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A STUDY ON PREVALENCE OF HAIRLOSS AND ASSOCIATED FACTORS AMONG MEDICAL STUDENTS IN KONASEEMA INSTITUTION OF MEDICAL SCIENCES AND RESEARCH FOUNDATION

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ABSTRACT

Background: Hair loss is a common concern among medical students, often attributed to various physiological, psychological, and environmental factors. This study aims to assess the prevalence of hair loss and its associated factors among medical students. **Methods:** A cross-sectional study was conducted among 104 medical students. Data on demographic details, hair loss prevalence, potential causes, BMI, hemoglobin levels, stress levels, hair care practices, and water quality were collected and analyzed. Statistical associations were determined using chi-square tests. **Results:** The study found that 97.11% of participants experienced hair loss. The most commonly reported causes included academic stress (36.53%), dandruff (30.76%), and water and diet changes (20.19%). A significant association was observed between stress and hair loss ($p = 0.001$), indicating stress as a key contributing factor. However, no significant correlation was found between hair loss and BMI, hemoglobin levels, or type of water used for hair washing. Most participants (93.26%) relied on shampoos for hair loss treatment, while the use of other treatments such as vitamins and pills was minimal. **Conclusion:** The high prevalence of hair loss among medical students highlights the impact of stress and scalp health on hair conditions. While BMI and hemoglobin levels were not significantly associated, managing stress and adopting appropriate hair care practices may help mitigate hair loss. Further research with larger sample sizes and controlled variables is recommended to explore preventive measures and treatment strategies.

KEYWORDS : Hair loss, Academic stress,BMI, Hemoglobin levels,Diet and Nutrition.

INTRODUCTION:

Hair loss is a common concern affecting individuals across different age groups, often influenced by various lifestyle and environmental factors. Several studies suggest that stress, nutritional deficiencies, water quality, and genetic predisposition play a crucial role in hair health. Among students, academic stress is a significant contributing factor, alongside dietary habits and hair care practices.This study aims to explore the prevalence of hair loss and its possible associations with stress, body mass index (BMI), hemoglobin levels, water sources, and other lifestyle factors among a selected population. Understanding these relationships can help in developing preventive measures and targeted interventions to minimize hair loss. By analyzing demographic details, washing habits, dietary patterns, and medical factors, this research provides valuable insights into the impact of daily routines and health conditions on hair health.

Aim:

This study aims to assess the prevalence of hair loss and identify the contributing factors, including academic stress, dietary habits, water quality, BMI, and hemoglobin levels, among a selected population.

Objectives :

1. To evaluate the frequency of hair loss among participants.
2. To analyze the relationship between academic stress and hair loss.
3. To assess the impact of BMI and hemoglobin levels on hair health.
4. To examine the role of water quality and hair-washing habits in hair loss.
5. To determine the influence of dietary patterns on hair health.
6. To identify common hair care practices and their effectiveness in managing hair loss.

MATERIALS AND METHODS:

Place Of Study : The study was carried out among medical students in Konaseema Institute of Medical Sciences & Research Foundation, Amalapuram, Dr.B.R.A Konaseema District, Andhra Pradesh, India.

Study Design : This was a cross-sectional study done among medical students in konaseema institute of medical sciences and research foundation, Amalapuram

Study Period: The study was carried out among medical students in Konaseema Institute of Medical Sciences & Research Foundation, Amalapuram for 1 month (January 2025).

Study Participants : Medical students in kims medical college, Amalapuram.

Sample Size: 104 samples collected on the basis of a questionnaire.

Data Collection Procedure: After getting informed consent from the participants data was collected in a semi structured questionnaire.

Confidentiality: Particulars and details of all the participants were kept confidential throughout the study only summary of the details was used for declaring the result.

Ethical Consideration: Institutional ethics committee approval and informed consent was taken.

Data Analysis And Interpretation: Data was entered using Microsoft Excel sheet Summarisation and analysis of data was carried out by using IBM SPSS Software version 20(licensed).

Inclusion Criteria : Medical students in KONASEEMA INSTITUTE OF MEDICAL SCIENCES AND RESEARCH FOUNDATION, AMALAPURAM.

Exclusion Criteria : Those who are not willing to participate in semi structured questionnaire.

RESULT:

104 Responses were used for the analysis of current study.

Table 1 Demographic Details

Age	**Frequency**	**Percentage**
18-22	65	62.5
23-25	31	29.80
>25	8	7.69
Gender	Frequency	Percentage
Male	20	19.23
Female	84	80.76
Phase of study	Frequency	Percentage
Phase 1	14	13.46
Phase 2	5	4.80
Part 1	8	7.69
Part 2	30	28.8
Internship	47	45.19
Total	104	100

Table 2 Factors

Do you have hair loss	Frequency	Percentage
Yes	101	97.11
No	3	2.88
Cause of your hairloss	Frequency	Percentage
Academic stress	38	36.53
Dandruff	32	30.76
Dry hair/ split ends	3	2.88
Lice and nits	3	2.88
Water and diet changes	21	20.19
Pcos	3	2.88
Others	4	3.84
Diet	Frequency	Percentage
Mixed	90	86.53
Vegetarian	11	10.5
Vegan	1	0.96
Eggetarian	2	1.92
Total	104	100

BMI	Frequency	Percentage
Underweight	10	9.61
Normal	69	66.34
Overweight	19	18.26
Obese	6	5.76
Hemoglobin	Frequency	Percentage
7-9	28	26.9
10-12	41	39.4
13-15	31	29.8
>15	4	3.84
Stress	Frequency	Percentage
Yes	86	82.69
No	18	17.30
Total	104	100

Table 3 : Reasons

How often do you wash your hair per week	Frequency	Percentage
1 time	26	25
2-3 times	69	66.34
>3 times	7	6.73
Every day	2	1.92
Source of water	Frequency	Percentage
Borewell (hard water)	0	0
Borewell (normal Water)	58	55.76
Corporation supplied	42	40.38
Both	4	3.846
Any family history	Frequency	Percentage
Yes	34	32.69
No	70	67.3
Total	104	100

Type of water used for hair wash	Frequency	Percentage
Hot	13	12.5
Lukewarm	51	49
Cold	40	38.4
Treatment	Frequency	Percentage
Shampoos	97	93.26
Vitamins	5	4.80
Pills	2	1.92
Serums	0	0
Total	104	100

Analysis

Source of hair wash	Hairloss Present	Hairloss absent	Total	Chi square	P value
Borewell (hard Water)	0	0	0	4.56	0.10
Borewell (normal water)	58(55.76)	0	58(55.76)		
Corporation supplied	39(37.5)	3(2.88)	42(40.38)		
Both	4(3.84)	0	4(3.84)		
Total	101(97.11)	3(2.88)	104(100)		

BMI	Hairloss present	Hairloss absent	Total	Chi square	P value
Underweight	10(9.61)	0	10(9.61)	1.57	0.667
Normal	66(63.46)	3(2.88)	69(66.3)		
Overweight	19(18.26)	0	19(18.26)		
Obese	6(5.769)	0	6(5.769)		
Total	101(97.11)	3(2.88)	104(100)		

Year of study	Hairloss present	Hairloss absent	Total	Chi square	P value
1 st year	12(11.5)	2(1.92)	15(13.46)	7.86	0.09
2 nd year	5(4.80)	0	5(4.80)		
Part 1	8(7.69)	0	8(7.69)		
Part 2	30(28.8)	0	30(28.8)		
Internship	46(44.23)	1(0.96)	47(45.19)		
Total	101(97.11)	3(2.88)	104(100)		

Stress	Hairloss present	Hairloss absent	Total	Chi square	P value
Yes	86(82.69)	0	86(82.69)	14.75	0.001
No	15(14.4)	3(2.88)	18(17.30)		
Total	101(97.11)	3(2.88)	104(100)		

Treatment	Hairloss present	Hairloss absent	Total	Chi square	P value
Shampoos	94(90.38)	3(2.88)	97(93.26)	0.22	0.89
Vitamins	5(4.80)	0	5(4.80)		
Pills	2(1.92)	0	2(1.92)		
Serums	0	0	0		
Total	101(97.11)	3(2.88)	104(100)		

Haemo globin	Hairloss present	Hairloss absent	Total	Chi square	P value
7-9	28(26.92)	0	28(26.92)	4.74	0.19
10-12	38(36.53)	3(2.88)	41(39.4)		
13-15	31(29.80)	0	31(29.80)		
>15	4(3.84)	0	4(3.84)		
Total	101(97.11)	3(2.88)	104(100)		

The study highlights stress as a major contributing factor to hair loss, with a statistically significant association (p=0.001). Other factors, such as BMI, hemoglobin levels, water quality, and hair care habits, did not show a strong correlation with

hair loss. The findings suggest that addressing stress and scalp health may be more effective in managing hair loss than focusing solely on external factors like water quality or hair washing frequency.

DISCUSSION:

Hair loss among medical students is a multifaceted issue influenced by various factors, including stress, lifestyle habits, and underlying health conditions. The provided document highlights that 97.11% of participants experienced hair loss, with academic stress (36.53%) and dandruff (30.76%) being the most commonly reported causes. Additionally, 82.69% of the respondents acknowledged experiencing stress.

A comparable study conducted at Allama Iqbal Medical College revealed that 85.67% of medical students experienced hair loss, with a significant association between stress levels and hair loss severity. Specifically, 25% reported mild hair loss, 48.7% moderate, and 12% extreme hair loss. The study concluded that higher stress levels correlated with increased hair loss among medical students. Jumdc.com

In contrast, a study focusing on female medical students at Dow Medical College found a low prevalence (1.9%) of significant hair loss. Despite 96% of participants experiencing moderate to high stress, no direct association between stress levels and hair loss was established. The researchers suggested that the low incidence of hair loss might have limited the ability to detect a significant relationship between stress and hair loss in this cohort. Jpmsonline.com

Furthermore, research from a medical college in Kolar, India, examined the association of depression, loneliness, and internet addiction with androgenetic alopecia (AGA) in male medical students. The findings indicated that 94% of students with AGA reported daily stress, and higher grades of AGA were associated with increased levels of depression, loneliness, and internet addiction. This underscores the psychological impact of hair loss on medical students and its potential to exacerbate mental health issues. Pmc.ncbi.nlm.nih.gov

Collectively, these studies suggest that while stress is a common factor among medical students, its direct correlation with hair loss varies across different populations. The variability in findings may be attributed to differences in study design, sample size, gender distribution, and cultural factors. Nonetheless, the psychological implications of hair loss, such as increased stress, depression, and loneliness, are evident and warrant attention.

Addressing hair loss in medical students necessitates a comprehensive approach that includes stress management strategies, mental health support, and education on healthy lifestyle practices. By recognizing and mitigating the factors contributing to hair loss, medical institutions can better support the well-being of their students.

CONCLUSION:

This study highlights the high prevalence of hair loss among medical students, with stress emerging as a significant contributing factor ($p=0.001$). Academic pressure, lifestyle habits, and scalp conditions such as dandruff were among the most commonly reported causes. While other factors like BMI, hemoglobin levels, and water quality were analyzed, no strong correlations were found.

Hair care practices, including shampoo use and hair-washing frequency, were widely adopted, but their impact on hair loss remained inconclusive. Despite the widespread use of shampoos (93.26%), no statistically significant association was found between hair care treatments and reduced hair loss.

The study underscores the need for effective stress management strategies to mitigate hair loss among medical students. Implementing lifestyle modifications, promoting balanced nutrition, and encouraging healthy scalp care routines may help in reducing hair loss. Future research with a larger sample size and longitudinal analysis is recommended to further explore the complex interactions between stress, health, and hair loss.

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