



Relationship Between Dietary Knowledge, Nutritional Attitudes, And Eating Habits Among School Students : A Cross-Sectional Study

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ABSTRACT

Growth, development, academic achievement, and long-term health consequences are all significantly impacted by the healthy eating habits formed during childhood and adolescence. Designing successful nutrition education interventions requires an understanding of students' attitudes, eating habits, and nutritional knowledge. The current study sought to evaluate schoolchildren's eating habits, nutritional attitudes, and dietary knowledge as well as investigate the relationships between these factors. A cross-sectional survey was conducted among 238 school students using a structured questionnaire comprising items related to dietary knowledge, nutritional attitudes, and eating habits. Descriptive statistics, gender-wise and grade-wise comparisons, and correlation analyses were performed to evaluate the nutritional profile of the participants. The findings revealed that students possessed a good level of dietary knowledge (Mean = 4.09 ± 0.59). Dietary habits were found to be moderately healthy (Mean = 3.78 ± 0.61), while attitudes toward nutrition were generally positive (Mean = 3.69 ± 0.47). Female students demonstrated higher scores in dietary knowledge, dietary habits, and nutritional attitudes compared with male students. Correlation analysis showed a moderate positive relationship between dietary knowledge and dietary habits ($r = 0.374$), dietary knowledge and nutritional attitudes ($r = 0.549$), and dietary habits and nutritional attitudes ($r = 0.559$). These findings indicate that students with better nutritional knowledge tend to exhibit healthier eating behaviors and more positive attitudes toward nutrition. School students demonstrated satisfactory dietary knowledge and positive attitudes toward nutrition; however, there remains scope for improving healthy dietary practices. The significant associations among knowledge, attitudes, and dietary habits highlight the importance of comprehensive school-based



nutrition education programs to promote lifelong healthy eating behaviors among adolescents.

Keywords: Dietary Knowledge, Nutritional Attitudes, Eating Habits, School Students, Nutrition Education, Adolescent Health, Dietary Behavior.

Introduction

Nutrition plays a fundamental role in the growth, development, and overall well-being of children and adolescents. The dietary habits established during school years often continue into adulthood and can significantly influence future health outcomes. Adequate nutrition supports physical growth, cognitive development, academic performance, and the prevention of various health problems, whereas unhealthy eating behaviors may increase the risk of obesity, malnutrition, cardiovascular diseases, and other lifestyle-related disorders (**World Health Organization [WHO], 2024**). In recent years, rapid urbanization, changing lifestyles, increased availability of processed foods, and extensive exposure to digital media have substantially influenced the dietary patterns of young people. Many school students consume foods that are high in sugar, salt, and saturated fats while failing to meet the recommended intake of fruits, vegetables, and other nutrient-rich foods. Such dietary behaviors have emerged as major public health concerns worldwide, particularly among adolescents who are at a critical stage of growth and development (**UNICEF, 2023**). Dietary knowledge is considered an important determinant of food choices and eating behavior. Students who understand the nutritional value of foods are more likely to make informed dietary decisions and adopt healthier lifestyles. However, knowledge alone may not always translate into healthy practices. Personal preferences, family environment, peer influence, socioeconomic factors, and attitudes toward food also play significant roles in shaping dietary habits. Therefore, it is essential to examine not only what students know about nutrition but also how they feel about healthy eating and how they apply this knowledge in their daily lives (**Contento, 2020**). Schools provide an ideal setting for promoting healthy dietary behaviors because children spend a considerable portion of their day within the educational environment. School-based nutrition education programs have been shown to improve students' nutritional knowledge, attitudes, and food choices. Teachers, school policies, and health promotion activities can collectively encourage healthier eating practices and contribute to the development of lifelong healthy habits (**Centers for Disease Control and Prevention [CDC], 2023**). Several studies have reported positive associations between nutrition knowledge and healthy dietary behaviors among school-going children. Research suggests that students with greater



nutritional awareness tend to consume more fruits and vegetables, maintain regular meal patterns, and exhibit healthier food choices compared to their peers with lower nutritional knowledge. Additionally, positive attitudes toward healthy eating have been identified as significant predictors of better dietary practices (**Spronk et al., 2014; Velardo, 2015**).

Despite increasing attention to nutrition education, unhealthy dietary behaviors continue to be prevalent among school students in many regions. Understanding the current level of dietary knowledge, attitudes, and eating habits among students is necessary for designing targeted interventions and educational programs. Furthermore, examining differences across gender and grade levels can help educators and policymakers develop more effective and age-appropriate nutrition strategies. Therefore, the present study was undertaken to assess dietary knowledge, nutritional attitudes, and eating habits among school students and to explore the relationships among these variables. The findings of this study may contribute to the development of evidence-based nutrition education initiatives aimed at promoting healthier lifestyles among adolescents.

Methodology

The present study adopted a quantitative cross-sectional research design to assess dietary knowledge, nutritional attitudes, and eating habits among school students. A total of 238 students from Grades 8, 9, and 10 participated in the study. Participants were selected using a convenience sampling technique based on their availability and willingness to participate. Data were collected through a structured questionnaire consisting of demographic information and items related to dietary knowledge, nutritional attitudes, and eating habits. The questionnaire included statements on balanced nutrition, healthy food choices, fruit and vegetable consumption, breakfast habits, junk food intake, and awareness of nutrition-related concepts. Responses were recorded on a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). Negatively worded items were reverse scored before analysis to ensure uniform interpretation of responses. Prior permission was obtained from the school authorities, and students were informed about the purpose of the study. Participation was voluntary, and confidentiality of the collected information was assured. Composite scores were calculated separately for dietary knowledge, nutritional attitudes, and dietary habits, with higher scores indicating better knowledge, more positive attitudes, and healthier eating behaviors. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize participant characteristics and study variables. Independent sample t-tests were employed to compare scores between male and female students, while one-way analysis of variance (ANOVA)



was used to examine differences across grade levels. Pearson's correlation analysis was conducted to determine the relationships among dietary knowledge, nutritional attitudes, and dietary habits. The reliability of the questionnaire was assessed using Cronbach's alpha coefficient, and a significance level of $p < 0.05$ was considered for all statistical analyses. Ethical principles of voluntary participation, anonymity, confidentiality, and informed consent were maintained throughout the study.

Results & Analysis

Table 1 : *Participant Characteristics*

Variable	Category	n	%
Gender	Male	92	38.7
	Female	146	61.3
Grade	8th	60	25.2
	9th	50	21.0
	10th	128	53.8
Total		238	100

Interpretation : The sample consisted predominantly of female students (61.3%). More than half of the participants belonged to Grade 10 (53.8%).

Table 2 : *Overall Dietary Knowledge, Habits and Attitude Scores*

Variable	Mean	SD	Interpretation
Dietary Knowledge	4.09	0.59	Good
Dietary Habits	3.78	0.61	Moderate to Good
Nutrition Attitude	3.69	0.47	Positive

Interpretation : Students demonstrated a good level of dietary knowledge (Mean = 4.09). Dietary habits were moderately healthy (Mean = 3.78), while attitudes toward nutrition were generally positive (Mean = 3.69).

**Table 3 : Gender-wise Comparison**

Variable	Male Mean	Female Mean
Knowledge	3.96	4.18
Habits	3.76	3.79
Attitude	3.54	3.78

Interpretation : Female students showed higher scores in dietary knowledge, healthy dietary habits, and positive nutritional attitudes compared with male students. The largest difference was observed in nutrition attitude.

Table 4 : Grade-wise Comparison

Grade	Knowledge	Habits	Attitude
8th	4.03	3.90	3.66
9th	4.16	3.67	3.72
10th	4.10	3.76	3.69

Interpretation : Ninth-grade students exhibited the highest dietary knowledge scores. Eighth-grade students reported the healthiest dietary habits, while nutrition attitudes remained relatively similar across grades.

Table 5 : Correlation between Knowledge, Habits and Attitude

Variables	r
Knowledge ↔ Habits	0.374
Knowledge ↔ Attitude	0.549
Habits ↔ Attitude	0.559

Interpretation : Knowledge showed a moderate positive correlation with dietary habits ($r = 0.374$). Knowledge demonstrated a moderate-to-strong positive correlation with nutrition attitude ($r = 0.549$). Attitude had the strongest relationship with dietary habits ($r = 0.559$). These findings suggest that students possessing better nutritional knowledge tend to develop more positive attitudes and healthier eating behaviors.



Discussion and Conclusion

The present study examined dietary knowledge, nutritional attitudes, and eating habits among school students. The findings indicated that students possessed a good level of dietary knowledge and generally positive attitudes toward nutrition. However, their dietary habits were only moderately healthy, suggesting that knowledge does not always translate into practice. Factors such as food preferences, family environment, peer influence, and accessibility of healthy food may affect students' eating behaviors. Female students demonstrated slightly better knowledge, attitudes, and dietary habits than male students. Furthermore, significant positive relationships were observed among dietary knowledge, nutritional attitudes, and dietary habits, indicating that students with greater nutritional awareness and positive attitudes are more likely to adopt healthier eating behaviors. Overall, the study highlights the importance of school-based nutrition education in promoting healthy dietary practices among adolescents. While students showed satisfactory knowledge and awareness, there remains a need to strengthen practical dietary behaviors. Schools, parents, and health professionals should work together to encourage healthy food choices and create supportive environments that foster lifelong healthy eating habits. Future studies may explore the effectiveness of targeted nutrition interventions in improving dietary behaviors among school students.

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