

Health Awareness and Behavior Among School Going Adolescent Students: A Cross-Sectional Observational Study

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ABSTRACT

Background: Adolescence is a critical period during which health-related knowledge and behavioral patterns are established and consolidated. School-going adolescents in rural settings represent a particularly important target group for health education, yet the gap between health awareness and actual health behavior in this population remains inadequately studied.

Objective: To assess health awareness and behavior among school-going adolescents in rural Jhansi District, Uttar Pradesh, India, and to evaluate gender-based differences across domains of exercise, nutrition, and tobacco use.

Methods: A cross-sectional, observational questionnaire-based survey was conducted during November–December 2025 among 150 high school students aged 14–18 years (75 males, 75 females) from rural schools of Jhansi District, Uttar Pradesh, India. A self-designed structured questionnaire assessed awareness and behavior related to exercise, nutrition, malnutrition, obesity, and tobacco. Data were analyzed using SPSS version 20. Results were expressed as numbers, percentages, and mean \pm standard deviation. Pearson's Chi-square test was applied for categorical variables, with statistical significance set at $p < 0.05$.

Results: Awareness regarding exercise importance (98.66%) and tobacco's ill effects (97.33%) was near-universal. However, only 68.66% devoted time to exercise and 23.33% reported tobacco consumption. Gender-wise chi-square analysis revealed highly significant differences in exercise participation ($\chi^2 = 33.742$, $p < 0.001$) and tobacco use ($\chi^2 = 16.435$, $p < 0.001$), with males significantly more active yet more likely to consume tobacco. Significant differences were also noted in awareness of malnutrition and obesity ($p = 0.006$) and tobacco harms ($p = 0.024$). Meal regularity and awareness of exercise importance showed no significant gender variation.

Conclusion: A notable disconnect between health awareness and health behavior was observed among adolescent students, with distinct gender-specific vulnerability patterns. The study underscores the urgent need for gender-sensitive, school-based behavioral interventions that address the social, psychological, and environmental determinants of adolescent health, extending well beyond conventional awareness-based approaches.

Keywords: Adolescent health, Health awareness, Health behavior, Gender differences, Rural school students, Tobacco use, Physical activity, Cross-sectional study

INTRODUCTION

Adolescence represents a critical period of development where health behaviors and lifestyle choices established during these formative years significantly influence lifelong health trajectories. Among school-going students aged 14–18 years, the transition from childhood to adulthood involves increasing autonomy in decision-making regarding personal health practices, nutrition, physical activity, hygiene, and preventive health measures. However, the adolescent population often exhibits a disconnect between their level of health understanding and their actual health-related behaviors, a gap that warrants systematic investigation, particularly in the Indian context.

Jhansi district in Uttar Pradesh, despite being an educationally significant region, faces considerable health burdens stemming from inadequate health literacy and suboptimal health practices among its youth population. The prevalence of lifestyle-related conditions, poor sanitation awareness, and inconsistent health-seeking behaviors underscore the need for localized data on health awareness levels among adolescents. Furthermore, gender-based differences in health knowledge and practices remain underexplored in this specific geographic setting, making it essential to examine both male and female students separately to understand sex-specific health promotion needs.

Schools serve as ideal settings for health research, given their accessibility and the captive nature of the student population. This cross-sectional observational study was conducted to assess the current state of health awareness and identify behavioral patterns among male and female school-going adolescents in Jhansi district. The outcomes of this investigation will contribute to developing context-specific health education strategies and inform evidence-based public health interventions in the region.

METHODS

The present study was a cross-sectional, observational questionnaire-based survey conducted in the months of November and December, 2025 at the school saturated in the rural villages of Jhansi District of Uttar Pradesh, India.

A self-designed and well-structured questionnaire was distributed randomly to high school students between 14 to 18 years of age. After obtaining permission from the school principal and class teachers, the students were interviewed during the recess and free period. After obtaining informed consent, they were asked to complete questionnaire assessing awareness of health and related issues. After obtaining informed consent, they were asked to complete questionnaire assessing awareness of health and related issues. Demographic details were also recorded.

The questionnaire assessed health awareness and behavior related to

(a) Exercise and Nutrition; (b) Malnutrition and Obesity; and (c) Tobacco. One hundred and fifty(150) students participated in the survey. Their responses were obtained and further analyzed.

INCLUSION CRITERIA

1. All Students between 14-18 years present in the school during the timeframe of the survey.
2. Students who were willing to participate in the survey.

Data was analyzed with the help of SPSS 20. Data was expressed in actual number, mean \pm standard deviation, and percentage. Pearson's Chi-Square test was used for categorical data. 'P' value of less than 0.05 was considered as statistically significant.

RESULTS

Table - 01

Table 1: Assessment of Health Awareness and Behavior Domains (positive responses).

<i>No.</i>	<i>Health questions (awareness and behavior)</i>	<i>Values</i>
1.	Awareness of Importance of exercise on health	98.66 % (148)
2.	Devoted time for exercise activity	68.66 % (103)

3.	Awareness of ill effects of Malnutrition and obesity	85.33 % (128)
4.	Awareness of Healthy food concept	66.66% (100)
5.	Consumes Breakfast and meal every day	70.00% (105)
6.	Awareness of ill effects of taking Tobacco	97.33 % (146)
7.	Consumes tobacco	23.33 % (35)

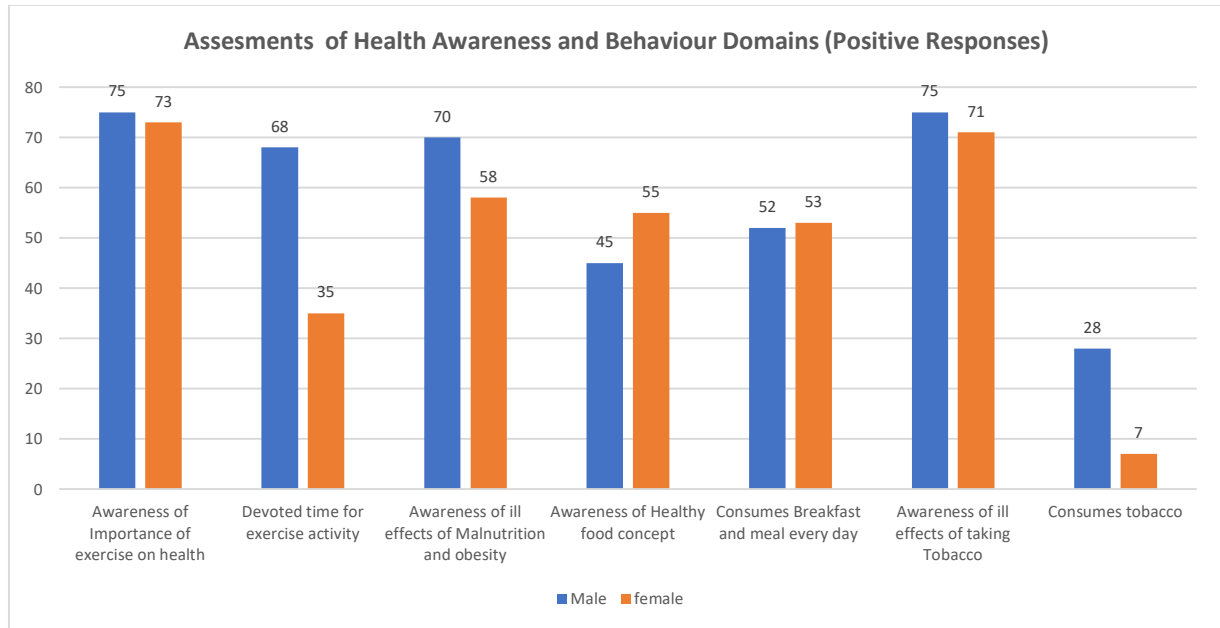
Out of 150 students surveyed, 50 % (75) were males and 50 % (75) were females. 98.66 % (148) students were aware of importance of exercise on health and 68.66 % (103) devoted time for exercise & recreational activities. 85.33 % (128) students were aware of the ill effects of Malnutrition and Obesity. 66.66 % (100) students were aware of healthy food concept. 70 % (105) students consume breakfast and meals every day. 97.33 % (146) were aware of ill effects of taking Tobacco and 23.33 % (35) consumed tobacco.

Table – 02

Table-2 Responses of student's gender wise to the questions related to health awareness and behavior

No.	Health awareness question	Answer	Male	Female
1.	Awareness of Importance of exercise on health	Yes	75	73
		No	00	02
2.	Devoted time for exercise activity	Yes	68	35
		No	07	40
3.	Awareness of ill effects of Malnutrition and Obesity	Yes	70	58
		No	05	17
4.	Awareness of Healthy food concept	Yes	45	55
		No	30	20
5.	Consumes Breakfast and meal every day	Yes	52	53
		No	23	22
6.	Awareness of ill effects of taking Tobacco	Yes	75	71
		No	00	05
7.	Consumes tobacco	Yes	28	07
		No	47	68

Graph - 01



Graph -02

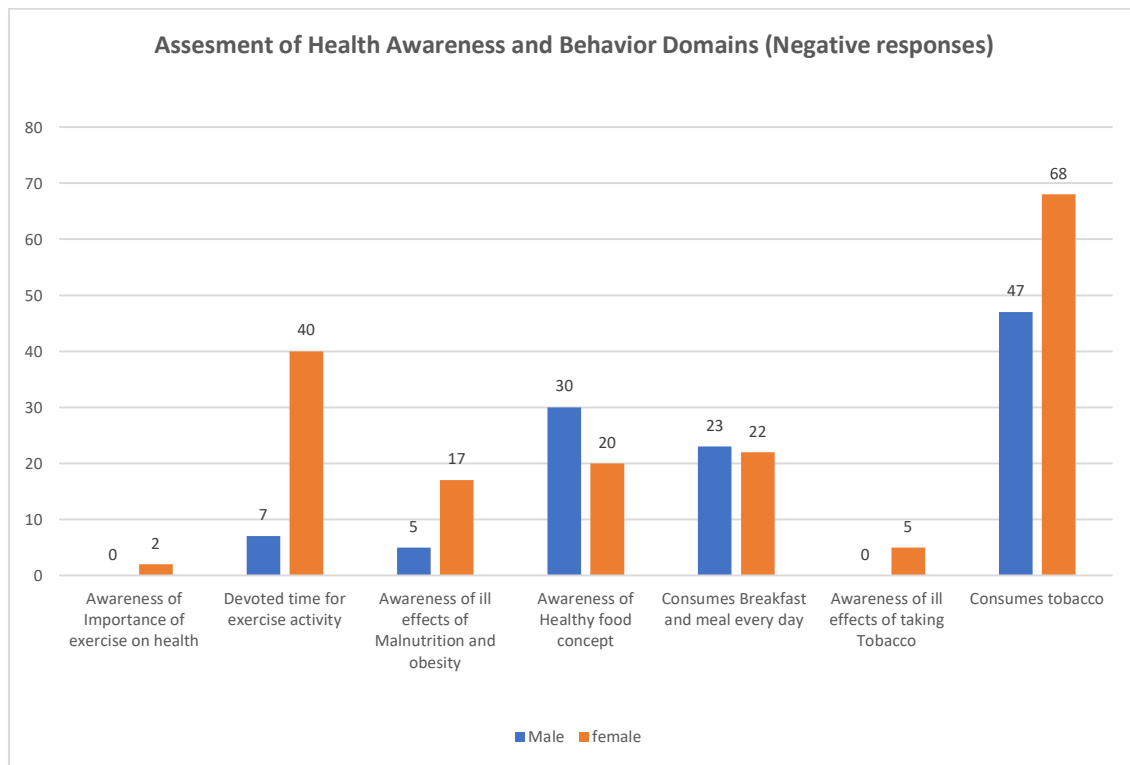


Table – 03

Table 3: Gender-wise comparison of Health Awareness and Behaviour using Chi-square test

No.	Parameter	χ^2 Value	df	p-value	Significance
01	Awareness of importance of exercise on health	2.027†	1	0.155	NS
02	Devoted time for exercise activity	33.742	1	< 0.001	HS
03	Awareness of ill effects of malnutrition and obesity	7.670	1	0.006	S
04	Awareness of healthy food concept	3.000	1	0.083	NS
05	Consumes breakfast and meal every day	0.032	1	0.858	NS
06	Awareness of ill effects of taking tobacco	5.110†	1	0.024	S
07	Consumes tobacco	16.435	1	< 0.001	HS

NS = Not significant ($p > 0.05$); S = Significant ($p < 0.05$); HS = Highly significant ($p < 0.001$)†Fisher's exact test applied as expected frequency in some cells was < 5

The chi-square analysis revealed statistically significant gender differences in four out of seven parameters assessed. Highly significant associations were observed for time devoted to exercise activity ($\chi^2 = 33.742$, $p < 0.001$) and tobacco consumption behaviour ($\chi^2 = 16.435$, $p < 0.001$), indicating that male students were significantly more likely to engage in both physical activity and tobacco use compared to their female counterparts. A significant gender difference was also noted in awareness of the ill effects of malnutrition and obesity ($\chi^2 = 7.670$, $p = 0.006$) and awareness of tobacco's harmful effects ($\chi^2 = 5.110$, $p = 0.024$). However, no statistically significant differences were found between male and female students regarding awareness of exercise importance ($p = 0.155$), awareness of healthy food concepts ($p = 0.083$), or daily meal consumption habits ($p = 0.858$). These findings suggest that while both genders demonstrate comparable knowledge in certain health domains, behavioural practices and specific areas of awareness differ significantly, warranting gender-targeted health interventions within school settings.

Discussion of findings

The study findings reveal a clear disconnect between health awareness and actual behaviour among adolescent students. While awareness levels were high across both genders—particularly regarding exercise importance and tobacco's ill effects—behavioural compliance

was markedly lower. Male students showed greater physical activity engagement (90.7%) but alarmingly high tobacco use (37.3%), despite universal awareness of its harms. Female students demonstrated better understanding of healthy food concepts yet significantly lower exercise participation (46.7%). Meal regularity emerged as a shared concern, with nearly one-third of all students skipping daily meals. These patterns underscore that knowledge alone does not drive behaviour change among adolescents. The findings highlight the urgent need for gender-sensitive, school-based interventions that go beyond awareness campaigns to address the social, psychological, and environmental barriers shaping adolescent health choices.

CONCLUSION

The findings collectively demonstrate that adolescent health cannot be adequately addressed through a one-size-fits-all approach. Male and female students present with distinct vulnerability patterns — males toward tobacco use and females toward physical inactivity — that require tailored intervention strategies. Furthermore, the consistent disconnect between awareness and behavior observed across multiple parameters reinforces the need for school health programs to move beyond mere knowledge transmission. Creating supportive environments, addressing gender-specific barriers, and integrating behavioral counseling into routine school health services are essential steps toward translating adolescent health awareness into sustained healthy practices.

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