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Nutritional Knowledge and Its Relationship to Dietary Intake Among College Going Students

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Abstract
Nutritional Knowledge plays a key role in shaping eating behaviors and improving overall well-being. Health is not merely the absence of disease but a state of complete physical, mental, and social well-being. College Going students, as they transition from adolescence to adulthood, begin to make independent decisions about their eating habits. This period is crucial as nutritional choices can have lasting effects on their long-term health. This study examines the relationship between nutritional knowledge and food intake among college going students. A descriptive research design was used, and data were collected using a purposive sampling method from 200 students of Akurchand Manmul Jain College, Meenambakkam, Chennai, India. An interview schedule was used to gather detailed insights into the participants' eating habits and understanding of nutrition. The primary objective of the study was to assess the nutritional awareness of students and analyze how it influences their eating practices and overall lifestyle. The findings of the study aim to highlight the importance of nutrition education in promoting healthy eating behaviors among university students.
Keywords: *Eating Habits; College Going Students; Health; Nutrition Education*

1. Introduction
Nutrition knowledge is widely recognized as a key factor in promoting nutritious food choices, encouraging healthy eating habits, and supporting the maintenance of appropriate body weight among diverse population groups, including students [1–3]. University students represent a significant segment of society who can influence not only their peers but also their families and communities by disseminating knowledge about healthy lifestyles and dietary practices. As an essential component of improving lifestyle and dietary habits, nutritional knowledge plays a critical role in enhancing the nutritional status of individuals, families, and communities. Conversely, poor dietary choices can result in inadequate and unbalanced nutrient intake, which may negatively affect both students' health and academic performance [4, 5]. Research has consistently shown that higher nutritional knowledge is associated with healthier food choices and better adherence to dietary guidelines [6].

1.1.Lifestyle Changes and Dietary Habits of University Students
The transition from high school to university presents students with a range of challenges. For many, this period marks the first time living away from home, adjusting to a new environment, adopting a different lifestyle, and coping with academic pressures [5, 7, 8]. These lifestyle changes can lead to increased stress and the adoption of unhealthy eating habits, such as frequent consumption of energy-dense fast foods and sugary drinks. Skipping breakfast and lunch and relying on snacks such as chips, crackers, muffins, and sweets throughout the day is a common practice among college-aged students [5, 7].

1.2.Dietary Imbalances and Health Implications
Frequent snacking and high consumption of fast foods often result in excessive daily intake of fat and sodium while reducing dietary fiber intake below recommended levels. Such imbalances can contribute to weight gain and may adversely affect health and academic performance [9]. In attempts to manage their weight, many university students skip meals, which can further disrupt nutrient balance. Although several studies have explored nutrition knowledge among adolescents and young adults

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1.3.Psychological Consequences of Poor Nutrition

Overweight and obesity are associated with low self-esteem and are often linked to depression and anxiety, which can reduce overall quality of life [10]. This highlights the importance of focusing on university students, as they are particularly vulnerable to developing unhealthy dietary habits that may have both physical and psychological consequences.

1.4.Importance of Nutrition Education

Research indicates that lack of nutrition knowledge is a major barrier to making healthy food choices [1]. Adequate nutrition education during early life can have long-term benefits by reducing morbidity and mortality associated with lifestyle-related diseases [4]. Several studies have linked major nutritional problems—still a prominent public health concern—to low nutritional awareness and insufficient education [8]. Therefore, increasing individual and community awareness about nutrition is crucial to reducing the prevalence of nutrition-related health problems.

1.5.Need for the Study

Although several studies have explored nutrition knowledge among adolescents and young adults, direct comparison of findings is limited due to differences in assessment tools, scoring systems, and definitions [4,6]. Moreover, most existing research has been conducted in developed countries, with relatively little evidence available from university populations in developing regions. In addition, demographic and socioeconomic variables—such as age, gender, education level, and income—are known to influence nutrition knowledge [5], yet their combined impact in culturally diverse student groups remains insufficiently studied.

1.6.Aim of the Study

Given the importance of nutrition knowledge in shaping healthy eating behaviors and preventing lifestyle-related diseases, this study aims to:

- Assess the level of nutrition knowledge among university students.
- Examine the relationship between nutrition knowledge and dietary intake patterns.
- mortality associated with lifestyle-

2. Methodology

This study employed a descriptive survey design to assess the nutritional knowledge and dietary intake among college students.

2.1. Participants

A total of 200 undergraduate students aged 18 to 21 years were selected for the study, with 100 students from the Arts program (50 males and 50 females) and 100 students from the Science program (50 males and 50 females). The participants were enrolled at Agurchand Manmull Jain College, Meenambakkam, Chennai, India, and were chosen using purposive sampling.

2.2. Data Collection Procedure

Data was collected in person during scheduled class sessions. The purpose of the study was explained to participants before distribution of the questionnaire. Each item was read aloud to ensure clarity and minimize misinterpretation. Participation was voluntary, and informed consent was obtained prior to data collection.

2.3. Research Instrument

A self-developed 25-item Nutritional Knowledge and Dietary Intake Questionnaire was used to measure students' understanding of nutrition concepts and their dietary habits.

- Section A collected demographic data (5 items).
- Section B assessed nutritional knowledge (10 items) using a 3-point dichotomous scale (Yes, Sometimes, No).
- Section C examined dietary intake and habits (10 items) using a 5-point Likert scale (Never, Rarely, Occasionally, Frequently, Very Frequently).

2.4. Data Analysis

The collected data were analyzed using frequency distributions and percentages to interpret the results of the study.

3. Results and Summary

3.1.Demographic Profile

The analysis revealed that the participants' annual family income ranged from less than ₹150,000 to a maximum of ₹200,000. The sample primarily comprised second-year students, with the remaining participants enrolled in the third year of their

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undergraduate programs. Most respondents were within the age range of 18–20 years.

3.2.Statements and Response

Nutritional Knowledge of College Students (N = 200)
Table 1 shows Analysis of Yes and No

Table 1 Analysis of Yes and No

No.	Question	Yes (%)	Sometimes (%)	No (%)
1	Are you aware of the recommended number of servings from each food group in a balanced diet?	62.0	25.0	13.0
2	Can you identify common food sources that are rich in protein?	75.0	18.5	6.5
3	Do you know the essential vitamins and minerals required to maintain good health?	68.5	22.0	9.5
4	Are you aware of the health risks associated with consuming sugar-sweetened beverages and fast foods?	81.0	14.0	5.0
5	Do you understand the role of dietary fiber in digestion and disease prevention?	59.5	27.0	13.5
6	Do you know the importance of eating breakfast for maintaining health and academic performance?	72.0	20.5	7.5
7	Do you know the recommended daily water intake for a healthy adult?	65.0	23.0	12.0
8	Are you aware that poor nutrition can lead to chronic diseases such as diabetes, hypertension, and obesity?	78.0	15.0	7.0
9	Can you differentiate between healthy and unhealthy cooking methods (e.g., steaming versus deep frying)?	69.0	21.5	9.5
10	Are you familiar with national or international dietary guidelines (e.g., Indian Dietary Guidelines, WHO)?	54.5	30.0	15.5

The findings reveal that a majority of students demonstrated solid nutritional knowledge on several key areas. For instance, 75% could identify protein-rich foods, and 81% were aware of the health risks from sugary drinks and fast food. Additionally, 72% understood the importance of eating breakfast, while 78% recognized the link between poor nutrition and chronic diseases. However, only 54.5% were familiar

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with national or international dietary guidelines, and just 59.5% understood the role of dietary fiber in digestion and disease prevention Table 2 Habits of College Students

Table 2 Habits of College Students

No.	Question	Never (%)	Rarely (%)	Occasionally (%)	Frequently (%)	Very Frequently (%)
16	How often do you eat breakfast?	8.0	12.0	18.0	40.0	22.0
17	How often do you consume fruits in a day?	10.0	15.0	25.0	30.0	20.0
18	How often do you eat green leafy vegetables?	12.5	17.5	20.0	35.0	15.0
19	How often do you eat fast food (burgers, pizza, fries, etc.)?	25.0	20.0	18.0	22.0	15.0
20	How often do you drink carbonated soft drinks?	30.0	25.0	20.0	15.0	10.0
21	How often do you consume sweets, chocolates, or pastries?	20.0	18.0	25.0	22.0	15.0
22	How often do you eat fried snacks (chips, samosas, pakoras)?	22.0	20.0	20.0	23.0	15.0
23	How often do you consume milk or dairy products?	10.0	12.0	20.0	35.0	23.0
24	How often do you drink at least 6–8 glasses of water per day?	15.0	18.0	20.0	27.0	20.0
25	How often do you skip meals due to academic workload or other reasons?	18.0	20.0	22.0	25.0	15.0

Dietary Intake and Habits of College Students (N = 200)

The students' eating habits showed a diverse pattern. About 62% of the students reported eating breakfast often or very often, while 18% reported eating breakfast rarely or never, which may affect their energy and concentration levels during the day. Fruit and vegetable consumption was moderate, with about 50% consuming these foods often or very often, indicating room for improvement in their intake of these nutrient-rich foods. Conversely, unhealthy eating habits were also evident. Approximately 37% of the students consumed fast food often or very often, and a similar proportion drank carbonated soft drinks. In addition, 37% reported consuming sweets and fried snacks frequently. Skipping meals due to academic workload was reported frequently or very often by 40% of the students, highlighting the stress-related impacts on diet. These findings highlight the need for interventions to promote healthy eating

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habits and regular eating patterns among university students.

Conclusion

This study provides valuable insights into the nutritional knowledge and eating habits of university students. While most students demonstrated a reasonable understanding of basic nutrition concepts such as identifying protein-rich foods and recognizing the health risks associated with sugary drinks and fast food – there are significant gaps. Notably, fewer students were aware of national and international dietary guidelines or fully understood the role of dietary fibre, which suggests areas where nutrition education could be strengthened. Dietary patterns revealed mixed behaviours: while many students reported eating breakfast regularly and consuming some fruit and vegetables, a significant proportion frequently consumed unhealthy foods such as fast food, sugary drinks, sweets and fried snacks. Furthermore, a significant number of students admitted to skipping meals, often due to academic pressures, which can negatively impact their nutritional status and academic performance. These findings highlight the critical need for comprehensive, targeted nutrition education programmes within university settings that not only improve knowledge but also promote healthy eating behaviours. Such interventions can improve students' dietary choices, reduce their risk of lifestyle-related diseases, and support their overall well-being and academic success. Future research should explore effective strategies to address these knowledge gaps and behavioral challenges, taking into account demographic and socioeconomic factors, and designing approaches that are appropriate for diverse student populations.

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