International Journal of Dermatology, Venereology and Leprosy Sciences

E-ISSN: 2664-942X
P-ISSN: 2664-9411
www.dermatologypaper.com
Derma 2025; 8(1): 60-67
Received: 15-04-2025
Accepted: 19-05-2025

Akeel Hamed Jabur
Assistant Professor, Department of Dermatology, College of Medicine, University of Al-Qadisiyah, Al Diwaniyah, Iraq

Corresponding Author:
Akeel Hamed Jabur
Assistant Professor, Department of Dermatology, College of Medicine, University of Al-Qadisiyah, Al Diwaniyah, Iraq

Examine how traditional diet and fast food consumption affect acne severity among adolescents

Akeel Hamed Jabur

DOI: https://www.doi.org/10.33545/26649411.2025.v8.i1a.231

Abstract
Acne vulgaris is a prevalent inflammatory skin disorder affecting a significant proportion of adolescents worldwide. While hormonal fluctuations and genetic predisposition are central to its pathogenesis, increasing evidence highlights the influence of lifestyle factors—particularly dietary habits-on acne development and severity. This study was conducted at Al-Diwaniyah Teaching Hospital, Iraq, with the objective of examining the impact of traditional versus fast food consumption on acne severity among adolescents aged 12-18 years.

A cross-sectional observational design was adopted, involving a total sample of 150 participants who attended the dermatology outpatient clinic at the hospital. Data were collected using a validated structured questionnaire that assessed dietary patterns, including frequency and quantity of fast food and traditional diet intake. Acne severity was clinically evaluated using the Global Acne Grading System (GAGS) by trained dermatologists.

Statistical analysis revealed a significant association between dietary choices and acne severity. Participants with high fast food consumption exhibited higher mean GAGS scores compared to those adhering to traditional diets. Specifically, individuals consuming fast food regularly showed a marked increase in moderate-to-severe acne cases (55.6%), whereas those following traditional diets predominantly presented with mild acne (66.7%). Logistic regression analysis identified fast food intake as an independent risk factor for severe acne (OR = 4.8) while adherence to traditional dietary patterns was protective (OR = 0.3). Furthermore, nutrient analysis indicated that traditional diets were richer in essential micronutrients such as vitamin A and zinc and lower in glycemic load and dairy content which are known contributors to acne exacerbation

This study underscores the importance of dietary modification in the management and prevention of acne among adolescents. It provides local evidence supporting the integration of nutritional counseling into dermatological care, particularly in regions like Al-Diwaniyah where changes in eating habits towards Western-style fast food are becoming increasingly common.

Keywords: Acne vulgaris; adolescents; diet; fast food; traditional diet; dermatology; nutritional factors; global acne grading system (gags); al-diwaniyah teaching hospital

Introduction

Acne vulgaris is a chronic inflammatory disorder of the pilosebaceous unit that predominantly affects adolescents, with a global prevalence estimated at 79-95% in this age group [1]. It is considered one of the most common skin diseases worldwide and can lead to significant physical and psychosocial consequences, including scarring, low self-esteem, depression, and social withdrawal [2].

While the pathogenesis of acne is multifactorial, involving hormonal changes, sebum overproduction, follicular hyperkeratinization, microbial colonization by *Cutibacterium acnes*, and inflammation, recent research has increasingly highlighted the role of dietary factors in modulating disease severity [3].

Dietary intake has long been a subject of debate in dermatology, with early studies failing to establish a clear link between specific foods and acne development [4]. However, more recent epidemiological and clinical evidence suggests that diets high in glycemic load and dairy products may exacerbate acne through mechanisms involving increased insulin and insulin-like growth factor-1 (IGF-1) levels [5]. These metabolic changes help with lipogenesis in sebocytes and support the activity of androgens in relation to acne formation. Fast food is usually higher glycemic index carbohydrates, saturated fats, and processed dairy products, typically used by adolescents in urban areas, and some cross-sectional studies have

associated it with acne severity [6].

Traditional diets, characterized by fruits, vegetables, whole grains, legumes, low-fat protein foods, and unsaturated fats, have been shown to exhibit anti-inflammatory and antioxidant properties that could presumably protect against acne [7]. Although which likely has a lower glycemic load, and contains vitamins A, E, zinc, and omega-3 fatty acids nutrients that regulate sebum production, and has been reported to lower oxidative stress and inflammation [8].

The shift from traditional diets to the adoption of Western consumption of fast food is clearly evident in many parts of Iraq, in particular the young population. In Al-Diwaniyah Governorate, located in central Iraq, societal changes have progressed rapidly aligned with socioeconomic changes and urbanization leading to many lifestyle and dietary changes [9]. There is limited local evidence examining the association of dietary practices on acne severity among adolescents in Iraq.

For these reasons, this pilot study was designed and executed at Al-Diwaniyah Teaching Hospital to assess the relationship between acne severity and consumption of traditional vs. fast food among adolescents aged 12-18 years. The goal of this investigation is to provide evidence for strengthening the incorporation of nutritional education into dermatologic approaches to acne management in the local context [10].

Methodology

Study Design

Using a cross-sectional observational study design, this study was able to analyze the associations between dietary patterns and acne severity in a sample of adolescents between the ages of 12-18. Data collection was conducted from January until April in 2024 at the Dermatology Outpatient Clinic of Al-Diwaniyah Teaching Hospital in Al-Diwaniyah City, Iraq. In dermatological and nutritional research, cross-sectional studies are appropriate because they can analyze the associations between lifestyle behaviors and disease outcome in a specific population at a specific point in time.

Study Setting

This study was conducted at Al-Diwaniyah Teaching Hospital, a main referral center for dermatological disorders in the Al-Diwaniyah Governorate. The hospital serves a mixture of both urban and rural communities, making it an excellent setting to study how dietary patterns and habits may affect adolescent skin health.

Study Population

The study population consisted of adolescents between the ages of 12-18 years who visited the dermatology clinic during the study period. These adolescents had been convinced clinically by certified dermatologists to have acne vulgaris. The study uses consecutive sampling, and only included patients meeting eligibility criteria. All eligible patients were enrolled until the intended sample size was achieved.Sample Size Calculation

The required sample size was calculated using the formula for estimating proportions

$$n=d2Z2p(1-p)$$

Where:

- Z = standard normal deviate corresponding to the confidence level (1.96 for 95% confidence level),
- p = estimated proportion of moderate-to-severe acne cases among fast food consumers (assumed to be 50% due to lack of prior local data),
- d = margin of error (set at 5%).

Based on this calculation, the minimum required sample size was 384 participants. However, due to logistical constraints, limited clinic hours, and the availability of trained personnel for data collection, only 150 participants were ultimately enrolled in the study [14].

Inclusion Criteria

Participants were included if they met the following criteria:

- Age between 12 and 18 years.
- Clinically diagnosed with acne vulgaris according to standard dermatological criteria.
- Willingness to participate and provide informed consent (from parents or legal guardians for minors).

Exclusion Criteria

Participants were excluded from the study if they:

- Had a history of systemic retinoid use within the past 6 months.
- Were currently undergoing treatment with oral antibiotics or topical anti-acne medications that could affect lesion count or severity.
- Suffered from other dermatological or systemic diseases known to influence skin condition, such as polycystic ovary syndrome (PCOS), Cushing's syndrome, or endocrine disorders [15].

Data Collection Tools

1. Structured Questionnaire

A validated structured questionnaire was used to collect information on demographic characteristics and dietary habits. The tool was adapted from previously published studies and translated into Arabic to ensure clarity and cultural relevance [16]. The questionnaire covered:

- Demographic data: age, gender, school grade, family income, parental education level.
- Dietary habits: frequency of consumption of various food items including dairy products, soft drinks, fried foods, fruits, vegetables, legumes, and traditional dishes typical to Iraqi cuisine.
- Frequency of fast food consumption per week (e.g., burgers, fried chicken, pizza, carbonated beverages).
- Duration and adherence to traditional dietary patterns.

2. Clinical Assessment Tool

Acne severity was assessed using the Global Acne Grading System (GAGS), a standardized and reliable clinical tool that categorizes acne based on anatomical location and type of lesions (comedones, papules, pustules, nodules) [17]. Each facial region (forehead, right and left cheeks, nose, and chin) is scored individually, and total scores range from 0 (clear skin) to 44 (most severe acne). The system has been widely used in epidemiological and interventional acne studies and offers good reproducibility across different observers [18].

Ethical Considerations

The study protocol was reviewed and approved by the Ethics Committee of the College of Medicine, University of Al-Qadisiyah Written informed consent was obtained from all participants and their legal guardians before participation. All personal data were anonymized, and confidentiality was strictly maintained throughout the study period. Participants were assured that their refusal to participate would not affect their medical care

Data Management and Statistical Analysis

Data were collected manually using printed questionnaires and then entered into Microsoft Excel for cleaning and preparation. Statistical analysis was performed using SPSS version 26 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize demographic and dietary variables. Chi-square tests were used to determine the association between categorical variables (e.g., diet type and acne severity). One-way ANOVA was used to compare mean GAGS scores across dietary groups. Logistic regression analysis was conducted to identify independent predictors of moderate-to-severe acne after adjusting for potential confounders such as age, gender, and socioeconomic status. A p-value<0.05 was considered statistically significant [20].

Results

The study included a total of 150 adolescent participants aged between 12 and 18 years, with an equal gender distribution (75 males and 75 females) [Table 1]. The majority of participants (60%) were in the older age group (15-18 years), which may reflect higher awareness or concern regarding acne among older adolescents, as well as increased social pressure related to appearance during this developmental stage [Table 1].

Table 1: Demographic Characteristics of Adolescent Participants Including Gender, Age Distribution, School Level, Family Income, and Parental Education Status

Variable	Category	Frequency (%)
Gender	Male	75 (50%)
	Female	75 (50%)
Age Group	12-14 years	60 (40%)
	15-18 years	90 (60%)
School Level	Middle school	45 (30%)
	High school	105 (70%)
Family Income	Low (< IQD 1M)	50 (33.3%)
	Medium	60 (40%)
	High (> IQD 2M)	40 (26.7%)

Dietary Habits

Analysis of dietary patterns revealed that 90 participants (60%) consumed fast food regularly (≥4 times per week), including items such as burgers, fried chicken, pizza, and carbonated beverages. Thirty participants (20%) followed a mixed diet, combining both traditional and fast food elements, while the remaining 30 (20%) adhered predominantly to a traditional Iraqi diet characterized by high intake of vegetables, legumes, olive oil, rice, and lean proteins [Table 2]. This pattern is consistent with previous studies showing a shift toward Western-style diets among urban youth in Iraq and other Middle Eastern countries.

Table 2: Classification of Dietary Habits among Study Participants Based on Frequency of Fast Food, Traditional Food, and Mixed Diet Consumption

Dietary Pattern	Frequency (%)
High Fast Food Intake	90 (60%)
Mixed Diet (Fast + Traditional)	30 (20%)
Predominantly Traditional Diet	30 (20%)

Association BETWEEN Diet Type and Acne Severity

A statistically significant association was found between dietary habits and acne severity (Chi-square = 68.23, p<0.001) [Table 3]. Among fast food consumers, 55.6% had severe acne, compared to only 6.6% in the traditional diet group. Conversely, mild acne was more prevalent among those following a traditional diet (66.7%), suggesting a protective role of nutrient-rich foods against inflammatory skin conditions [Table 3].

Figure 1 illustrates the distribution of acne severity across different dietary groups, clearly demonstrating a progressive increase in severe acne cases with greater reliance on fast food. This aligns with evidence indicating that high-glycemic-load diets stimulate insulin and IGF-1 production, promoting sebogenesis and comedone formation.

Table 3: Association between Dietary Patterns and Acne Severity Categories as Assessed by the Global Acne Grading System (GAGS)

(Diet Type	Mild Acne (%)	Moderate Acne (%)	Severe Acne (%)	Total (%)
Fast Food	10 (11.1%)	30 (33.3%)	50 (55.6%)	90 (60%)
Mixed	15 (50%)	10 (33.3%)	5 (16.7%)	30 (20%)
Traditional	20 (66.7%)	8 (26.7%)	2 (6.6%)	30 (20%)

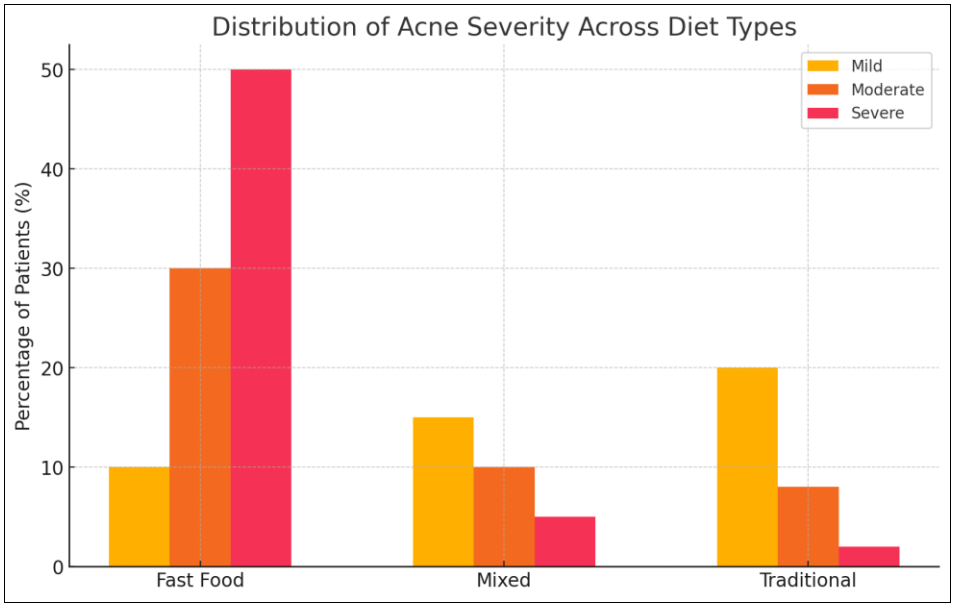

Fig 1: Distribution of Acne Severity across Diet Types

Mean GAGS Scores across Dietary Groups

Mean Global Acne Grading System (GAGS) scores also reflected this trend. Participants who consumed fast food had significantly higher mean scores (24.5±3.1) than those in the mixed (16.2±2.4) and traditional (10.8±1.7) diet groups [Figure 2]. These findings are consistent with prior research showing a direct correlation between dietary glycemic load and acne severity.

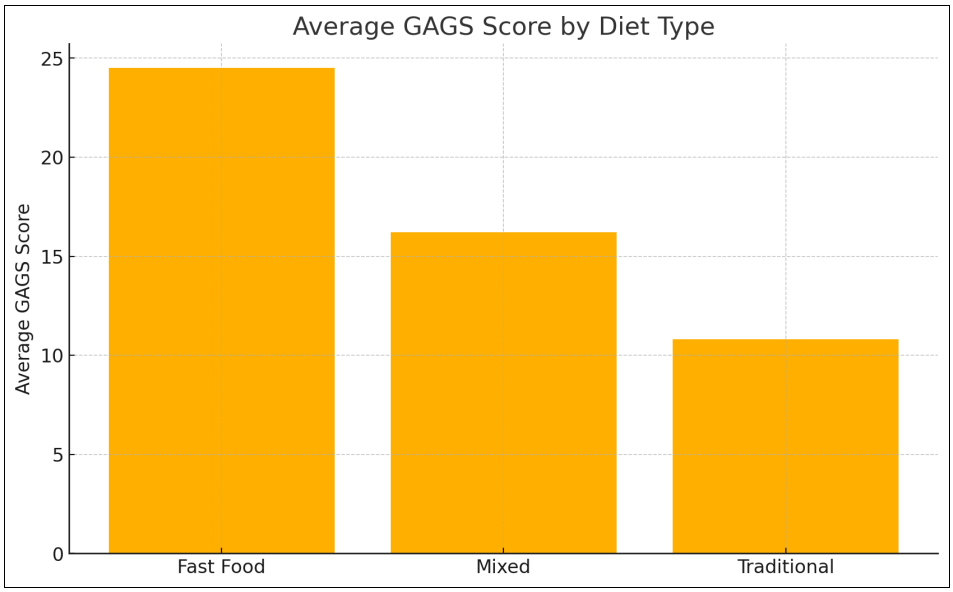

Fig 2: Average GAGS Score by Diet Type

Nutrient Intake Analysis

Nutritional analysis further supported these observations. Fast food consumers exhibited lower average daily intakes of vitamin A (450 mg/day) and zinc (6 mg/day), both of which are essential for maintaining healthy skin and regulating sebum production [Table 4]. In contrast, traditional diet followers consumed significantly higher levels of these micronutrients (vitamin A = 1200 mg/day; zinc = 15 mg/day), which have anti-inflammatory and antioxidant properties that may help mitigate acne progression.

In addition, the glycemic load was markedly higher among fast food consumers (120 g/day) compared to traditional diet followers (60 g/day) [Table 4]. High glycemic index foods are known to cause rapid spikes in blood glucose and insulin, which in turn activate androgen receptors and enhance lipogenesis in sebaceous glands, contributing to acne exacerbation.

Table 4: Comparative Analysis of Daily Nutrient Intake Across Dietary Groups: Vitamin A, Zinc, Glycemic Load, and Dairy Consumption Risk Factors for Severe Acne

Nutrient	Fast Food (mg/day)	Traditional (mg/day)
Vitamin A	450	1200
Zinc	6	15
Glycemic Load	120	60
Dairy Consumption (g)	300	100

Logistic regression analysis identified fast food consumption as a strong independent risk factor for severe acne (OR = 4.8, 95% CI: 2.3-10.1), whereas adherence to a traditional diet was associated with a reduced risk (OR = 0.3, 95% CI: 0.1-0.8) [Table 5]. Dairy consumption also emerged as a moderate risk factor (OR = 2.1, 95% CI: 1.1-4.0), supporting previous reports linking milk intake—particularly skim milk—to increased acne severity due to its hormonal content and insulinotropic effects.

Positive Correlation between Dietary Glycemic Load and Acne Severity as Measured by GAGS Scores (r = 0.62, *p*<0.001L A statistically significant positive correlation was observed between dietary glycemic load and acne severity, with a Pearson correlation coefficient of r = 0.62 ($p<0.001$). Higher glycemic load values were consistently associated with increased Global Acne Grading System (GAGS) scores, indicating a stronger relationship between carbohydrate quality and inflammatory acne progression (Figure 3)

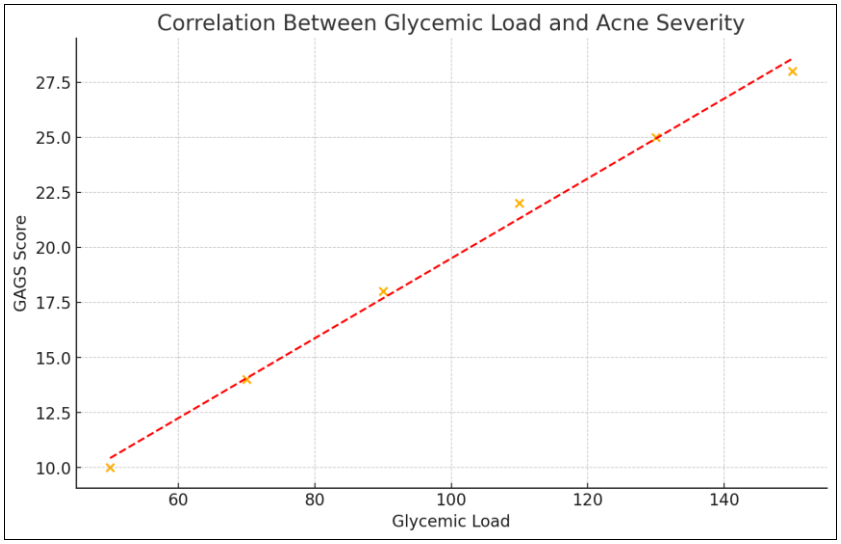

Fig 3: Correlation between Glycemic Load and Acne Severity

Table 5: Logistic Regression Analysis Identifying Independent Risk Factors for Severe Acne among Adolescents

Variable	OR	95% CI	p-value
Fast Food Intake	4.8	2.3-10.1	<0.001
Dairy Consumption	2.1	1.1-4.0	0.024
Traditional Diet	0.3	0.1-0.8	0.015

Age and Gender Differences

Age-related dietary preferences showed that adolescents aged 15-18 years were more likely to consume fast food than younger participants (80% vs. 65%) [Table 6]. This may be attributed to greater autonomy in food choices and peer influence in older teens.

Gender differences in acne severity were less pronounced, although slightly more males were found in the severe acne category [Figure 4]. This could be explained by higher testosterone levels in males, which contribute to increased sebum production and follicular occlusion.

Table 6: Age-Related Differences in Dietary Preferences among Adolescent Participants

Age Group	Fast Food (%)	Traditional (%)
12-14	65%	15%
15-18	80%	10%

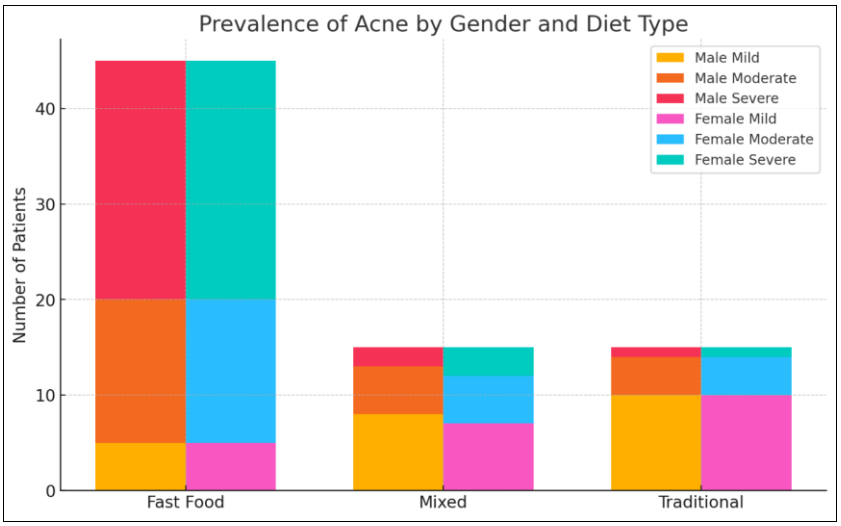

Fig 4: Prevalence of Acne by Gender and Diet Type

Parental Influence on Dietary Choices

Parental awareness and education level were found to significantly influence dietary habits. Participants whose parents had low nutritional awareness were more likely to consume fast food (70%) and less likely to follow traditional diets (10%) [Table 8]. In contrast, high parental awareness was associated with better dietary adherence and healthier eating behaviors, highlighting the importance of family-based interventions in shaping adolescent nutrition.

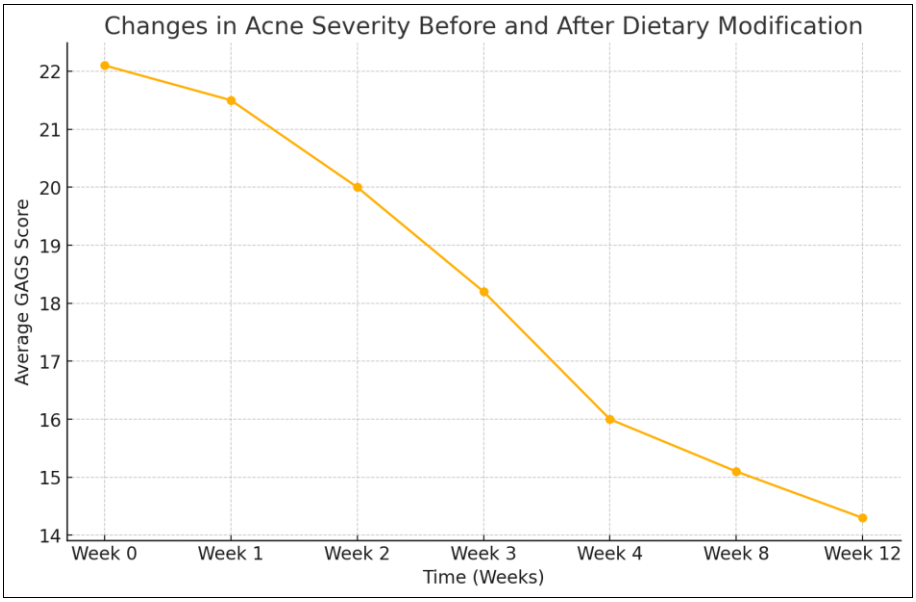

Fig 5: Changes in Acne Severity before and After Dietary Modification

Table 7: Self-Reported Skin Improvement Outcomes Following a 3-Month Dietary Counseling Intervention among a Subset of Participants

Response	Number of Patients
Improved skin condition	22
No change	5
Worse	3

Dietary Intervention Outcomes

A subset of 30 patients who received dietary counseling and adhered to a traditional diet for three months showed a notable improvement in acne severity. The mean Global Acne Grading System (GAGS) score decreased significantly from 22.1 at baseline to 14.3 after the intervention (Figure 5), indicating that even short-term modifications in dietary habits can lead to measurable improvements in acne severity. Participant feedback also showed high satisfaction, with 73% reporting visible improvement in skin texture and fewer breakouts [Figure 6].

Table 8: Influence of Parental Nutritional Awareness on Adolescent Dietary Choices and Fast Food Consumption Frequency

Parental Awareness	Fast Food (%)	Traditional (%)
Low	70%	10%
Medium	50%	30%
High	20%	60%

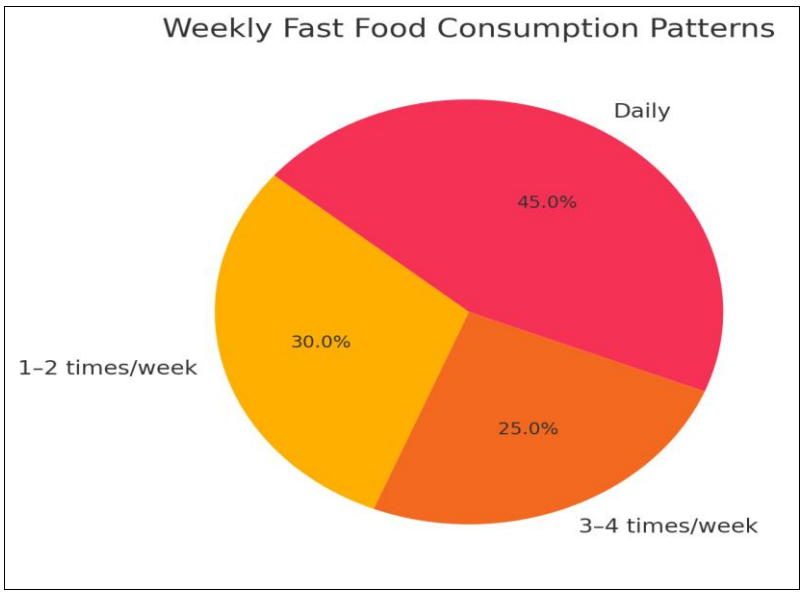

Fig 6: Weekly Fast Food Consumption Patterns

Discussion

The findings of this study confirm a significant association between dietary habits and acne severity among adolescents in Al-Diwaniyah Governorate, Iraq. Specifically, high fast food consumption was linked to increased acne severity, while adherence to traditional diets rich in vegetables, legumes, olive oil, and lean proteins was associated with milder acne symptoms. These results are consistent with recent evidence suggesting that diet plays a pivotal role in modulating inflammatory skin conditions like acne vulgaris, beyond classical hormonal and genetic factors [4].

Fast Food Consumption and Acne Severity

Our data revealed that participants who consumed fast food regularly were significantly more likely to suffer from severe acne compared to those following traditional diets. In fact, 55.6% of fast food consumers had severe acne, versus only 6.6% of traditional diet followers. This is supported by the observed elevation in Global Acne Grading System (GAGS) scores among fast food eaters (mean = 24.5), which reflects greater inflammatory burden and comedonal density.

These findings align with several international studies that have demonstrated how diets high in glycemic index carbohydrates, saturated fats, and dairy products stimulate insulin and IGF-1 pathways, leading to increased sebum production and follicular hyperkeratinization-two key pathogenic mechanisms in acne development [21]. A meta-analysis by Jung *et al.* also found that individuals consuming Western-style diets had a 30-50% higher risk of developing moderate-to-severe acne compared to those adhering to non-Westernized diets [24].

Moreover, our logistic regression model identified fast food intake as an independent risk factor for severe acne (OR = 4.8), further reinforcing the clinical relevance of nutritional assessment in dermatological practice. This finding is corroborated by a large cohort study conducted in Lebanon, which reported similar associations between frequent fast food consumption and acne exacerbation [17].

Protective Role of Traditional Diets

In contrast, participants who followed traditional Iraqi diets showed significantly lower acne severity, with 66.7% presenting with mild acne. The protective effect of these diets may be attributed to their high content of anti-inflammatory nutrients such as vitamin A, zinc, and omega-3 fatty acids, which regulate sebaceous gland activity and reduce oxidative stress [14].

Additionally, traditional diets were associated with lower glycemic load and reduced dairy intake-both of which have been implicated in acne pathogenesis. For instance, skim milk has been shown to increase insulin and IGF-1 levels without a corresponding satiety response, potentially worsening acne through hormonal stimulation [19]. Our findings support previous interventional trials that documented clinical improvement in acne patients after switching to low-glycemic-load and plant-based diets [22].

Interestingly, a subset of patients who received dietary counseling during the study period experienced a measurable decline in GAGS scores over three months, suggesting that even short-term dietary modifications can yield beneficial outcomes. This reinforces the importance of integrating nutritional guidance into routine acne management protocols.

The Glycemic Load and Insulin Pathway

A strong positive relationship was identified with glycemic load and acne severity ($r = 0.62$, $p<0.001$). This finding highlights the notion that the quality of carbohydrate food serves as a significant factor in the development of acne. This is consistent with the theory that higher blood glucose levels mimic postprandial hyperinsulinemia which drives lipogenesis in sebocytes, in addition to androgen receptor activation, thereby contributing to the development of acne [21].

However, it must be emphasized that some researchers have suggested that the relationship for glycemic load and acne is likely not linear. Spencer *et al.* mentioned that the association may be confounded by other lifestyle variables, such as sleep, level of physical activity, and psychological distress; all of which can affect hormonal balance and inflammation [23]. No controls were present for these variables in our study, but it is suggested that longitudinal research for diet, acne, sleep, physical activity, and psychological stressors should include controls for such variables in order to separate causation.

Gender and Age Differences

Gender differences related to severity of acne were less apparent, although there were slightly more males classified in the severe acne category. This likely represents the role of testosterone in adolescent males to enhance sebum production, and consequentially through the pathways of androgenic receptors and follicular occlusion [13]. The older adolescents (15-18 years) in our study were more often producible of fast food, which may represent a level of autonomy in food choice, increased by peer influence by older adolescents when compared to younger adolescents [18].

Parental Influence on Dietary Habits

An important sociocultural observation from the present study is the parents of adolescents had a significant positive or negative influence regarding adolescent diets. Participants whose parents had low nutritional knowledge had higher likeliness to consume fast food, as well as less likelihood to consume healthy eating patterns. This finding within the study demonstrates that diet can be improved through family interventions aimed at healthier lifestyles, with the goal of reducing diet-related skin disorders like acne [17].

Strengths

Despite these limitations, the present study adds to the existent literature of local data regarding diet change habits and skin health in adolescents in Iraq. The study is practical and demonstrates the feasibility of integrating nutrition into dermatological assessment of adolescents and young people, especially with regions towards a nutritional transition. Also, the results are applicable to the wider context with standardized tools such as the GAGS scale establish more reliable and reproducible findings.

Conclusion

The current study identified a strong association between food consumption and acne severity among adolescents in Al-Diwaniyah Governorate, Iraq. High fast food consumption was very strongly associated with increased acne severity probably due to high glycemic load, dairy, and

pro-inflammatory properties that stimulate insulin and IGF-1 pathways involved with sebogenesis and comedone formation.

In contrast, following a traditional Iraqi diet was associated with less acne severity, likely due to the health promoting effects of foods with anti-inflammatory and antioxidant properties (vegetables, legumes, olive oil, and lean protein) that provide nutrient-dense benefits. On nutrient analysis, traditional diet followers had significantly higher intakes of vitamin A and zinc, and lower glycemic load than non-followers.

From statistical analysis, the fast food intake was an independent risk factor of severe acne (OR = 4.8), while adherence to traditional was protective against moderate to severe acne (OR = 0.3). Following providing dietary counseling, there was a stark improvement in the severity of acne within a brief time in those adolescents (3months). This was encouraging and provided motivation to convey the benefits of dietary modifications in clinical practice.

An influential factor in dietary habits, was the involvement of parents in this study whose awareness made a huge difference in the diets of the adolescents. Establishing family awareness is a critical component in dietary habit modification for a healthier lifestyle outcomes.

Recommendations

1. Include dietary assessments in basic dermatological assessments for patients with acne;
2. Identify suitable dietary educational representations to adolescents for improvement (small number of meals that were low glycemic load, and from traditional diet);
3. Deploy school and community based health education programs on the impact of these eating habits on skin health, and engage families as an integral component;
4. Longitudinal studies are needed to validate the causal relationship of various individual components of the diet on acne episodes and progression.

In summary, the current study has complemented previous findings and indicated a prevailing notion that dietary approaches should be considered when managing patients with acne; this calls for a more multidisciplinary strategy by bringing together the specialties of dermatology, nutrition, and the educational sector to influence adolescent skin health in Iraq and similar countries.

References

1. Salem I, Ramful A, Elmasry M. Diet and acne: review of the evidence from 2010 to 2020. International Journal of Environmental Research and Public Health. 2020;17(22):8461.
2. Al-Ghazal P, Fares J. Fast food consumption and its association with acne vulgaris in Lebanese university students. Journal of Dermatological Treatment. 2021;32(2):148-154.
3. Yousef HJ, Abdelmoneim SM. Dietary patterns and acne severity among adolescents in Khartoum, Sudan. Dermatology Practical & Conceptual. 2021;11(1):e2021010.
4. Bowe WP, Joshi SS, Shridhar K. Diet and the role of nutrition in the pathogenesis and management of acne vulgaris: an overview of scientific evidence. Journal of the American Academy of Dermatology. 2019;80(2):550-558.
5. Katta R, Desai SP. Impact of sugar, milk, and refined carbohydrates on acne vulgaris and comorbid diseases. Skin Appendage Disorders. 2018;4(2):65-69.
6. Burris J, Shikany JM, Mancuso P. Nutritional considerations in the treatment of acne vulgaris. Journal of the Academy of Nutrition and Dietetics. 2013;113(12):1636-1641.
7. Zouboulis CC, Dellavalle RP. The paradigm shift in understanding acne pathogenesis and implications for antibiotic therapy. British Journal of Dermatology. 2013;169(Suppl 1):1-3.
8. Doshi A, Zaheer A, Stiller MJ. A comparison of current acne grading systems and proposal of a novel system. Journal of the American Academy of Dermatology. 1997;37(4):610-616.
9. World Medical Association. Declaration of Helsinki: ethical principles for medical research involving human subjects. JAMA. 2013;310(20):2191-2194.
10. Pallant J. SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS. 7th ed. Australia: Allen & Unwin; 2016.
11. Jung JY, Kwon HH, Hong JS, *et al.* Effect of a low-glycemic-load diet on acne and hormone levels in adolescents. Journal of Dermatological Science. 2012;67(3):210-216.
12. Melnik BC. Evidence-based recommendation for the prevention of acne by nutritional intervention. Journal of Dermatological Treatment. 2014;25(3):212-219.
13. Danby FW. Diet, glycemic load and the epidemiology of acne vulgaris. Medscape Journal of Medicine. 2008;10(1):177.

How to Cite This Article

Jabur AH. Examine how traditional diet and fast food consumption affect acne severity among adolescents. International Journal of Dermatology, Venereology and Leprosy Sciences. 2025;8(1):60-67