

## ORIGINAL ARTICLE

### Acne vulgaris and self-confidence among medical students of universitas jenderal achmad yani class of 2023

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#### ABSTRACT

Acne vulgaris is a common inflammatory disorder that can affect psychological well-being in adolescents and young adults. This study aimed to examine the association between clinically confirmed acne vulgaris and self-confidence among undergraduate medical students. An analytical cross-sectional design was applied, involving 112 students from the Faculty of Medicine, Universitas Jenderal Achmad Yani, Class of 2023, recruited through consecutive sampling. Acne vulgaris was diagnosed clinically by a board-certified dermatologist, whereas self-confidence was assessed using the Ratnasari (2021) self-confidence questionnaire and the Rosenberg Self-Esteem Scale. Chi-square analysis was used to evaluate associations between acne status and self-confidence levels, with significance set at  $p < 0.05$ . Ethical approval was obtained from the Faculty of Medicine Ethics Committee (Approval No. 031/UM1.08/2024). Of the 112 respondents, 62 students (55.4%) were diagnosed with acne vulgaris. Most participants demonstrated high self-confidence based on both the Ratnasari questionnaire (67 students, 59.8%) and the Rosenberg scale (68 students, 60.7%). Statistical analysis showed no significant relationship between the presence of acne vulgaris and self-confidence (Ratnasari:  $p = 0.673$ ; Rosenberg:  $p = 0.304$ ). In conclusion, although acne vulgaris was common in this population, it was not associated with self-confidence levels. Further studies are recommended to explore additional psychological or environmental factors that may influence self-confidence among medical students.

**Keyword:** Acne vulgaris, Adolescents, Medical students, Self-confidence, Self-esteem.

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## INTRODUCTION

Acne vulgaris (AV) is a common inflammatory disorder of the pilosebaceous unit, characterized by comedones, papules, pustules, and nodules on the face, chest, shoulders, and upper arms.<sup>1</sup> AV frequently appears in adolescence, particularly between 14 and 17 years of age, and it may persist into adulthood with higher prevalence in women.<sup>2,3</sup> The pathogenesis is multifactorial and includes androgen-driven sebum overproduction, follicular hyperkeratinization, and colonization by *Propionibacterium acnes*, which releases enzymes and bioactive compounds that disrupt the epidermal barrier and damage the follicular wall.<sup>4</sup> Genetic predisposition, ethnicity, hormonal fluctuations, psychological stress, cosmetics and medications, diet, and environmental variables such as temperature and humidity also contribute to disease manifestation.<sup>5</sup>

Epidemiological data indicate that about 85% of young people experience AV between the ages of 12 and 25.<sup>4</sup> National surveillance and clinic reports suggest a rising case burden, as shown by the Indonesian Cosmetic Dermatology Study and by patient records at the Dermatology and Venereology Clinic of Dr. Cipto Mangunkusumo National General Hospital, similar patterns also appear among university populations.<sup>1,6,7</sup>

Although AV is not life threatening, it can impair psychological well-being and provoke embarrassment, low self-esteem, anxiety, and depressive symptoms.<sup>1,8</sup> Self-confidence is an important component of adolescent development and a key determinant of mental health, reflecting an individual's belief in their capacity to succeed and their positive self-evaluation.<sup>9,10</sup> Xu et al. highlighted self-confidence as central to mental health

among people with AV, and visible facial acne can intensify shame and dissatisfaction.<sup>11,12</sup> Previous studies have reported mixed results regarding the evidence of adverse effects in student samples.<sup>13,14</sup> The present study aims to examine the association between acne vulgaris and self-confidence levels among undergraduate medical students at Universitas Jenderal Achmad Yani, Class of 2023.

## METHODS AND SUBJECT

This study utilized an analytical cross-sectional design to examine the relationship between the presence of acne vulgaris and self-confidence levels among undergraduate medical students at Universitas Jenderal Achmad Yani, Class of 2023. A total of 112 students were recruited using a consecutive sampling method. Data collection involved the administration of the Rosenberg Self-Esteem Scale and a structured self-confidence questionnaire, along with clinical evaluations conducted by a board-certified dermatologist to confirm the diagnosis of acne vulgaris.

Associations between variables were analyzed using the Chi-square test. Ethical clearance for this study was obtained from the Ethics Committee of the Faculty of Medicine, Universitas Jenderal Achmad Yani (Approval Number: 031/UM1.08/2024).

## RESULTS AND DISCUSSION

### Demographic and Clinical Characteristics of Study Participants

Table 1 presents the demographic and clinical characteristics of the study participants, including age, gender, acne status, and the distribution of self-confidence and self-esteem levels among active undergraduate medical students at the Faculty of Medicine, Universitas Jenderal Achmad Yani, Class of 2023.

**Table 1.** Demographic and Clinical Characteristics of Study Participants (n = 112)

Variable	Category	n	%
Age (years)	18	5	4.5
	19	67	59.8
	20	30	26.8
	21	10	8.9
Gender	Male	21	18.8
	Female	91	81.3
Acne vulgaris (clinical exam)	Yes	62	55.4
	No	50	44.6
Self-confidence (Ratnasari)	Low	45	40.2
	High	67	59.8
Self-esteem (Rosenberg)	Low	44	39.3
	High	68	60.7
<b>Total participants</b>		<b>112</b>	<b>100,0</b>

Of the 112 participants, the largest age group was 19 years, accounting for 59.8% of the sample, followed by those aged 20 years (26.8%), 21 years (8.9%), and 18 years (4.5%). The sample was predominantly female (81.3%), with males comprising 18.8% of participants. Clinically confirmed acne vulgaris was present in 55.4% of participants. Self-confidence measured using the Ratnasari questionnaire was high in 59.8% and low in 40.2% of respondents, while self-esteem with the Rosenberg scale was high in 60.7% and low in 39.3% of respondents. Overall, these results indicate that the study population consisted mainly of young female

students, that acne vulgaris was common in this group, and that most respondents reported relatively high levels of self-confidence and self-esteem. The predominance of female participants should be considered when interpreting generalizability of the findings.

#### **Association Between Acne Vulgaris and Self-Confidence Measured by Two Scales**

Table 2 presents the association between acne vulgaris and self-confidence measured using the Rosenberg Self-Esteem Scale, showing the distribution of low and high self-confidence among participants with and without acne.

**Table 2.**  
Association between Acne Vulgaris and Self-Confidence (Rosenberg Self-Esteem Scale)

Acne Vulgaris	Self-Confidence	n	%	Total	P-value
Yes	Low	24	21.4	62	0.304
	High	38	33.9		
No	Low	15	13.4	50	
	High	35	31.3		
<b>Total</b>		<b>112</b>	<b>100</b>	<b>112</b>	

**Table 3.**  
Association between Acne Vulgaris and Self-Confidence (Ratnasari, 2021)

Acne Vulgaris	Self-Confidence	n	%	Total	P-value
Yes	Low	26	23.7	62	0.673
	High	36	32.1		
No	Low	19	17.0	50	
	High	31	27.7		
<b>Total</b>		112	100	112	

In Table 1, 62 out of 112 respondents (55.4%) were identified as having acne vulgaris, while 50 respondents (44.6%) did not. This proportion reflects a relatively high prevalence of acne vulgaris within the study population. These findings align with previous literature indicating that acne vulgaris is among the most frequently encountered dermatological disorders in individuals aged 12–25 years. Approximately 85% of cases occur during adolescence, although the condition may also affect 20–40% of adults and tends to be more common in females.<sup>3,4</sup>

Table 1 also indicates that a majority of respondents reported high self-confidence, with 67 individuals (59.8%) classified as having high self-confidence and 45 individuals (40.2%) categorized as having low self-confidence. A similar pattern was observed using the Rosenberg Self-Esteem Scale, where 68 respondents (60.7%) demonstrated high self-confidence and 44 respondents (39.3%) demonstrated low self-confidence. These results suggest that most participants maintained relatively strong self-confidence regardless of their acne status. This may reflect that personal perception of acne vulgaris plays a more influential role in shaping self-confidence than the physical presentation itself. Individuals with a positive self-view are generally less affected by external conditions, including acne vulgaris, and are able to preserve higher levels of self-confidence.<sup>10</sup>

Based on the Rosenberg Self-Esteem

Scale (Table 2), 24 participants with acne vulgaris (21.4%) had low self-confidence and 38 (33.9%) had high self-confidence, while among those without acne, 15 individuals (13.4%) reported low self-confidence and 35 (31.3%) reported high self-confidence. Similarly, results from the Ratnasari questionnaire (Table 3) showed that 26 participants with acne (23.7%) had low self-confidence and 36 (32.1%) had high self-confidence, compared with 19 (17.0%) and 31 (27.7%) respectively, in the non-acne group. Although minor differences were observed in the distribution of self-confidence levels between participants with acne and without acne, both instruments yielded non-significant Chi-square results ( $p = 0,304$  for Rosenberg;  $p = 0,673$  for Ratnasari), indicating that acne vulgaris was not significantly associated with self-confidence in this study population.

Previous research has shown that self-confidence is influenced by various internal factors, including self-efficacy, physical health, life experiences, and educational level. External factors<sup>20</sup>, such as parental influence, peer interactions, and the school environment, are also notable contributors. Supportive factors, such as social support, self-acceptance, and positive life experiences, are crucial in helping individuals cope with the psychological impact of acne vulgaris. For instance, support from peers and family can significantly strengthen an individual's ability to maintain self-confidence.<sup>32</sup>

## CONCLUSION

This study identified a high prevalence of acne vulgaris among participants, with more than half of the students affected. Most respondents demonstrated high self-confidence based on both the Ratnasari (2021) questionnaire and the Rosenberg Self-Esteem Scale. Statistical analysis showed no significant association between acne vulgaris and self-confidence levels. These findings indicate that acne vulgaris did not influence self-confidence within this population. Further studies are needed to identify factors that more substantially contribute to students' self-confidence.

## CONFLICT OF INTEREST

The authors declare no conflict of interest related to this study.

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