



Research Paper

Prevalence of Hair Fall and Association of Lifestyle Factors in Young Adults aged 18-35 years: A cross-sectional study

1. Dr. Pawan Manojising Pawar, Intern, Department of research, Dr. Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, India. Pin code- 425309;
 2. Dr. Prashant Solanke, Professor and Dean, Department of community medicine, Dr. Ulhas Patil Medical College And Hospital, Jalgaon, Maharashtra, India. Pin code: 425309;
 3. Dr Alok Kumar Yadav, Associate Professor, Department of Physiology, Dr. Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, India. Pin code: 425309;
 4. Vijay Pandurang More, Statistician, Department of community medicine, Dr. Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, India. Pin code: 425309;
- Corresponding author -Dr. Pawan Manojising Pawar, Intern, Department of research, Dr. Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, India. Pin code- 425309;

Abstract

Background–

Hair fall is a common concern among young adults and has been increasingly linked to modifiable lifestyle factors such as diet, sleep, physical activity, smoking, alcohol consumption and screen time. This study was conducted to determine the prevalence of self-reported hair fall and assess its association with selected life style factors among young adults aged 18-35 years.

Objectives –

This study aims to determine the prevalence of self-reported hair fall among young adults aged 18-35 years and to assess the association between selected lifestyle factors, to identify the significant life-style related risk factors associated with hair fall among young adults.

Methodology –

A Cross-sectional study was conducted among the young adults from Jalgaon and Buldhana, Maharashtra, India in the period of 2 months from June, 2026 to August, 2026. The study population includes the young adults aged 18-35 years. Sample size taken for the study is 95 whereas in total of 102 responses recorded. Consecutive sampling done by distributing the google form to the students via the whatsapp groups.

Results –

Among the 102 participants aged 18-35 years, the prevalence of self-reported hair fall was 78.43%. No significant association was observed between hair fall and the selected lifestyle factors including diet, sleep duration, physical activity, smoking, alcohol consumption and screen time, although physical inactivity showed a borderline association. However this study did not identify any lifestyle factor as an independent predictor of hair fall. Overall, the study demonstrates a high prevalence of self-reported hair fall among young adults, with no significant lifestyle related risk factors identified in this sample.

Conclusion –

Self-reported hair fall is highly prevalent among young adults aged 18-35 years. No significant association was observed between the selected lifestyle factors and hair fall, and no independent lifestyle-related risk factors were identified.

Key words – Hair fall, Lifestyle factors, Young adults, Prevalence

Received 04 Aug., 2026; Revised 14 Aug., 2026; Accepted 16 Aug., 2026 © The author(s) 2026.
Published with open access at www.questjournals.org

I. Introduction

Hair fall is one of the most common dermatological and cosmetic concerns among young adults, affecting both males and females and significantly influencing self-confidence, body image, and quality of life. Although the loss of approximately 50–100 hairs per day is considered a normal physiological process, excessive or persistent hair fall may indicate underlying nutritional deficiencies, hormonal imbalance, genetic predisposition, systemic illness, or exposure to modifiable environmental and lifestyle-related factors.¹described telogen effluvium as one of the most common causes of diffuse hair loss, while ²emphasized the importance of a systematic approach to the diagnosis and management of diffuse hair loss in adults. Furthermore, ³and ⁴highlighted that physiological and psychological stress can disrupt the normal hair growth cycle, resulting in excessive hair shedding. Owing to rapid urbanization and changing lifestyle patterns, hair fall has emerged as an important public health concern among young adults.

Several studies have reported a high prevalence of hair fall among young adults. A cross-sectional study conducted by ⁵among individuals aged 18–35 years in Maharashtra reported a prevalence of 56.5% and identified hair fall as a common health problem in this age group. Similarly, ⁶ in a cross-sectional study published in the Journal of Emerging Technologies and Innovative Research (JETIR), reported a high prevalence of hair fall and hair-related problems among both males and females. These findings indicate that hair fall is common in young adults; however, its prevalence may vary across different populations, emphasizing the need for further epidemiological studies in different geographical settings.

Lifestyle factors have increasingly been recognized as important determinants of hair health. ⁷reported that deficiencies of essential vitamins and minerals adversely affect the hair growth cycle and contribute to excessive hair loss. ⁸highlighted that unhealthy dietary habits, inadequate sleep, smoking, alcohol consumption, and other lifestyle practices may negatively influence hair growth and scalp health. Likewise, ⁹identified nutritional imbalance, systemic illnesses, medications, and psychological stress as important precipitating factors for telogen effluvium. ^{1,4}also recognized psychological stress as a major trigger for diffuse hair loss. These findings suggest that several lifestyle factors are potentially modifiable and may influence the occurrence and severity of hair fall.

Among the various forms of hair loss, androgenetic alopecia is one of the most common conditions affecting adults. ¹⁰provided evidence-based guidelines for the diagnosis and management of androgenetic alopecia in men, while ¹¹reviewed its epidemiology, pathogenesis, and recent advances in treatment. Beyond the physical manifestations, hair loss also has a substantial psychosocial impact. ¹²reported that alopecia adversely affects self-esteem, body image, emotional well-being, and quality of life, particularly among young adults.

Although previous studies have identified individual determinants of hair fall, including psychological stress, dandruff, family history, and the use of chemical hair products, as reported by ⁵and poor dietary habits, inadequate sleep, and stress, as reported by ⁶limited studies from India have comprehensively evaluated the association of self-reported hair fall with selected modifiable lifestyle factors such as diet, sleep duration, physical activity, smoking, alcohol consumption, and screen time among young adults. Furthermore, there is limited evidence identifying which of these lifestyle factors independently contribute to the risk of hair fall in this age group. Therefore, the present study was undertaken to determine the prevalence of self-reported hair fall among young adults aged 18–35 years, assess the association between selected lifestyle factors and hair fall, and identify the significant lifestyle-related risk factors associated with hair fall. The findings of this study are expected to contribute to the existing literature and provide evidence for promoting healthy lifestyle practices, increasing awareness regarding preventable risk factors, and developing effective preventive strategies to reduce the burden of hair fall among young adults.

II. Objectives

1. To determine the prevalence of self-reported hair fall among young adults aged 18–35 years.
2. To assess the association between selected lifestyle factors (diet, sleep duration, physical activity, smoking, alcohol consumption, and screen time) and hair fall among young adults.
3. To identify the significant lifestyle-related risk factors associated with hair fall among young adults.

III. Methodology

Study design –

A cross-sectional study

Study setting –

The study was conducted among the young adults aged 18-35 years from Jalgaon and Buldhana, Maharashtra, India after obtaining approval from the institutional ethical committee.

Study duration –

The study was conducted over a period of 2 months, from June 2026 to August 2026.

Study population –

Young adults aged 18-35 years who fulfilled the eligibility criteria and willing to participate in the study.

Inclusion Criteria –

Young adults aged 18-35 years. Individuals willing to participate in the study.

Exclusion Criteria –

Individuals below 18 years or above 35 years. Individuals unwilling to participate. Individuals with incomplete questionnaire responses.

Sample size –

The sample size was calculated using the formula for estimating a single proportion: $n = Z^2 p(1-p)/E^2$. Assuming a prevalence (p) of 56.5% based on previous literature⁵, a 95% confidence level ($Z = 1.96$), and an absolute precision of 10% ($E = 0.10$), the required sample size was calculated as $(n = (1.96)^2 \cdot 0.565(1-0.565) / (0.10)^2 = 94.41)$, which was rounded up to 95 participants. The calculated sample size was 95, whereas a total of 102 participants were included in the final analysis.

Sampling technique –

Consecutive sampling technique was used to recruit eligible participants.

Data collection tool –

Data were collected using a structured questionnaire consisting of – sociodemographic details, hair fall characteristics, dietary habits, sleep duration, physical activity, screen time, smoking and alcohol consumption, hair care practices, dandruff and chemical hair product use.

Study procedure –

After obtaining Institutional Ethics committee approval, a structured questionnaire was provided to the eligible participants via the google form. Confidentiality and anonymity of the collected information were maintained throughout the study.

Ethical considerations –

Approval was obtained from the Institutional Ethical Committee prior to the commencement of the study.

Results

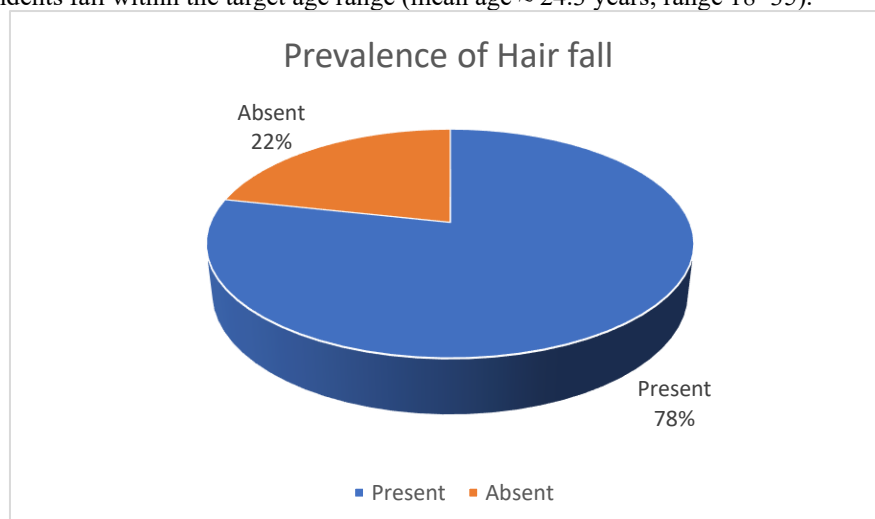
Prevalence –

Among the 102 participants 78.43% reported experiencing hair fall, whereas 21.57% reported no hair fall. Thus, the prevalence of self-reported hair fall in the present study is 78.43%.

Prevalence		
Hair Fall	n	%
Present	80	78.43
Absent	22	21.57
Total	102	100

Table 1. Prevalence of self-reported hair fall among study participants
95% Wilson confidence interval: 69.50% – 85.30%.

All 102 respondents fall within the target age range (mean age $\approx$ 24.3 years; range 18–35).



Graph 1. Prevalence of self-reported hair fall among study participants

Sociodemographic characteristics –

Age groups	n	%
18-21	4	3.92
22-25	82	80.39
26-30	10	9.8
31-35	6	5.89
Total	102	100

Table 2. Distribution of participants according to age

Distribution according to Gender		
Gender	n	%
Male	60	58.82
Female	42	41.18
Other	0	0

Table 3. Distribution of participants according to Gender

Occupation	n	%
Student	76	74.51
Employed	21	20.59
Self-employed	4	3.92
Unemployed	1	0.98
Total	102	100

Table 4. Distribution of participants according to occupation

Among 102 participants, 65 participants belongs to the Urban area of residence and 37 participants belongs to the Rural area of residence.

Lifestyle Factors –

Dietary Habits

Dietary Habits			
Variable	Category	n	%
Skipping Breakfast	Never	13	12.75
	Occasionally	62	60.78
	Frequently	27	26.47
Green Leafy Vegetables	Daily	12	11.76
	3-4 times/week	26	25.49
	1-2 times/week	40	39.22
	Rarely	24	23.53
Fruit Intake	Daily	5	4.9
	3-4 times/week	11	10.78
	1-2 times/week	47	46.08
	Rarely	39	38.24
Fast Food Consumption	Never	14	13.73
	Once/week	41	40.2
	2-3 times/week	29	28.43
	>3 times/week	18	17.65
Water Intake	<1 litre	7	6.86
	1-2 litres	45	44.12

	2-3 litres	31	30.39
	>3 litres	19	18.63

Table 5. Dietary Habits among participants

Sleep duration

Sleep Duration		
Sleep	n	%
<5 hours	9	8.82
5-6 hours	42	41.18
6-8 hours	45	44.12
>8 hours	6	5.88

Table 6. Sleep duration among participants

Physical activity

Physical activity	n	%
None	42	41.18
1-2 days/week	24	23.53
3-5 days/week	26	25.49
>5 days/week	10	9.8

Table 7. Distribution according to physical activity

Smoking and Alcohol consumption

Smoking and Alcohol Consumption			
Variable	Category	n	%
Smoking	Yes	2	1.96
	No	100	98.04
Alcohol	Yes	8	7.84
	No	94	92.16

Table 8. Distribution according to smoking and alcohol consumption

Screen time

Screen time	n	%
<2 hours	11	10.78
2-4 hours	38	37.25
4-6 hours	32	31.37
>6 hours	21	20.59

Table 9. Distribution of screen time among participants

Dandruff and Hair care practices

Hair Care Practices			
Variable	Category	n	%
Dandruff	Yes	53	51.96
	No	49	48.04
Chemical Products	Yes	20	19.61
	No	82	80.39
Use of oil	Yes	43	42.16
	No	59	57.84

Table 10. Distribution of participants according to Dandruff and Hair care practices

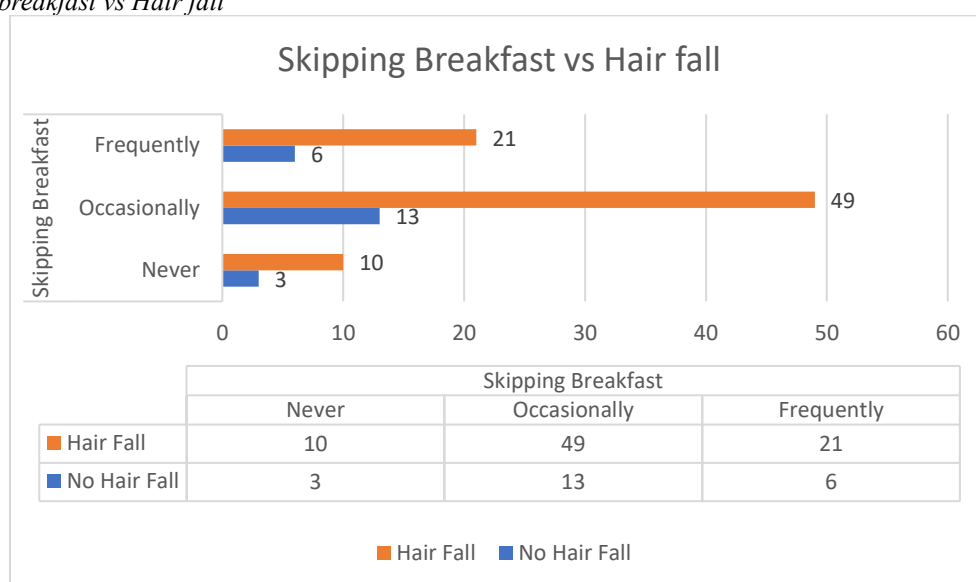
Chronic Illness

Chronic Illness			
Variable	Category	n	%
Illness	Yes	19	18.63
	No	83	81.37

Table 11. Distribution of participants according to chronic illness

Statistical Tests Applied –

The outcome variable is binary self-reported current hair fall (Yes/No). Lifestyle variables were cleaned (trailing spaces removed, “None”/blank treated as no exercise) and analysed with **chi-square tests of independence**. Where expected cell counts were low, **Fisher’s exact test** was also examined for 2×2 tables. Continuous scores (age) used **Mann–Whitney U tests**. A multivariable logistic regression model was fitted to identify independent lifestyle-related risk factors.

Dietary habits vs Hair fall –*Skipping breakfast vs Hair fall*

Graph 2. Skipping Breakfast vs Hair fall

We applied the Chi-Square test and found out the P-value, which came to be 0.981, which is more than (0.05), Hence there is no significant association found between skipping breakfast and hair fall.

Green leafy vegetables intake vs Hair Fall

Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Green Leafy Vegetables	Daily	5	7	4.012	0.26
	3-4 times/week	4	22		
	1-2 times/week	7	33		
	Rarely	6	18		

Table 12. Green leafy vegetables intake vs Hair fall

As per the Chi-Square test, P-value comes to be 0.26 which states that there is No significant association between green leafy vegetables intake and hair fall.

Fruit intake vs Hair fall

Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Fruit Intake	Daily	2	3	2.892	0.409
	3-4	4	7		

	times/week				
	1-2 times/week	9	38		
	Rarely	7	32		

Table 13. Fruit intake vs Hair fall

As per Chi-Square test, No significant association was found between fruit intake and hair fall.

Fast food consumption vs Hair fall

Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Fast Food Consumption	Never	6	8	5.03	0.17
	Once/week	8	33		
	2-3 times/week	6	23		
	>3 times/week	2	16		

Table 14. Fast food consumption vs Hair Fall

As per Chi-Square test, No significant association was found between fast food consumption and hair fall.

Water intake vs Hair fall

Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Water Intake	<1 litre	0	7	3.152	0.369
	1-2 litres	10	35		
	2-3 litres	6	25		
	>3 litres	6	13		

Table 15. Water intake vs Hair fall

As per Chi-Square test, No significant association was found between water intake and hair fall.

Interpretation – There is no significant association between dietary habits and hair fall.

Sleep duration vs Hair fall –

Average Sleep Duration vs Hair Fall			Chi-Square	P-value
Sleep duration	No Hair Fall	Hair Fall		
<5 hours	0	9	3.562	0.313
5-6 hours	11	31		
6-8 hours	9	36		
>8 hours	2	4		

Table 16. Sleep duration vs Hair fall

Interpretation - As per Chi-Square test, No significant association was found between sleep duration and hair fall.

Physical activity vs Hair fall –

Physical Exercise vs Hair Fall			Chi-Square	P-value
Exercise/week	No Hair Fall	Hair Fall		
None	6	36	7.108	0.069
1-2 days	3	21		
3-5 days	9	17		
>5 days	4	6		

Table 17. Physical activity vs Hair fall

Interpretation - As per Chi-Square test, No significant (or) borderline association was found between physical activity and hair fall.

Smoking and Alcohol consumption vs Hair fall –

Smoking vs Hair fall					
Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Smoking	Yes	1	1	0.975	0.32
	No	21	79		

Table 18. Smoking and Alcohol consumption vs Hair fall

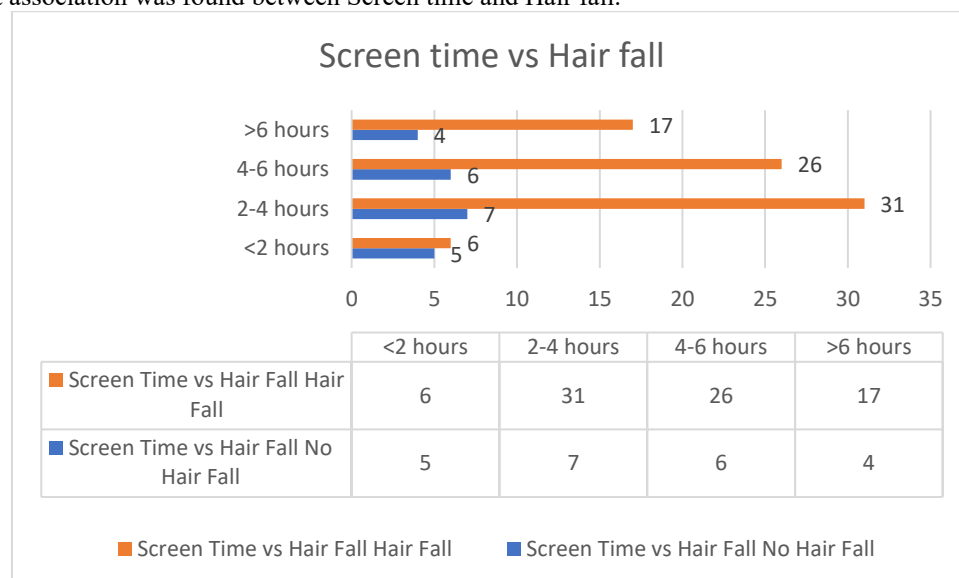
Alcohol Consumption vs Hair fall					
Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Alcohol	Yes	2	6	0.06	0.806
	No	20	74		

Table 19. Alcohol consumption vs Hair fall

Interpretation - As per Chi-Square test, No significant association was found between Smoking and Alcohol consumption and Hair fall.

Screen time vs Hair fall –

Interpretation - As per Chi-Square test , Chi-Square = 4.162 and P-value = 0.245 (>0.05), hence there is no significant association was found between Screen time and Hair fall.



Graph 3. Screen time vs Hair fall

Dandruff and Hair care practices vs Hair fall –

Dandruff and Hair Care Practices vs Hair fall					
Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Dandruff	Yes	10	43	0.476	0.49
	No	12	37		

Table 20. Dandruff vs Hair fall

Chemical product use vs Hair fall					
Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Chemical products use	Yes	4	16	0.036	0.849
	No	18	64		

Table 21. Chemical products use vs Hair fall

Interpretation - As per Chi-Square test, No significant association was found between Dandruff and Hair care practices and Hair fall.

Chronic illness vs Hair fall –

Chronic Illness vs Hair fall					
Variable	Category	No Hair Fall	Hair Fall	Chi-Square	P-value
Illness	Yes	3	16	0.461	0.497
	No	19	64		

Table 22. Chronic illness vs Hair fall

Interpretation - As per Chi-Square test, No significant association was found between Chronic illness and Hair fall.

Other Factors –

Age: No significant difference found between age groups. (Mann–Whitney $p = 0.18$).

Gender: As per Chi-Square test, Chi-Square = 0.983 and P-value = 0.313, which states that there is No significant association between Gender and Hair fall.

Multivariable binary logistic regression –

(Hair Fall ~ gender + inadequate sleep + no exercise + high screen time + frequent breakfast skipping + low water + frequent fast food):

- Overall model not significant (LLR $p = 0.80$).

- No variable reached $p < 0.05$.

- Highest adjusted odds ratios (non-significant): No exercise ≈ 1.87 , Frequent fast food ≈ 1.66 .

Overall Interpretation Linked to Objectives –

1. **Prevalence** of self-reported hair fall in this sample of young adults is high ($\approx 78\%$).

2. **Associations:** Among the examined lifestyle factors (diet-related, sleep, physical activity, screen time, smoking, alcohol), only physical inactivity showed a borderline trend. Other factors did not demonstrate statistically significant associations in this dataset.

3. **Significant lifestyle risk factors:** None of the lifestyle variables emerged as independently significant predictors after multivariable adjustment. Trend for physical inactivity merit further investigation in larger samples.

IV. Discussion

The present study was conducted to determine the prevalence of self-reported hair fall and evaluate its association with selected lifestyle factors among young adults aged 18–35 years. A high prevalence of self-reported hair fall was observed, with 78.43% of participants reporting hair fall. This prevalence is considerably higher than the 56.5% reported by ⁵ in their community-based cross-sectional study conducted among young adults in Maharashtra. Similarly, ⁶ also reported that hair fall and other hair-related problems were highly prevalent among both male and female participants. The higher prevalence observed in the present study may be attributed to differences in study population, sampling method, geographical setting, sample size, and the use of self-reported assessment rather than objective clinical diagnosis. Nevertheless, the findings of both the present study and previous Indian studies indicate that hair fall is a common health concern among young adults.

The present study did not demonstrate a statistically significant association between self-reported hair fall and dietary habits, sleep duration, recreational screen time, smoking, alcohol consumption, dandruff, hair-care practices, or chronic illness. Although physical inactivity showed a borderline association with hair fall ($p = 0.068$), the association did not reach statistical significance. In contrast, ⁶ reported that poor dietary habits, inadequate sleep, and psychological stress were commonly associated with hair-related problems. Similarly, ⁸ highlighted that unhealthy lifestyle behaviours, including poor nutrition, inadequate sleep, smoking, alcohol consumption, and chronic stress, may adversely affect hair health and contribute to hair loss. These differences may be explained by variations in participant characteristics, lifestyle patterns, methods of data collection, and statistical power between the studies.

Multivariable logistic regression analysis in the present study did not identify any independent lifestyle-related predictors of hair fall. In comparison, ⁵ identified psychological stress, dandruff, family history, shampoo use, artificial hair dye, helmet use, and hair oil practices as significant determinants of hair fall among young adults. Likewise, ⁷ emphasized that deficiencies of essential vitamins and minerals may impair the normal hair growth cycle and contribute to excessive hair loss, while ⁹ reported that nutritional imbalance, systemic illnesses, medications, and psychological stress are important precipitating factors for telogen effluvium. The discrepancy between the present findings and previous studies may be due to differences in study design, sample size, population characteristics, assessment of lifestyle variables, and the limited statistical power of the present study.

Although no independent lifestyle-related risk factors were identified in the present study, the high prevalence of self-reported hair fall observed among young adults suggests that hair fall remains an important public health concern. The absence of statistically significant associations does not necessarily exclude the influence of lifestyle factors but may reflect the multifactorial nature of hair fall, in which genetic, hormonal, nutritional, environmental, and psychosocial factors interact. Therefore, larger multicentric prospective studies with objective clinical assessment, detailed nutritional evaluation, and longer follow-up are recommended to better understand the role of modifiable lifestyle factors and to identify independent predictors of hair fall. Such evidence would help in developing effective preventive strategies, promoting healthy lifestyle practices, and reducing the burden of hair fall among young adults.

V. Conclusion

The prevalence of self-reported hair fall among young adults aged 18–35 years was high, with 78.43% of participants reporting hair fall.

Nosignificant association was found between hair fall and the selected lifestyle factors, including diet, sleep duration, screen time, smoking, alcohol consumption, dandruff, hair care practices and chronic illness. Physicalactivity showed a borderline association with hair fall but did not reach statistical significance.

This study did not identify any lifestyle factor as an independent significant predictor of hair fall. Although physical inactivityshowed higher odds of hair fall, these associations were not statistically significant.

Limitation

Consecutive sampling. Small number of participants, eg. small number of smokers/alcohol users (low power). No clinical examination of hair fall (only self-reported).

Funding

Self-funded research.

Conflict of interest

There are no conflicts of interest.

References

- [1]. Grover C, Khurana A. Telogen effluvium. *Indian J Dermatol Venereol Leprol.* 2013;79(5):591-603.
- [2]. Shrivastava SB. Diffuse hair loss in adults: approach to diagnosis and management. *Indian J Dermatol Venereol Leprol.* 2009;75(1):20-27.
- [3]. Malkud S. Telogen effluvium: a review. *J Clin Diagn Res.* 2015;9(9):WE01-WE03.
- [4]. Harrison S, Sinclair R. Telogen effluvium. *Clin Exp Dermatol.* 2002;27(5):389-395.
- [5]. Saoji A, Saoji P, Kulkarni M, Khurana K, Wani D. Prevalence and determinants of hair fall, hair loss and premature graying in young adults: a cross-sectional study. *Afr J Biomed Res.* 2024;27(3 Suppl):5454-5460. doi:10.53555/AJBR.v27i3S.3182.
- [6]. Patil S, et al. A cross-sectional study on hair fall and hair-related problems among males and females. *J Emerg Technol Innov Res (JETIR).* 2022;9(11).
- [7]. Almohanna HM, Ahmed AA, Tsatalis JP, Tosti A. The role of vitamins and minerals in hair loss: a review. *Dermatol Ther (Heidelb).* 2019;9(1):51-70.
- [8]. Trüeb RM. Association between lifestyle factors and hair loss. *Int J Trichology.* 2015;7(3):95-99.
- [9]. Asghar F, Shamim N, Farooque U, Sheikh H, Aqeel R. Telogen effluvium: a review of the literature. *Cureus.* 2020;12(5):e8320.
- [10]. Mysore V. Guidelines on management of androgenetic alopecia in men. *Indian J Dermatol Venereol Leprol.* 2015;81(5):444-453.
- [11]. Rudnicka L, Olszewska M, Rakowska A. Androgenetic alopecia. *Lancet.* 2024;403(10431):1046-1058.
- [12]. Hunt N, McHale S. The psychological impact of alopecia. *BMJ.* 2005;331(7522):951-953.