ORIGINAL RESEARCH PAPER
Volume - 15 | Issue - 05 | May - 2026 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

STUDY ON QUALITY OF LIFE OF MEDICAL STUDENTS SUFFERING FROM MODERATE TO SEVERE ACNE VULGARIS

Dermatology

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ABSTRACT

Background: Acne vulgaris significantly impairs quality of life (QoL) in medical students under academic stress. **Aim:** To assess QoL, psychological, academic/social impacts, and treatment outcomes in moderate-severe acne. **Material & Method:** Prospective observational study on 30 medical students (18-35 years, GAGS ≥19) at Krishna Mohan Medical College (May 2024-Oct 2025). DLQI/CADI, GAD-7, PHQ-9, Rosenberg, PSS used; analyzed by χ^2, correlations ($p<0.05$). **Result:** Mean DLQI 12.8±5.2 (52% moderate-severe); anxiety 8.9±4.2. No significant correlations (severity-QoL r=0.263, p=0.161). Academic impact 46.7%; Tx improvement 43.3%. **Conclusion:** AV burdens QoL; integrated institutional support needed.

KEYWORDS

Acne vulgaris, DLQI, medical students, psychosocial, quality of life

1. INTRODUCTION

Acne vulgaris (AV) is a chronic inflammatory disorder of pilosebaceous units, manifesting as comedones, papules, pustules, nodules, and cysts due to hyperkeratinization, *Cutibacterium acnes* proliferation, sebum excess, and immune responses (Bhate & Williams, 2013). It affects up to 85% of adolescents, commonly on the face, chest, and back, with significant psychosocial consequences including anxiety, depression, low self-esteem, scarring, social withdrawal, and academic interference-exacerbated in high-stress medical students (Dabash et al., 2024).

Globally, AV peaks between 12-24 years, with untreated severe cases linked to 2-3 times higher suicidality risk (Halvorsen et al., 2007). In India, stress directly correlates with severity, yet treatment-seeking remains low (<50%), favoring over-the-counter remedies (Rengifo-Pardo et al., 2018). Prevalence among medical students ranges 34-97.9%, with validated tools like DLQI and CADI showing moderate QoL impairment (Sachdeva et al., 2021).

Research Gap: Sparse data on Indian medical cohorts regarding QoL, lifestyle correlations, and institutional interventions.

Aim: To study QoL of medical students with moderate-severe AV.

Objectives: Determine prevalence and QoL/psychological impacts; evaluate academic/social effects; explore lifestyle links; assess treatment outcomes; propose guidelines .

2. MATERIAL & METHOD

Study Design: Prospective observational.

Place & Period: Dermatology OPD, Krishna Mohan Medical College Hospital, Mathura, UP (May 2024-October 2025).

Sample Size: 30 medical students, calculated via $n = Z^2P(1-P)/d^2$ (pilot prevalence, 80% power, $\alpha=0.05$).

Inclusion Criteria: Age 18-35 years; currently enrolled in medical college; clinical moderate-severe AV (Global Acne Grading System [GAGS] score ≥19); informed consent.

Exclusion Criteria: Age <18 or >35 years; other dermatoses/ comorbidities affecting QoL; current systemic AV treatment (e.g., isotretinoin); pregnancy; non-students.

Variables: Independent-AV presence/severity; Dependent-QoL (DLQI/Cardiff Acne Disability Index [CADI]), psychological (GAD-7, PHQ-9, Rosenberg Self-Esteem Scale, Perceived Stress Scale [PSS]); academic/social impacts. Extraneous-age, sex, diet, sleep.

Tools & Procedure: Clinical (GAGS, CBC); self-administered questionnaires at baseline; treatment (topical/oral/counseling) with follow-ups. Data managed electronically with confidentiality.

3. RESULT

Demographic Profile: Equal sex distribution (15 females/15 males, 50% each, p=1.000). Mean age: females 20.7±2.09 years, males 21.6±2.50 years. Residence: day scholars 14 (46.7%), hostellers 16 (53.3%; p=0.856). All 30 (100%) had AV (p<0.001); family history positive in 12 (40%; p=0.362).

Table 1: Demographic Characteristics

Characteristic	Frequency n(%)	p-value
Sex (Female/Male)	15/15 (50.0)	1.000
Residence (Day/Hostel)	14/16 (46.7/53.3)	0.856
Acne Present	30 (100.0)	<0.001
Family History (Yes)	12 (40.0)	0.362

Quality of Life & Psychological Scores: Mean DLQI: 12.8±5.2 (52% moderate-severe impairment); key domains: physical symptoms 67%, self-perception 68%, academic interference 60%, social 36.7-53.3%. GAD-7 (anxiety): 8.9±4.2 (mild); PHQ-9 (depression): 7.1±3.5 (minimal); Rosenberg self-esteem: 20.5±6.8 (moderate).

Table 2: Key Outcome Scores

Scale	Impairment Level/ %
DLQI (QoL)	Moderate-severe 52%
Physical Symptoms	67%
Self-Perception	68%
Academic Interference	60%
GAD-7 (Anxiety)	Mild
PHQ-9 (Depression)	Minimal

Correlations & Impacts: No significant associations: DLQI vs. GAGS severity (r=0.263, p=0.161); DLQI vs. GAD-7 (-0.199, p=0.292); severity vs. PSS stress (-0.081, p=0.669); diet (Kruskal-Wallis F=0.488, p=0.694). Academic impact: 46.7%; attendance affected 53.3%. Treatment outcomes: improvement 43.3%, no change 16.7%, worsening 40.0% (p=0.474). Support needs: dermatological 46.7%, psychological 33.3%.

Table 3: Selected Correlations

Variables Pair	Correlation (r)	p-value
QoL (DLQI) - Severity (GAGS)	0.263	0.161
QoL - Anxiety (GAD-7)	-0.199	0.292
Severity - Stress (PSS)	-0.081	0.669
Anxiety – Depression	-0.315	0.089

4. DISCUSSION

The mean DLQI score of 12.8±5.2 indicates moderate QoL impairment in over half the cohort, with pronounced effects on physical symptoms (67%), self-perception (68%), and academics (60%)—consistent with global patterns where AV disrupts high-achieving students' lives (Dabash et al., 2024). Psychological findings (mild anxiety, minimal depression) align with reports of subclinical distress in young adults with skin conditions, yet underscore potential for escalation without intervention (Sachdeva et al., 2021).

Absence of significant correlations between AV severity and QoL/ stress/diet suggests multifactorial etiology beyond simple lifestyle triggers, possibly involving genetics, hormones, or unmeasured confounders; this contrasts some dietary associations elsewhere but highlights study power limitations (n=30) (Rahim & Kumar, 2024).

Treatment variability (only 43.3% improvement) reflects common self-medication pitfalls and need for supervised care, as low consultation rates persist despite burdens (Matthew et al., 2021).

Limitations: Small single-center sample; self-reported data; short-term follow-up.

Strengths: Use of validated multi-domain tools; ethical rigor.

Clinical Implications: Institutions should implement routine AV screenings, on-campus dermatology-mental health clinics, and awareness programs to mitigate academic/social fallout . Future research: Larger multicenter longitudinal trials testing integrated interventions .

5. CONCLUSION

Moderate-to-severe acne vulgaris substantially impairs QoL, psychological well-being, and academic/social functioning in medical students, with suboptimal treatment responses and no clear lifestyle predictors. Comprehensive institutional strategies-dermatological care, counseling, and policy reforms-are essential. Multicenter studies recommended for robust guidelines .

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