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ORIGINAL RESEARCH

Exploring Social Avoidance and Psychosocial Factors in Young Adults with Acne in East China

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Background: Acne is highly prevalent among young adults, and in East Asian contexts—where appearance standards, social media exposure, and the cultural construct of "face" (mianzi) are particularly prominent—visible skin lesions may incur amplified social burdens. However, evidence from China remains scarce regarding the key drivers of social avoidance in this population: specifically, whether anxiety, body image disturbance, income level, and lesion distribution exert independent effects, beyond the influence of acne severity itself. This study aims to fill this research gap by examining a sample of young adults with acne from East China.

Objective: To investigate social avoidance and its associations with body image disturbance, anxiety, and sociodemographic factors in Chinese young adults with acne.

Methods: A cross-sectional study of 201 acne patients (18–29 years) in East China assessed social avoidance (SADS-SA), body image (BIDQ), and anxiety (GAD-7). Pearson correlation analyzed associations among variables, and multivariable linear regression explored independent effects of social avoidance.

Results: Mean social-avoidance score was 5.71±3.79 and correlated with BIDQ ($r = 0.343$, $P < 0.01$) and GAD-7 ($r = 0.546$, $P < 0.01$). In multivariable models, higher income (≥5000 CNY) was negatively associated with avoidance ($B = -2.640$; $\beta = -0.288$; $P = 0.022$), whereas combined facial/neck + torso was positively associated with avoidance ($B = 1.098$; $\beta = 0.122$; $P = 0.040$); torso-only was negatively associated with avoidance ($B = -3.889$; $\beta = -0.175$; $P = 0.003$). Anxiety showed the strongest independent association with social avoidance ($B = 0.330$; $\beta = 0.458$; $P < 0.001$), while body image disturbance showed no significant direct association ($P = 0.053$).

Conclusion: In Chinese young adults with acne, anxiety is strongly associated with social avoidance—not acne severity itself. Higher income acts protectively, and combined facial/neck and torso distribution indicates greater risk. These findings support the integration of brief anxiety screening, targeted psychosocial interventions, and focused care for patients with visible lesions into dermatological care to reduce social avoidance.

Plain Language Summary: Acne is a common skin condition, especially among teenagers, and can affect more than just appearance. It may lower self-confidence and lead to social avoidance. This study explored why some young people with acne avoid social activities and what psychological factors contribute to this behavior. Researchers surveyed 201 acne patients aged 18 to 29 in eastern China, asking them about their social life, body image, and anxiety levels. The study also considered factors like income and acne location.

The findings revealed that: (1) higher anxiety levels were linked to increased social avoidance; (2) dissatisfaction with appearance led to stronger tendencies to avoid social interactions; (3) acne affecting both the face and body had a greater impact; and (4) individuals with higher income levels were less likely to avoid social activities.

These results suggest that acne not only impacts appearance but also emotional well-being and social life. Addressing anxiety and improving self-perception may help reduce social avoidance. Professional support and greater public awareness can improve the quality of life for young people with acne.

Keywords: acne, young adults, social avoidance, body image, anxiety, influencing factors

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Introduction

Acne vulgaris ranks among the most prevalent dermatologic conditions, affecting approximately 9.4% of the population,[1] with peak incidence occurring during adolescents and young adults.[2] Visible facial lesions are frequently linked to avoidance of social situations and to anxiety/depressed mood, impairing daily functioning.[3,4] Defined as the deliberate withdrawal from social interactions due to appearance-related distress, social avoidance affects 30–50% of acne patients—a rate 3–5 times higher than healthy controls.[5] From a stigma perspective, acne represents a concealable stigma—lesions can sometimes be hidden, yet the anticipation of "being seen" heightens vigilance and self-consciousness in interactions.[6,7]

Beyond individual symptoms, contemporary media and culture likely shape these responses. Social media encourages idealized appearance norms and upward comparisons among young people.[8] In Chinese collectivist contexts, sensitivity to social evaluation and the salience of mianzi ("face") may intensify the perceived social costs of visible acne, potentially amplifying avoidance behavior.[9]

Although prior work connects acne with body image disturbance and other psychosocial outcomes,[10] several gaps remain. First, despite established associations between lower income and poorer dermatologic/mental health outcomes,[11] most studies emphasize psychological mediators while neglecting to specify the role of socioeconomic moderators. Second, lesion distribution is underexplored; given the social salience of the face, combined facial/neck plus truncal involvement may carry greater stigma than single-site disease. Third, young adulthood (18–29 years)—a life stage marked by pivotal transitions in education, employment, and relationships—remains understudied, despite its heightened vulnerability to psychosocial strain.[12] Empirical data from China remain limited, particularly on how these factors jointly relate to social avoidance.

Despite nursing's critical role in acne management, existing protocols often emphasize physical symptom alleviation (eg, topical therapies, antimicrobial agents) over structured psychosocial interventions.[13] This oversight contradicts the biopsychosocial model[14] and the holistic care framework.[15] This study addresses these gaps by examining how socioeconomic factors, clinical characteristics (eg, lesion distribution), and psychological variables collectively influence social avoidance among Chinese young adults, a population navigating both acne stigma and intense social competition during critical developmental years.

Materials and Methods

Study Design and Participants

A multicenter, cross-sectional survey using consecutive sampling method to recruit young adult acne patients from the dermatology clinics of two tertiary hospitals in Hangzhou City, Zhejiang Province, China, from December 2024 to February 2025.

The study was conducted following ethical approval and permission from the participating hospitals. All methods were carried out in accordance with relevant guidelines and regulations including the Declaration of Helsinki. The participants of this study are young adults aged 18–29, who have reached the legal age of majority (≥18 years old) and have full civil capacity and independent informed consent. The research protocol has been approved by all participants providing electronic informed consent after a detailed verbal and written explanation of study procedures. During the study, participants have the right to withdraw from the study at any time, and personal information is processed anonymously to ensure data privacy and security.

The inclusion criteria for acne patients included: meeting the diagnostic criteria of the "Guidelines for the Diagnosis and Treatment of Acne Vulgaris in Primary Care";[16] aged between 18 and 29 years; disease duration for more than 3 months; clear mind and no comprehension difficulties; and willing to sign an informed consent to participate in this study.

Exclusion criteria for patients with acne included: having received structured psychological intervention from a psychiatrist or psychologist; having cognitive impairment or psychiatric disorder (according to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) criteria)[17] that precluded them from completing the study; and other serious dermatologic diseases likely to confound acne severity or psychosocial outcomes (eg, psoriasis, bullous pemphigoid, extensive vitiligo, atopic dermatitis/eczema, rosacea, seborrheic dermatitis, hidradenitis suppurativa),

or serious chronic systemic illnesses (eg, uncontrolled endocrine disease, active malignancy, end-stage renal/hepatic failure, autoimmune connective-tissue diseases), as determined by the attending clinician.

Data Collection

The study team members received standardized training to ensure a clear understanding of the study's purpose, methods, content, and significance. Permission was obtained from the original authors to use the validated instruments in this study. Data were collected using the following tools:

1. Demographic Information Questionnaire: Captured age, gender, education level, residence, marital status, medical insurance type, employment status, and household income.
2. Clinical Variables: Included Body Mass Index (BMI), acne location, disease duration, family history, physician-rated acne severity, and treatment details.
3. Social Avoidance Subscale of Social Avoidance and Distress Scale (SADS-SA): A 14-item self-report tool assessing the tendency to avoid social interactions. Scores range from 0 to 14. SADS-SA is a subscale of the Social Avoidance and Distress Scale (SADS).[18] It consists of 28 dichotomous items with a total score range of 0 to 28, where higher scores indicate greater social avoidance and distress. In a Chinese adaptation, SADS reported a Cronbach's alpha of 0.85 for the entire scale, with subscale alphas of 0.77 and 0.73 for avoidance and distress, respectively.[19]
4. Body Image Disturbance Questionnaire (BIDQ): A 7-item self-report tool assessing appearance-related concerns, distress, social/occupational impact, and avoidance behaviors.[20] Scores range from 7 to 35, with higher scores indicating greater disturbance. The BIDQ has demonstrated excellent reliability (Cronbach's alpha = 0.89–0.90 for females, 0.87–0.89 for males).[21] The Chinese version, validated by Chen et al[22] showed good reliability (Cronbach's alpha = 0.82) and validity in Chinese populations.
5. Generalized Anxiety Disorder Scale (GAD-7): A 7-item tool for screening generalized anxiety disorder and assessing symptom severity.[23] Scores range from 0 to 21, with higher scores indicating more severe anxiety. The scale has excellent internal consistency (Cronbach's alpha = 0.92) and test–retest reliability (r = 0.83). The Chinese version, validated by He et al,[24] demonstrated a Cronbach's alpha of 0.90, confirming its reliability for use in Chinese populations.

Sample Size Calculation

When designing this study, the researcher carefully considered how many participants we would need to reliably detect the complex relationships between acne and its psychosocial impacts. Using Kendall's well-established method for multivariate studies, we calculated that our analysis required at least 5 participants for each of the 21 independent variables we planned to examine—including demographic factors, social avoidance measures, body image disturbance, and anxiety symptoms. This initial calculation suggested a minimum of 105 participants. However, recognizing the practical challenges of clinical research, such as potential participant dropouts or incomplete questionnaires, we prudently increased this target by 20%. This adjustment brought our minimum sample size to 126 participants, ensuring we would maintain sufficient statistical power even if some data could not be used.

In practice, we went beyond this minimum threshold to enhance the robustness of our findings. Our team distributed 220 questionnaires across two tertiary hospitals, reflecting our commitment to obtaining comprehensive data. After careful quality checks to eliminate incomplete or inconsistent responses, we retained 201 valid questionnaires for analysis – a strong final sample that both met and exceeded our initial power calculations.

Statistical Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS Version 25.0). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize sociodemographic data and scores from the SADS-SA, BIDQ, and GAD-7, Pearson's correlation coefficient was employed to examine relationships among SADS-SA, BIDQ, and GAD-7 scores. Univariate analysis was conducted to identify potential factors associated with social avoidance, using appropriate statistical tests based on variable types and distributions. Multivariate regression analysis was

performed to determine independent predictors of social avoidance, adjusting for confounding variables. Results were reported as beta coefficients with 95% confidence intervals (CI), and statistical significance was set at $P < 0.05$.

Results

Comparison of Body Image Disturbance Status Among Different Clinical Demographic Characteristics

A total of 201 patients were included in this study, with a mean score for social avoidance of 5.71±3.79 and a mean disease duration of 6.11±5.41 years. Among them, 28.9% (n=58) had a family history of acne. The distribution of acne lesions was mainly on the face and neck (74.1%, n=149), followed by simultaneous involvement of the face, neck, and torso (22.9%, n=46). Most patients had moderate acne severity (42.8%, n=86), followed by mild (26.4%, n=53) and moderate-to-severe (22.9%, n=46) cases. Topical treatments, including external applications, dressings, and phototherapy, were the most common therapeutic approach (69.6%, n=140), followed by combined Chinese and Western medicine (53.7%, n=108) (Table 1).

Table 1 Clinical Characteristics and Comparison of Social Avoidance Scores of Participants (N=201)

Variables	n (%)	Social Avoidance Score	*t/F*	*P*
Age (year)			0.187	0.666
18-24	76 (37.81)	5.86 ± 3.86		
25-29	125 (62.19)	5.62 ± 3.76		
Gender			2.189	0.141
Male	56 (27.86)	5.07 ± 3.45		
Female	145 (72.14)	5.95 ± 3.90		
Marital status			2.444	0.089
Unmarried	136 (67.66)	6.02 ± 3.85		
Married	62 (30.85)	4.90 ± 3.51		
Divorced	3 (1.49)	8.00 ± 5.20		
Residence			0.031	0.970
Urban	144 (71.64)	5.74 ± 3.81		
Rural	33 (16.42)	5.67 ± 3.79		
Town	24 (11.94)	5.54 ± 3.83		
Educational level			0.318	0.813
Junior school and below	10 (4.98)	6.80 ± 4.05		
Senior school	25 (12.44)	5.84 ± 4.44		
College	145 (72.14)	5.63 ± 3.56		
Master and above	21 (10.45)	5.52 ± 4.57		
Medical insurance			2.264	0.082
Employee medical insurance	107 (53.23)	5.20 ± 3.76		
Resident medical insurance	42 (20.90)	6.98 ± 4.16		
Student medical insurance	30 (14.93)	5.67 ± 3.72		
Self-paying/others	22 (10.95)	5.82 ± 2.84		
Working status			1.160	0.330
Students	49 (24.38)	5.51 ± 3.84		
Unemployed	8 (3.98)	5.75 ± 4.20		
Clerks	111 (55.22)	5.77 ± 3.86		
Individual businesses	22 (10.95)	6.77 ± 3.83		
Workers	11 (5.47)	3.82 ± 1.94		
Monthly household income (CNY ¥)			3.300	0.039*
< 3000	8 (3.98)	9.00 ± 4.47		
3000-4999	36 (17.91)	5.81 ± 3.44		
5000 and above	157 (78.11)	5.52 ± 3.78		

(*Continued*)

Table 1 (Continued).

Variables	n (%)	Social Avoidance Score	*t/F*	*P*
BMI (kg/m^2)			0.821	0.442
< 18.5	27 (13.43)	6.30 ± 3.38		
18.5–23.9	143 (71.14)	5.74 ± 3.95		
24 and above	31 (15.42)	5.03 ± 3.38		
Duration of acne (years)			0.929	0.448
< 1	18 (8.96)	4.33 ± 4.07		
1-3	68 (33.83)	6.19 ± 3.94		
4-6	47 (23.38)	5.79 ± 3.48		
7-10	35 (17.41)	5.40 ± 3.91		
10 and above	33 (16.42)	5.67 ± 3.65		
Location of acne			5.560	0.004**
Face and neck only	149 (74.13)	5.52 ± 3.70		
The face, neck, and torso	46 (22.89)	6.83 ± 3.89		
Torso only	6 (2.99)	1.83 ± 1.72		
Acne grading			1.102	0.349
Mild	53 (26.37)	5.02 ± 3.85		
Moderate	86 (42.79)	5.72 ± 3.53		
Moderately severe	46 (22.89)	6.39 ± 4.10		
Severe	16 (7.96)	5.94 ± 4.04		
Oral administration of traditional Chinese medicine only			0.019	0.891
No	164 (81.59)	5.69 ± 3.78		
Yes	37 (18.41)	5.78 ± 3.89		
Oral administration of Western medicine only			1.200	0.275
No	139 (69.15)	5.51 ± 3.91		
Yes	62 (30.85)	6.15 ± 3.52		
Combination of Chinese and Western medicine			0.000	0.991
No	93 (46.27)	5.71 ± 3.74		
Yes	108 (53.73)	5.70 ± 3.85		
External treatment (including topical application, external application, and light/laser therapy)			0.039	0.843
No	61 (30.35)	5.79 ± 3.90		
Yes	140 (69.65)	5.67 ± 3.76		
Family history of acne			0.245	0.807
No	143 (71.14)	5.75 ± 3.88		
Yes	58 (28.86)	5.60 ± 3.61		

Notes: *P<0.05, **P<0.01; 1 CNY=0.14 USD; Oral traditional Chinese medicine (TCM): physician-prescribed herbal decoctions or granules recorded in the medical chart; Oral Western medicine: conventional pharmacologic agents for acne such as oral antibiotics or isotretinoin; Combination of Chinese and Western medicine: Including oral TCM and Western medicine therapies, as well as integrated TCM-Western medicine preparations; External treatment: topical agents and device-based treatments (eg, light/laser therapy).

First, monthly income showed a graded association (overall F = 3.300, $P = 0.039$): participants with ≥5000 CNY reported lower avoidance than those <3000 CNY (eg, group means 5.52 ± 3.78 vs 9.00 ± 4.47). Second, lesion location mattered (overall F = 5.560, $P = 0.004$): the face/neck + torso group had higher scores (6.83 ± 3.89) than face/neck only (5.52 ± 3.70), whereas torso-only involvement was lowest (1.83 ± 1.72). Other variables were not significant (all $P > 0.05$) (Table 1).

The Reliability of the SADS-SA, BIDQ, and GAD-7

The reliability of the scales was evaluated using Cronbach's α coefficient. The reliability coefficients for the SADS-SA, BIDQ, and GAD-7, were all greater than 0.8, indicating high Internal consistency (Table 2).

Table 2 Reliability of the SADS-SA, BIDQ, and GAD-7

	Items	Cronbach's α Coefficient
Social Avoidance (SADS-SA)	14	0.830
Body Image Disturbance (BIDQ)	7	0.895
Anxiety (GAD-7)	7	0.939

Table 3 Correlation Between Social Avoidance and Other Factors with Pearson's Correlation Coefficient

	Social Avoidance	Body Image	Anxiety
Social avoidance (SADS-SA)		0.343**	0.546**
Body Image Disturbance (BIDQ)	0.343**		0.486**
Anxiety (GAD-7)	0.546**	0.486**	

Note: **P<0.01.

Correlation Between Social Avoidance and Psychological Factors with Pearson's Correlation Coefficient

The average scores of social avoidance (SADS-SA), body image disturbance (BIDQ), and anxiety (GAD-7) for the participants were 5.71±3.79, 30.91±12.49, and 6.43±5.26, respectively. Pearson correlation analysis revealed that social avoidance correlated with body image disturbance ($P < 0.01$) and anxiety ($P < 0.01$). BIDQ also correlated with GAD-7 ($P < 0.01$). See Table 3 for coefficients.

Univariate Linear Regression Analysis of Factors Affecting Social Avoidance

In univariate regressions (Table 4), higher anxiety and body image disturbance were associated with greater social avoidance (both $P < 0.001$). Compared with <3000 CNY, 3000–4999 CNY ($P = 0.030$) and ≥5000 CNY ($P = 0.011$) were associated with lower avoidance. Relative to face/neck only, face/neck + torso was higher ($P = 0.038$), and torso-only was lower ($P = 0.018$).

Multivariate Regression Analysis of Factors Affecting Social Avoidance

In multivariable analysis (Table 5), anxiety showed the strongest independent association with higher social avoidance ($P < 0.001$). Higher income (≥5000 CNY) was associated with lower avoidance ($P = 0.022$). Relative to face/neck only, face/neck + torso was higher ($P = 0.040$), and torso-only was lower ($P = 0.003$). Body-image disturbance showed no significant direct association ($P = 0.053$).

Table 4 Univariate Linear Regression Analysis of Factors Affecting Social Avoidance

	Regression Coefficient (B)	Standard Error (SE)	Standardized Regression Coefficient (β)	*t*	*P*
Monthly household income (CNY ¥) (vs < 3000)					
3000-4999	−3.194	1.466	−0.324	−2.179	0.030*
5000 and above	−3.484	1.359	−0.381	−2.563	0.011*
Location of acne (vs face and neck only)					
The face, neck, and torso	1.309	0.626	0.145	2.093	0.038*
Torso only	−3.683	1.545	−0.166	−2.385	0.018*
Body Image Disturbance (BIDQ)	0.104	0.020	0.343	5.149	<0.001**
Anxiety (GAD-7)	0.394	0.043	0.546	9.202	<0.001**

Notes: *P<0.05, **P<0.01.

Table 5 Multivariate Regression Analysis of Indicators Influencing Social Avoidance

	Regression Coefficient (B)	Standard Error (SE)	Standardized Regression Coefficient (β)	t	P
Monthly household income (CNY ¥) (vs < 3000)					
3000-4999	−2.238	1.224	−0.227	−1.829	0.069
5000 and above	−2.640	1.143	−0.288	−2.309	0.022*
Location of acne (vs face and neck only)					
The face, neck, and torso	1.098	0.530	0.122	2.071	0.040*
Torso only	−3.889	1.276	−0.175	−3.048	0.003**
Body Image Disturbance (BIDQ)	0.039	0.020	0.129	1.945	0.053
Anxiety (GAD-7)	0.330	0.048	0.458	6.867	<0.001**

Notes: *P<0.05, **P<0.01.

After the multivariable model (Table 5), two visuals aid interpretation. Figure 1 visualizes the standardized coefficients (β) with P values, highlighting the same pattern as the model; Figure 2 presents an association schematic summarizing the observed cross-sectional associations.

Discussion

This study found that Chinese young adults with acne exhibit moderate social avoidance (mean score: 5.71 ± 3.79)—a level higher than that reported in young adults with type 1 diabetes (5.55 ± 3.46)[25] and breast cancer patients (5.43 ± 3.37),[26] but lower than in patients with permanent enterostomies (8.47 ± 3.91).[27] This discrepancy may stem from the fact that acne, unlike enterostomies (which involve concerns about involuntary defecation, fecal leakage, and odor), allows for temporary relief of appearance anxiety via makeup or short-term treatment. By contrast, acne's visibility likely explains why its associated social avoidance is more pronounced than in diabetes or breast cancer, where symptoms are often less externally apparent. Li et al[28]

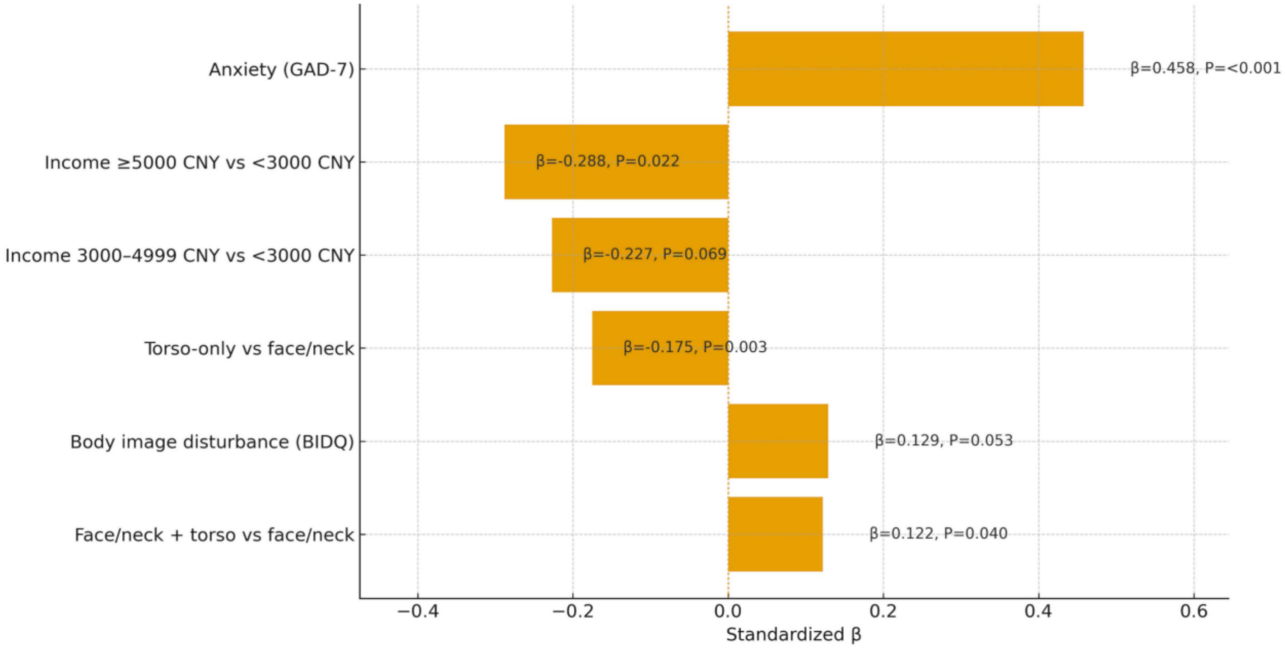

Figure 1 Visualizes the standardized coefficients (β) with P values.
Notes: β: Standardized regression coefficient; P < 0.05 is used as the criterion for statistical significance.

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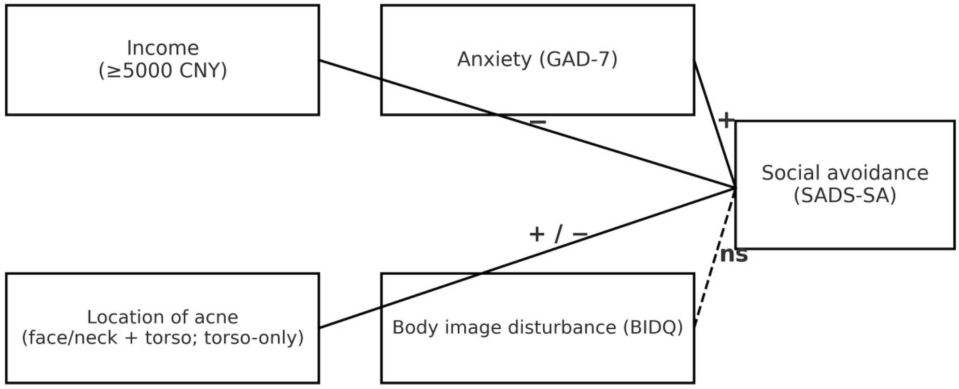

Figure 2 Association schematic.
Note: Undirected lines denote associations observed in the multivariable model; solid lines indicate P < 0.05 and dashed lines indicate P ≥ 0.05. Symbols mark the association's direction: "+" (positive), "−" (negative), "+/−" (mixed by levels), and "ns" (non-significant).

reported that social avoidance in patients with facial vitiligo correlates with coping mechanisms and social support—findings consistent with our emphasis on psychosocial factors. Our data extend this by identifying anxiety as having the strongest direct association with avoidance in acne, highlighting a specific, modifiable target for care.

Analysis of Sociodemographic Characteristics

Our results reveal a clear socioeconomic divide: patients with monthly household income ≥5000 CNY show significantly lower social avoidance compared to those earning <3000 CNY (β= −0.288, P < 0.05). This aligns with Faro et al's[3] observation that socioeconomic hardship correlates with greater psychological distress in acne, likely because higher income improves access to quality dermatologic care, psychological counseling, and resources to manage appearance-related concerns.[29]

Notably, marital status and education level had no significant impact on social avoidance (both $P > 0.05$). While unmarried patients exhibited slightly higher scores (6.02 ± 3.85 vs married: 4.90 ± 3.51), the difference was not statistically significant ($P = 0.089$)—a finding potentially linked to cultural norms around "face" (mianzi) and social interaction needs among young unmarried adults,[30] though the small effect size suggests this is not a priority for intervention.

Analysis of Clinical Characteristics

Acne distribution emerged as a key risk marker: patients with combined facial/neck and torso involvement had higher social avoidance scores (6.83 ± 3.89) than those with facial/neck only (5.52 ± 3.70) or torso only (1.83 ± 1.72). This underscores the critical role of lesion visibility in driving avoidance, as facial and trunk areas are harder to conceal than isolated torso lesions (which can be covered by clothing).[31] These findings align with Dréno et al,[32] who demonstrated a direct link between skin lesion visibility and social avoidance in psoriasis—supporting the need to prioritize patients with highly visible acne in dermatologic care.

In contrast, acne severity (mild/moderate/moderate-severe/severe) did not independently predict social avoidance ($P = 0.349$), reinforcing that clinical focus should center on visibility rather than severity grades alone.

The Predictive Role of Anxiety in Social Avoidance

Anxiety's dominant role likely reflects the influence of collectivist cultural norms in China, where sensitivity to social evaluation amplifies the impact of anxiety on avoidance behaviors.[33,34] This distinguishes our findings from Western studies that prioritize body image concerns as the primary driver of avoidance,[35] highlighting the need for culturally adapted interventions—such as cognitive-behavioral therapy (CBT) modules emphasizing self-compassion in collectivist contexts.[36]

While body image disturbance did not directly predict social avoidance (β = 0.129, $P = 0.053$), it correlated significantly with both social avoidance (r = 0.343, $P < 0.01$) and anxiety (r = 0.486, $P < 0.001$). This suggests an indirect pathway: negative body image may exacerbate anxiety,[37] which in turn increases avoidance[20,38]—supporting dual targeting of anxiety and body image in psychosocial support.

Clinical Implications

These findings advocate for integrating brief anxiety screening (eg, GAD-7) into routine dermatologic care, with targeted interventions for high-risk groups—particularly patients with combined facial/neck and torso acne. Drawing on evidence from other dermatologic conditions: Incorporating "situational exposure training" into health education programs can help patients gradually confront and adapt to social settings, thereby reducing avoidance behaviors.[39] Third-wave therapies like Acceptance and Commitment Therapy (ACT) or schema therapy—shown effective for improving psychological well-being in vitiligo patients[40]—may also benefit acne patients by fostering acceptance of appearance-related distress; Similar to the UK-based work by Ahmed et al[41] which identified "tailored support" as a core component of dermatologic psychological care, interventions for acne should prioritize patient-centered strategies (eg, one-on-one counseling for high-anxiety cases).

Complementary approaches, such as education on temporary concealment techniques (eg, appropriate makeup) and referrals to psychologists for elevated anxiety, will further ensure holistic care.

Limitations

This study has several limitations. First, we used the SADS-SA subscale (score range 0–14) to assess social avoidance; the full SADS (0–28) might offer greater sensitivity to subtle differences. Second, the cross-sectional design precludes definitive causal inference—longitudinal studies tracking acne, anxiety, and social avoidance over treatment or remission are needed to confirm temporal relationships. Third, we did not measure social media exposure, which emerging evidence links to heightened appearance anxiety via social comparison.[42] Finally, our sample consists of East China dermatology clinic patients, limiting generalizability to other regions or community-dwelling individuals with acne.

Conclusion

In Chinese young adults with acne, anxiety is strongly associated with social avoidance—not acne severity itself. Higher income acts protectively, and combined facial/neck and torso distribution indicates greater risk. These findings support integrating anxiety screening and culturally tailored psychosocial support (including evidence-based interventions like situational exposure training) into dermatologic practice, prioritizing patients with highly visible lesions. Future research should explore longitudinal outcomes of anxiety interventions and the role of social media in exacerbating appearance concerns.

Abbreviations

DSM-V, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; GAGS, Global Acne Grading System; BMI, Body Mass Index; SADS-SA, Social Avoidance Subscale of Social Avoidance and Distress Scale; SADS, Social Avoidance and Distress Scale; BIDQ, Body Image Disturbance Questionnaire; GAD-7, Generalized Anxiety Disorder Scale; SPSS, Statistical Package for Social Sciences; OR, Odds Ratios; CI, Confidence Intervals; CNY, Chinese Yuan; USD, United States Dollar; TCM, Traditional Chinese Medicine; CBT, Cognitive behavioral therapy; ACT, Acceptance and Commitment Therapy.

Data Sharing Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Ethics Approval and Consent to Participate

The study protocol was approved by the Ethics Committee of Hangzhou Third hospital (Approval No. 2024KA156). All methods were performed in accordance with the Declaration of Helsinki and relevant guidelines. Written informed consent was obtained electronically from all participants.

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