Age-wise Distribution of Psoriasis Patients (n=100)

Age Group (years)	Number	Percentage
16-20	16	16%
21-30	27	27%
31-40	19	19%
41-50	21	21%
51-60	10	10%
61-70	7	7%
Total	100	100%

A slight male predominance was observed, with males constituting 53% (n=53) and females 47% (n=47) of the cohort.

More than half of the patients (56%, n=56) resided in urban areas. Regarding education, the largest proportion had elementary education (37%, n=37), followed by secondary education (33%, n=33), graduate or above (26%, n=26), and only 4% (n=4) were illiterate. A family history of psoriasis was reported in only 7% (n=7) of patients.

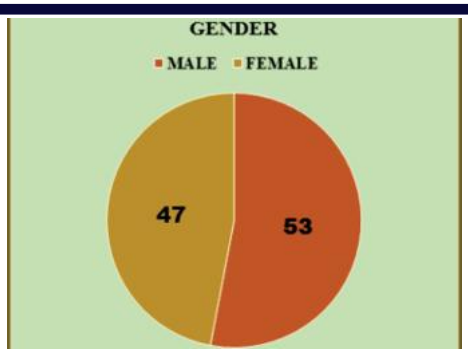

Figure 1: Gender Distribution of Psoriasis Patients (n=100)

The most frequently involved anatomical sites were the upper limbs (40%, n=40) and lower limbs (39%, n=39), followed by the chest (29%, n=29), back (27%, n=27), and abdomen (20%, n=20). Scalp and palms/soles were each involved in 19% (n=19) of patients.

In terms of disease duration, 39% (n=39) had lesions for less than 6 months, 37% (n=37) for 6–12 months, and 24% (n=24) for more than 12 months.

Chronic plaque psoriasis was the most common clinical type, accounting for 44% (n=44) of cases, followed by palmoplantar psoriasis (19%, n=19), scalp psoriasis (12%, n=12), mixed presentation (11%, n=11), and guttate psoriasis (10%, n=10). Nail psoriasis (3%, n=3) and erythrodermic psoriasis (1%, n=1) were less frequent.

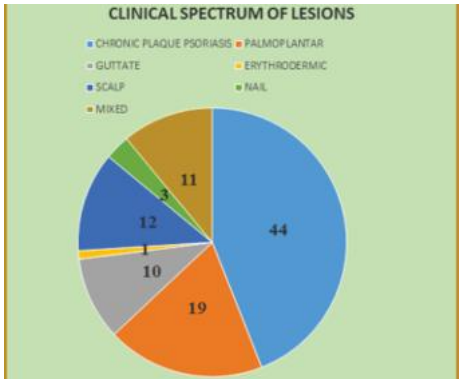

Figure 2: Clinical Spectrum of Lesions

Among the 97 patients eligible for PASI scoring (excluding 3 with isolated nail psoriasis), the majority had mild psoriasis (PASI ≤5: 60.82%, n=59), followed by moderate (PASI 6–10: 24.74%, n=24) and severe (PASI >10: 14.43%, n=14) disease. The three patients with nail psoriasis had NAPSI scores of 24, 25, and 32, respectively.

Table 2: PASI Scores of Psoriasis Patients (n=97)

Severity Grade	PASI Score	Number (n=97)	Percentage
Mild	≤5	59	60.82%
Moderate	6–10	24	24.74%
Severe	>10	14	14.43%
Total		97	100%

All 100% patients reported some impairment in QoL as measured by the Dermatology Life Quality Index (DLQI). The majority (87%) reported at least a moderate impact, with nearly half (49%, n=49) experiencing a very large effect (DLQI 11–20). An extremely large effect (DLQI 21–30) was reported by 8% (n=8), a moderate effect (DLQI 6–10) by 30% (n=30), and a small effect (DLQI 2–5) by 13% (n=13). No patient reported no effect.

No statistically significant association was found between QoL impact and age group (χ^2=11.44, p=0.934) or gender (χ^2=6.61, p=0.157). However, notable trends included a higher proportion of females reporting a "small effect" (19.1% vs. 7.5% in males) and males over six times more likely to report an "extremely large effect" (13.2% vs. 2.1% in females).

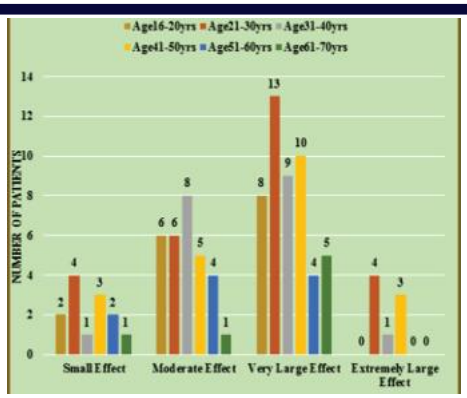

Figure 3: Distribution of Individuals According to Impact on QoL & Age (n=100)

A statistically significant association was observed between QoL impact and psoriasis severity as measured by PASI score (χ^2=30.15, p=0.0002). All patients with a "small effect" had mild psoriasis (PASI ≤5). Conversely, patients with higher PASI scores (6–10 and >10) were more likely to report "very large" or "extremely large" effects on QoL.

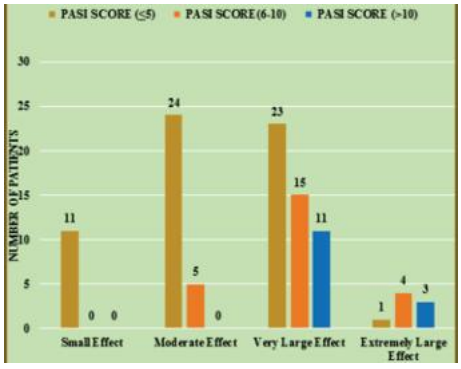

Figure 4: Distribution of Individuals According to Impact on QoL and Psoriasis Severity (PASI Score) (n=97)

DISCUSSION

The present study aimed to assess the impact of psoriasis on quality of life (QoL) and identify associated demographic and clinical factors in 100 patients. The key findings demonstrate that while the majority of patients had mild-to-moderate disease by PASI scoring, nearly all (100%) reported impairment in QoL, with 87% experiencing at least a moderate effect. A statistically significant positive correlation was observed between higher PASI scores and greater QoL impairment (p=0.0002), confirming that objective disease severity remains a major determinant of patient well-being. This aligns with multiple studies, including those by de Korte et al.[11], Eid et al.[12], and Pakran et al.[13]However, the presence of patients with mild PASI scores but severe QoL impairment underscores the discordance noted by Maul et al.[14], suggesting that other factors also contribute significantly.

Regarding age, the 21–30 years group showed the highest absolute number of patients reporting "very large" and "extremely large" effects on QoL, although no statistically significant association was found (p=0.934). This contrasts with studies by Nagrani et al.[15], Sampogna et al.[16], and Mork et al.[17], which reported significant age-related differences. The lack of significance in our cohort may reflect uniformly high disease burden or unique sociocultural influences requiring further exploration.

Gender analysis revealed a male predominance (53%) similar to reports by Kaur et al.[18] and Suchibrata et al.[19] While males were over six times more likely to report an "extremely large effect" (13.2% vs. 2.1% in females), this difference was not statistically significant (p=0.157). Our findings differ from Nagrani et al.[15] and Mabuchi et al.[20], who reported worse QoL in females, but align with a Chilean study showing higher DLQI scores in men[21]. These divergent results highlight potential gender-specific coping strategies and reporting patterns.

Upper and lower limbs were the most commonly involved sites (40% and 39%, respectively), followed by chest and back. The significant

impact of functionally limiting areas (limbs, palms/soles) over purely visible areas (scalp) on QoL is supported by Hanson et al.[22] and Krajewski et al.[23], while Prevezas et al.[24] confirmed that even localized nail psoriasis can independently impair QoL. Longer disease duration (>12 months) was associated with worse QoL, consistent with Suchibrata et al.[19] and Upadhyay et al.[25], reflecting the cumulative burden of persistent symptoms and treatment demands.

Chronic plaque psoriasis was the predominant clinical variant (44%), aligning with Bedi et al.[26] and global patterns. However, the notable frequency of palmoplantar psoriasis (19%) in our cohort, higher than the global benchmark of 3–4%, may reflect tertiary care referral bias, as this variant is notoriously treatment-resistant and disabling. Residence, education, and family history did not significantly influence QoL in our study, findings that are consistent with some literature (Zachariae et al.[27], Barot et al.[28]) but contradictory to others (Tejada et al.[29], Goyal et al.[30]), indicating complex, non-linear relationships.

CONCLUSION

Psoriasis profoundly impairs QoL across all patient subsets, with disease severity (PASI) and duration being the most consistent predictors. However, the lack of significant associations with age, gender, education, or residence in our cohort suggests that individual psychological and sociocultural factors may mediate the subjective burden of psoriasis. These findings underscore the need for individualized, multidisciplinary management that addresses both clinical severity and patient-reported outcomes, alongside public health strategies to reduce stigma and improve disease awareness.

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