# A Comparative Study on Nutritional Awareness Among Science and Non-Science Undergraduate Female Students

**[1]Nida Khan, [2]Dr. Mariyam Fatima**

[1]Research Scholar, [2]Assistant Professor
Department of Home Science
Aligarh Muslim University
Aligarh, India.

*Abstract*: **Food is an essential part of all human beings, and thus is important to correct knowledge of food and its nutrition, especially for the quality of life of its young budding adults as they leverage the future of society. The present study investigates whether there is a significant difference between the level of nutritional awareness among undergraduate female students from non-science and science academic backgrounds. The study was conducted on 80 undergraduate students (n=40) students from B.Sc. and (n=40) students from B.A., comprising both hostelers and day scholars from Aligarh City of Uttar Pradesh. A self-designed structured questionnaire containing 15 close-ended questions regarding the assessment of dietary knowledge, nutritional awareness, eating habits, and food labeling was prepared and administered via Google Forms. The scoring was done by giving one mark for each correct answer and zero marks for every incorrect answer, and the data was interpreted in two ways, viz. calculating the percentage of correct and incorrect responses for each question for science and non-science groups separately. To test the hypotheses, an independent *'t'*-test was applied to assess the significant difference between the mean scores of the two groups. The outcomes of the study reveal that there was a significant (*p=0.003*) difference in dietary knowledge between the two groups. The study's conclusion also disclosed a significant (*p=0.003*) difference in Nutritional Awareness between the two groups. The results also revealed that there is no significant (*p=0.881*) difference between the eating habits of the two groups chosen. The results of this study suggest that despite differences in dietary knowledge and nutritional awareness, the students tend to have similar eating habits implicating; they do not apply this awareness in their daily life. As a remedial step towards this trend, educational institutions and other stakeholders should make strategic efforts to develop a nutrition and health-oriented curriculum mandatory for the students, along with the recruitment of nutritionists and dieticians for monthly diet planning and follow-ups as a mandatory duty. Institutions help their adolescents build healthy physical and mental foundations by encouraging the practice of consuming healthy foods and sustaining good nutrition throughout these impressionable formative years. The study has value because it intends to determine the nutritional awareness of female college students, which will guide future research on this issue. It aims to facilitate formulating and implementing college-level strategies to address this issue**.

*Keywords*: **Nutritional Awareness, Food Literacy, Dietary Practices, Nutrition Education, Food Labels.**

1. **INTRODUCTION**

The word 'Adolescent' originates from the Latin word 'Adolescence,' which means to develop and mature, thus, signifying the unique features of adolescence. Adolescence can be called both "a period" and "a process" that bridges the immaturity of childhood to the maturity of adulthood. Any single borderline cannot mark the end of the beginning of adolescence. Rather, experts say 10–19 years is a passage of age, leading from childhood to adolescence. This distinct phase of life has its own unique requirements and benchmarks. Precisely, this phase is characterized by a series of transformations that unfold gradually, thus, eventually influencing many facets of the individual, like exponential physical growth and psychological and behavioral changes that bring about transformational changes to commute from childhood to adulthood. These transitions are cognitive, social, emotional, and biological. Over one-fifth of India's population consists of adolescents. Adolescents are rarely a homogenous group; as a result, their needs and wants differ depending on their gender, developmental stage, circumstances in their lives, and the socioeconomic conditions of their surroundings.

All these dimensions of development are interrelated; biological development interferes with the cognitive domain which impacts the emotional development which lays the foundation of social development. Hence, when considering physical development, the child's nutrition plays a major role, as an adolescent's growth spurt demands proper nutrition and is frequently identified as one of the contributing factors to diminished and delayed onset of puberty and physical growth and maturation, especially among Indian adolescent girls. Scarce nutritional intake during adolescence might have serious consequences, such as growth retardation and poor emotional development leading to the formation of conflicting personalities throughout the adolescent years and beyond. A lack of nourishment during adolescence can drastically impair the work capacity and productivity of both genders of this age group. A healthy nutritional regime, a sedentary lifestyle, with a manageable mental workload profoundly affect students' academic achievement [1]. However, theoretically, university students are essential targets for encouraging healthy lifestyles among the local public, as their poor eating habits and rapid psychological and physical development can contribute to weight gain [8]. The poor eating habits of college students are caused by stress, anxiety, a lack of leisure, and environmental factors [17]. Lack of nutrition, along with any damage to the body's physiology, exerts extra nutritional demand on the body, thus, accelerating the risk of

developing complications as the development remains unattained in the later years. Some of these problems require institutional help (health educators), whereas some depend on individual understanding and vigilance.

## 1.1.      Academic Streams

India ranks third in the higher education system, just after the United States of America and China respectively. In India, undergraduate education is conducted after secondary education (class 12th), followed by postgraduate education. Typically, it encompasses all academic programs for the bachelor's degree. University Grants Commission (UGC) is the primary governing bureau at the highest functional level; it executes its standards, advises the government, mainly the Ministry of Education, and facilitates coordination between the central and the state government. In Indian education, the Graduation system is divided into two categories: undergraduate programs and postgraduate programs. Three to four years are required to finish an undergraduate degree. The majority of three-year undergraduate programs are in arts, commerce, and sciences, while the majority of four-year programs are in engineering, technology, nursing, pharmaceutical sciences, agriculture, etc. However, the tenure for medicine, dentistry, law, and architecture is five years. Bachelor of Science, Arts, and Commerce (B.Sc., B.A, B.Com.) are the three most common degrees at the bachelor's level in India. The holder of the UG degree is a graduate, while the holder of the P.G. degree is a post-graduate. There are numerous 1- to 2-year diploma programs besides undergraduate and graduate programs.

## 1.2.      Female Nutrition

During adolescence, the physiological changes transpire in the body (secondary sexual characteristics appear, weight gain, height attainment, skin and hair changes, etc.) are at their peak. Girls admire beautiful women's vision; thus, nutritional habits are changed with the modern tendencies for healthy eating and the freedom to choose food during the day [16]. When this period of physical, mental, and sexual turbulence ends, some females experience positive and others experience negative changes in these behaviors. Society and research scientists should pay special attention to young budding women, who need to amplify their health now and possess the potential to procreate and raise the next generation in the future.

## 1.3.      Nutritional Awareness

In accordance with genetics, growth rate, daily activity, and other variables, a person's nutritional requirements change throughout his or her existence. During the adolescent years, many attitudes towards food are formed, laying the foundation for future eating behaviors [22]. Nutrition knowledge refers to the conscious realization and perception of food concepts and practices, nutrition, and its impacts on the body and mind, such as comestible nutrients, reasonable food intake, significant nutritional sources, and dietary recommendations and guidelines [1]. Nutritional awareness amongst this age group of students is likely to be one of the most significant and defining factors influencing their long-term health, particularly when they can make nutritional decisions independently. Moreover, the nutritional decisions that an adolescent is exposed to during his or her early and formative years influence his or her dietary preferences and understanding of food for the remainder of his or her life.

## 1.4.      Dietary Knowledge

It has been found that diet quality is strongly correlated with nutrition and dietary knowledge. In a nutshell, nutrition knowledge is the understanding of ideas and procedures associated with diet and health, such as diet and diseases associated with it, as well as dietary advice and guidelines [11].

## 1.5.      Eating Habits

The quality of the diet declines from childhood to adolescence [14]. Significant life-altering transitions occur when high school graduates enter college or the workforce [19]. The university years are a crucial time for young adults in terms of framing their relationship with dietary choices and weight gain [2]. This is the time when students enter a new educational phase of their lives, and they are permitted to choose their own meals. They are more independent than ever in determining their dietary preferences in their early years [7].  Some recurrent unhealthy eating habits among adolescents are skipping meals, dining away from home, snacking, and consuming fast food; therefore, developing healthy eating habits and dietary patterns is crucial for healthy adulthood and lifelong food choices.

## 1.6.      Food Labeling

Nutritional labels on pre-packaged edible commodities in the newly evolved food merchandising framework are one of the most prominent and highly credible founts of facts and details, and they serve as a valuable resource for many people when purchasing food products. There is also reliable proof linking awareness and the deliberate use of nutritional labels with wholesome healthier diets. However, label usage varies significantly across subgroups, with infants, adolescents, and adults, particularly obese, using labels less frequently. In view of consumer comprehension and the correct application of labeling information, research also reveals challenges [3]. Nutrition Facts Panels (NFPs) are located on most food packaging and provide a wealth of nutritional information. This information may be even more crucial for older adults whose dietary modification goals may influence food selection [13].


## 2.      REVIEW OF LITERATURE

**Bhavani and Dr. N. Prabhavathy Devi (2019)** aimed to investigate the impact of educational attainment on college students' knowledge of nutrition in Tamil Nadu, India and conducted research among a representative sample of 1000 college-going population (500 males and 500 females) in the age slot of 19-22 years. A self-designed structured questionnaire seeking nutrition knowledge was administered to collect data, and an interview schedule was used to obtain the crucial details. According to the pre-test data, the mean score obtained was 4.36, with the highest scorer being post-graduate students (4.99), diminishing to B.Sc. (4.4), subsequently B.A. (4.3), to least being B. Com (4.0). The F-value was 11.187, which was similarly statistically significant (p 0.001)—indicating that most respondents (34.5%) cited media as a source for learning more about nutrition. Similar results were found by **Ananya G. Roy and Pooja Gusain (2019),** who investigated the nutritional awareness and attitudes of adolescent girls between 13 and 15 years of age in government schools in the Almora District and found that 30.8% of answerers had accurate understanding about the correct sources of nutrients, only 4.8% had precise knowledge about nutritional deficiency diseases, and 34.4% had accurate knowledge about malnutrition and overnutrition. Most students have a defeatism toward healthy eating habits

and physical exercise. Thus, making it evident that college students still need to be more oriented. On the other hand, **Krutika Chanda (2019)** conducted an investigation into the nutritional status and knowledge of school students in India's Yadgir District through intervention; the research was followed by administering a self-structured questionnaire among a representative sample of 125 high schoolers at selected government high schools in Shorapur taluk area of Yadgir district. The derived observations show that most students were initially unaware of the fundamental idea of nutritional food and its impression on healthy living. The knowledge of food and nutrition was observed to have significantly increased following the intervention.

## 3. OBJECTIVES
3.1. To analyze and compare the level of dietary knowledge between undergraduate female students from science and non-science academic backgrounds.
3.2. To determine and compare the level of nutritional awareness between undergraduate female students from science and non-science academic backgrounds.
3.3. To assess the difference in eating habits of undergraduate female students from science and non-science academic backgrounds.

## 4. Significance Of the Study
Due to multiple factors, such as the busy lifestyles of individuals, the pressure of social-digital standards in the current world scenario, and easily accessible unhealthy food, frequently hinder students from receiving the nutritious meal they require. Even though they know the pros and cons of unhealthy foods, college students tend to gravitate towards fast food consumption and neglect healthy eating habits. They are more likely to uncritically follow trends and be entertained by brands' impressive advertising strategies via digital marketing. In addition, peer pressure significantly impacts adolescent students' overall dietary patterns and eating behaviors, thus developing wholesome practices. These obstacles to acquiring nutrition directly affect India's economic growth, healthcare state, and developing youth's mental, physical, and social health. Without practice, nutritional awareness by itself has little value. The previous studies revealed an average level of nutritional awareness, with no application of that knowledge, implying extreme irresponsibility and indifference towards this highly sensitive issue. The health of young adults is of the utmost significance to the nation, particularly the health of female students who are biologically predisposed to flourish to strengthen generations to come. The current state of adolescent health initiatives is fragmented, and there is no comprehensive strategy addressing all nutritional blocks of adolescents. A dietetic consultation assists individuals in modifying their dietary habits to enhance their health [15]. Since dietary knowledge and its access and availability of dietary services are critically lacking. Inadequate information, absence of appropriate guidance, ignorance, and inability to apply this knowledge are still the primary obstacles.
Consequently, this research intends to magnify the significance of fortifying health education to set the groundwork for long-term needs by highlighting the importance of generating awareness and imparting nutrition education among adolescents via academic institutions.

## 5. METHODOLOGY
A self-structured questionnaire containing 15 close-ended questions regarding the assessment of dietary knowledge (4), nutritional awareness (7), eating habits (2), and food labeling (2) was prepared. The test was administered to (N=80) undergraduate female students. 50% (n=40) of the students were enrolled in B.Sc.- Bachelors of Science, while the remaining 50% (n=40) were enrolled in B.A.- Bachelors of Arts. Students were illuminated about the study's relevance and consented to participate voluntarily. The respondents' confidentiality was reserved, following the ethics. The questionnaire was converted into a Google form, and links were distributed to the participants via social networking applications and in-person meetings. The response rate was one hundred percent. The scoring was done by giving one mark for each correct answer and zero for every incorrect answer. The data was interpreted in two ways: calculating the percentage of correct and incorrect responses for each question separately for science and non-science groups. To test the hypotheses, the independent sample 't'-test was applied to probe if there exists any significant difference between the mean scores of the two groups.

## 6. HYPOTHESES
• $H_O^1$- There is no significant difference in dietary knowledge of undergraduate female students from science and non-science academic backgrounds.
• $H_O^2$- There is no significant difference in nutritional awareness of undergraduate female students from science and non-science academic backgrounds.
• $H_O^3$- There is no significant difference in eating habits of undergraduate female students from science and non-science academic backgrounds.

## 7. DELIMITATIONS
7.1. The research excluded adolescent males.
7.2. The research was restricted to undergraduates.
7.3. The study was confined to Aligarh as a locale.

## 8. STATISTICAL ANALYSIS
The data was gathered and then tabulated on a Microsoft Excel sheet. Using IBM SPSS software version 25, the captured data were subjected to frequency distribution and an independent sample 't'-test ($P<0.05$).

## 9.  DATA INTERPRETATION

According to the survey done among 80 female undergraduate students. The majority of respondents in the science category were aged between 18 to 21 years. In contrast, non-science respondents were aged between 17 to 23 years.

| STREAM | AGE |
|---|---|
| Science stream | 18-21 Years |
| Non-Science | 17-23 Years |

**Table. 9. a.**

Moreover, of the total science population, 17.5% were first-year students, 50% were second-year students, and the rest, 32.5%, were in their third year of the undergraduate course. On the other hand, 50% of the total non-science population were 1st-year undergraduates, 20% were in their $2^{nd}$ year, and the remaining 30% were in their $3^{rd}$ year.

| STREAM | $1^{st}$ Year | $2^{nd}$ Year | $3^{rd}$ Year |
|---|---|---|---|
| Science stream | 17.5% | 50% | 32.5% |
| Non-Science stream | 50% | 20% | 30% |

**Table. 9. b.**

Further interpretation of data regarding each of the 15 questions is as follows-

### 9.1.  Daily Calorie Requirement

The present study revealed through **Figure 9.1** that only 10% of science females had a precise idea of how many calories they need daily. In comparison, only 2.5% of non-science students were able to answer correctly, indicating that they were unable to meet their daily caloric demands.
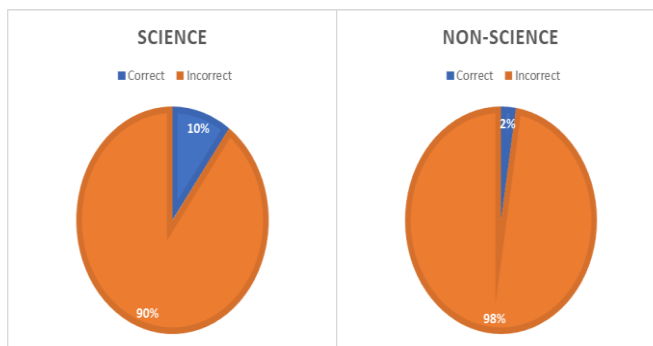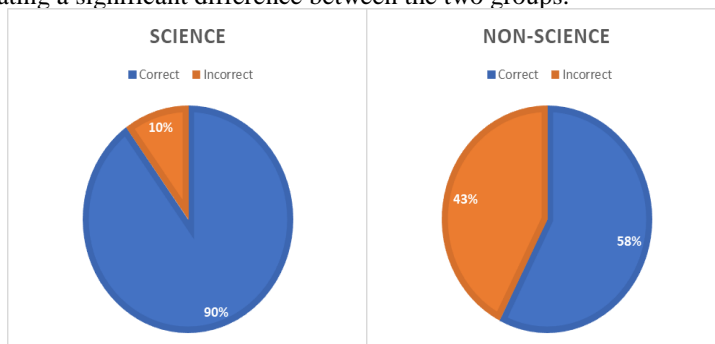
*Table-* **9.1**

| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| **CORRECT** | 10% (n=4) | 2% (n=1) |
| **INCORRECT** | 90% (n=36) | 98% (n=39) |



*Figure-* **9.1**

### 9.2.  Tissue Repair Function of Proteins

It was evident in **Figure 9.2** that the majority of science students (90%) were aware that proteins are necessary for repairing body tissues and aiding in recovering the wear and tear process. In contrast, only 58% of non-science students were mindful of the properties and functions of proteins derived from diet, indicating a significant difference between the two groups.

*Table-* **9.3**

| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| **CORRECT** | 90% (n=36) | 42% (n=17) |
| **INCORRECT** | 10% (n=4) | 58% (n=23) |



*Figure-* **9.2**

### 9.3.  Food Sources Providing the Highest No. of Calories

About 47.5% of science students answered correctly about food sources providing the highest no of calories from butter, bread, chicken, and fruits. In contrast, half of the selected students (50%) non-science had the correct idea of the answer: butter being fat provides about 9kcal/gm as shown in the **Figure 9.3**

*Table-* **9.3**

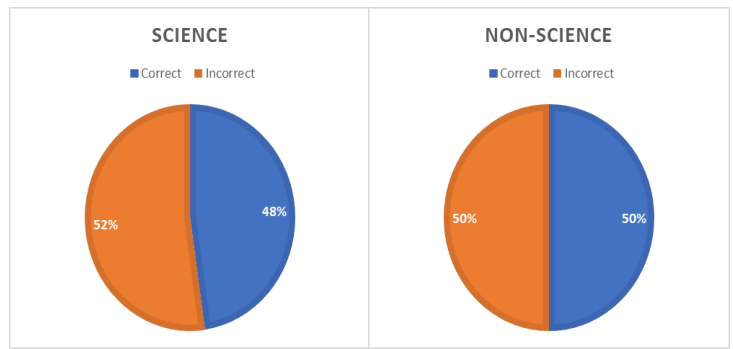| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 48% (n=19) | 50% (n=40) |
| INCORRECT | 52% (n=21) | 50% (n=40) |



*Figure-* **9.3**

## 9.4.    Alternative to Meat

As evident from **Figure 9.4** Approximately 92.5% of science students correctly stated that soy nuggets are a suitable alternative to meat for protein content. In contrast, only 67.5% of non-science students knew about vegetarian meat options.

*Table-* **9.4**

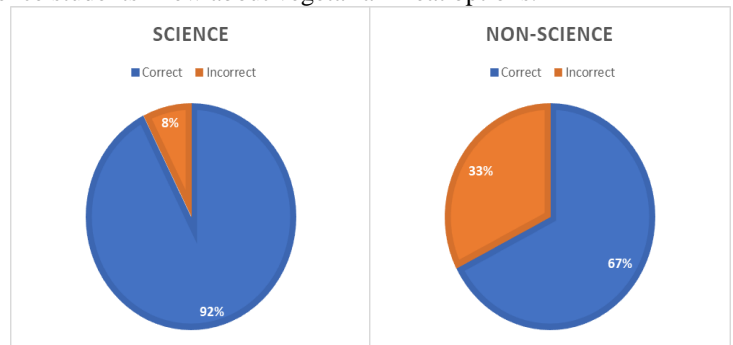| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 92% (n=37) | 67% (n=27) |
| INCORRECT | 8% (n=3) | 33% (n=13) |



*Figure-* **9.4**

## 9.5.    Vitamin Beneficial for Teeth

To assess students' knowledge of minerals and vitamins, they were asked about the mineral that is excellent for teeth; **Figure 9.5** depicts only 25% of science students knew the answer, while only 12.5% of non-science students could correctly identify it.; they sought to be confused between fluoride and phosphorous.

*Table-* **9.5**

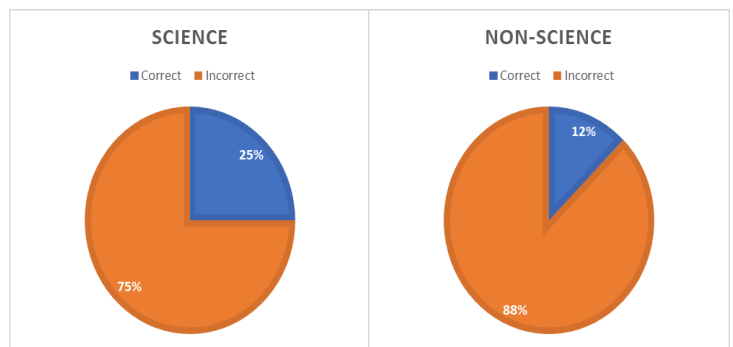| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 25% (n=10) | 12% (n=5) |
| INCORRECT | 75% (n=30) | 88% (n=35) |



*Figure-* **9.5**

## 9.6.    Protective Function of Vitamins and Minerals

According to the results in **Figure 9.6**, only 52.5% of science students knew the protective function of vitamins and minerals in the body. Moreover, only 25% of non-science students could choose the correct answer, indicating a lack of knowledge of food and its nutrients.

*Table-* **9.6**

| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 52% (n=21) | 25% (n=10) |
| INCORRECT | 48% (n=19) | 75% (n=30) |



*Figure-* **9.6**

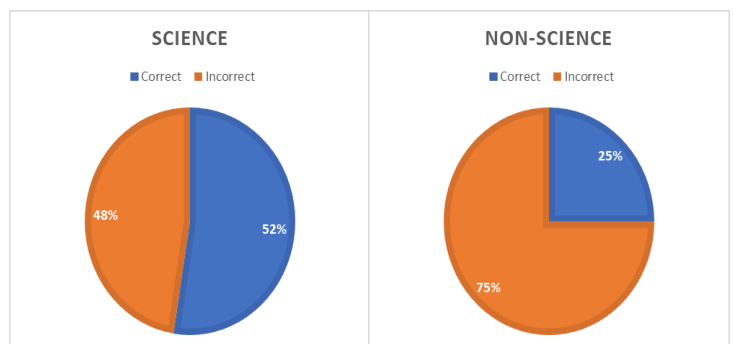## 9.7.    Primary Energy Source to The Brain

Most science students (70%) knew that glucose is the brain's primary energy source, whereas only 50% of non-science students knew this known fact as evident from **Figure 9.7**

*Figure*- **9.7**

*Table*- **9.7**

| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 70% (n=28) | 50% (n=40) |
| INCORRECT | 30% (n=12) | 50% (n=40) |

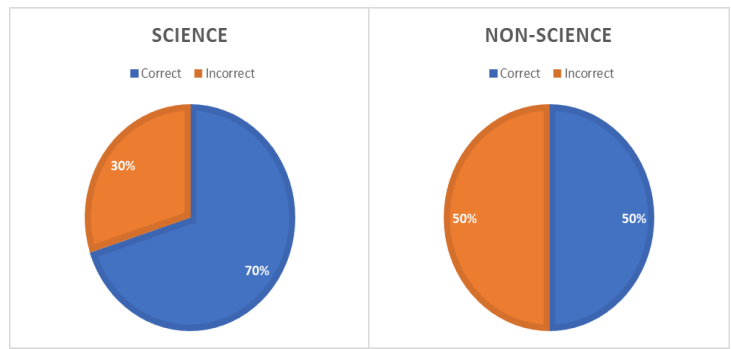### 9.8.     Glucose Solution for Fainting

A straightforward question was incorporated to investigate the student's nutrition knowledge. The results of the study as shown in **Figure 9.8** revealed that almost 95% of the science population knew that glucose solution is administered immediately if a person is fainting. Non-science students (87.5%) had a fair update about this non-science first aid skill.



*Figure*- **9.8**

*Table*- **9.8**

| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 95% (n=38) | 87% (n=35) |
| INCORRECT | 5% (n=2) | 13% (n=5) |

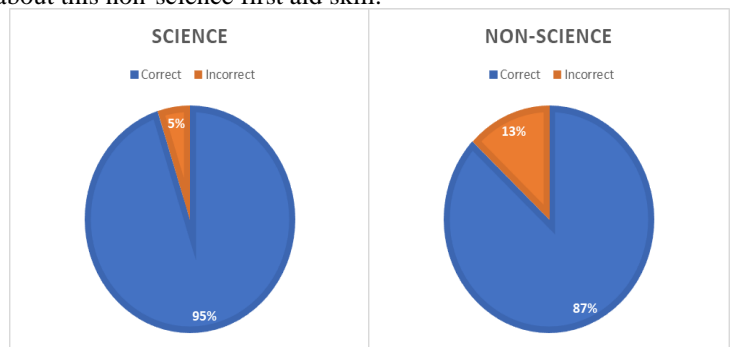### 9.9.     Deficiency of Vitamin C

The results revealed that most science students (57.5%) were aware that a deficiency in Vitamin C is associated with bleeding gums, while only 42.5% of non-science students were educated about vitamins which is evident in **Figure 9.9**



*Figure*- **9.9**

*Table*- **9.9**

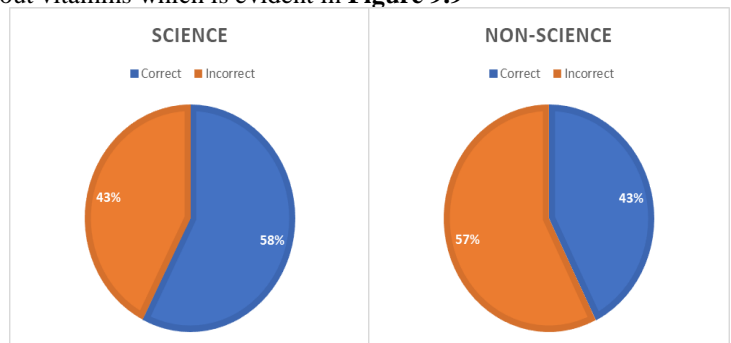| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 57% (n=23) | 43% (n=17) |
| INCORRECT | 43% (n=17) | 57% (n=23) |

### 9.10.     Intermittent Fasting

Intermittent fasting is an increasingly popular weight loss trend. In response to this query, **Figure 9.10** explains only 35% of science students knew about intermittent fasting and the hours involved while fasting, whereas approximately 40% of non-science students had an implicit understanding of this concept.



*Figure*- **9.10**

*Table*- **9.10**

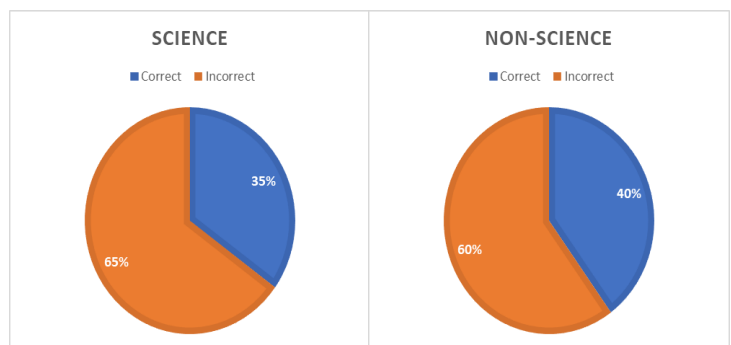| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| CORRECT | 35% (n=14) | 40% (n=16) |
| INCORRECT | 65% (n=26) | 60% (n=24) |

### 9.11.     Junk Food

Junk food is an integral part of a fast-flowing life; adolescents and adults are most exposed to this due to lack of time. Still, 65% of the science students knew the correct meaning of junk food. On the other hand, 57.5% of non-science students were aware of this, as explained in **Figure 9.11**.

*Table*-9.11

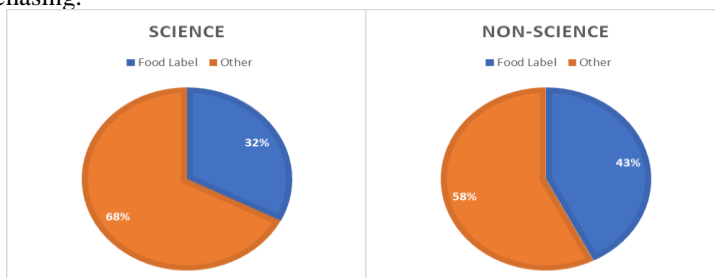| STREAM | SCIENCE | NON-SCIENCE |
|--------|---------|-------------|
| CORRECT | 32% (n=13) | 43% (n=17) |
| INCORRECT | 68% (n=27) | 57% (n=23) |
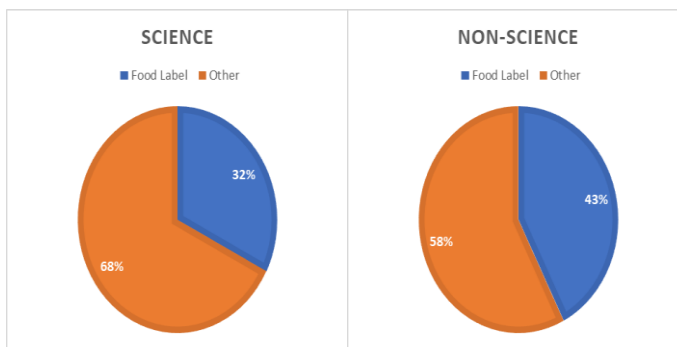


*Figure- **9.11***

### 9.12.    Preference while Purchasing Food

**Figure 9.12** suggests that about 32.5% of science students searched for nutritional labels when purchasing packaged food items, while the remaining students were more concerned with brand, price, and packaging appeal. In contrast, 42.5% of non-science students knew enough to consider nutrition labels when purchasing.

*Table- **9.12***

| STREAM | SCIENCE | NON-SCIENCE |
|--------|---------|-------------|
| CORRECT | 68% (n=27) | 743% (n=18) |
| INCORRECT | 32% (n=13) | 58% (n=22) |



*Figure- **9.12***

### 9.13.    Search for the Nutritional label

The results were quite equivalent for both educational streams, as depicted by **Figure 9.13**, indicating that 50% of science students search for nutritional facts on the pre-packed food in sight to make a better purchase decision. In comparison, half (50%) of the non-science population was conscious enough to search for nutritional facts.

*Table- **9.13***

| STREAM | SCIENCE | NON-SCIENCE |
|--------|---------|-------------|
| CORRECT | 50% (n=20) | 50% (n=20) |
| INCORRECT | 50% (n=20) | 50% (n=20) |
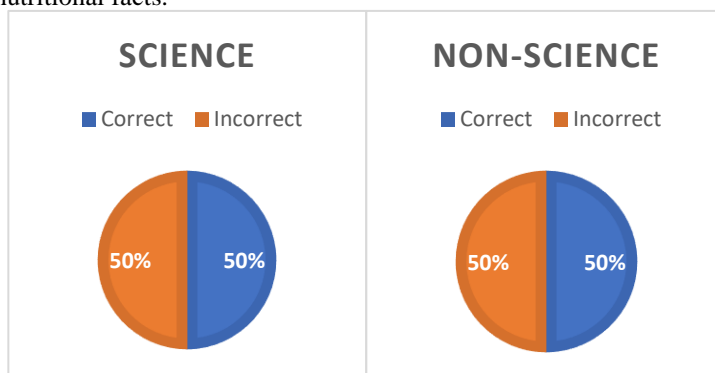


*Figure- **9.13***

### 9.14.    Ease of Comprehending Nutritional Facts on The Food Label

As explained in **Figure 9.14,** Students majoring in science found it Very Easy (12.5%), Easy (20%), Normal (57.5%), Difficult (10%), and Very Difficult (0%), respectively, to comprehend nutritional labels on food packaging. Non-science students rated them to be Very Easy (2.5%), Easy (20%), Normal (70%), Difficult (7.5%), and Very Difficult (0%), respectively.

*Table- **9.14***

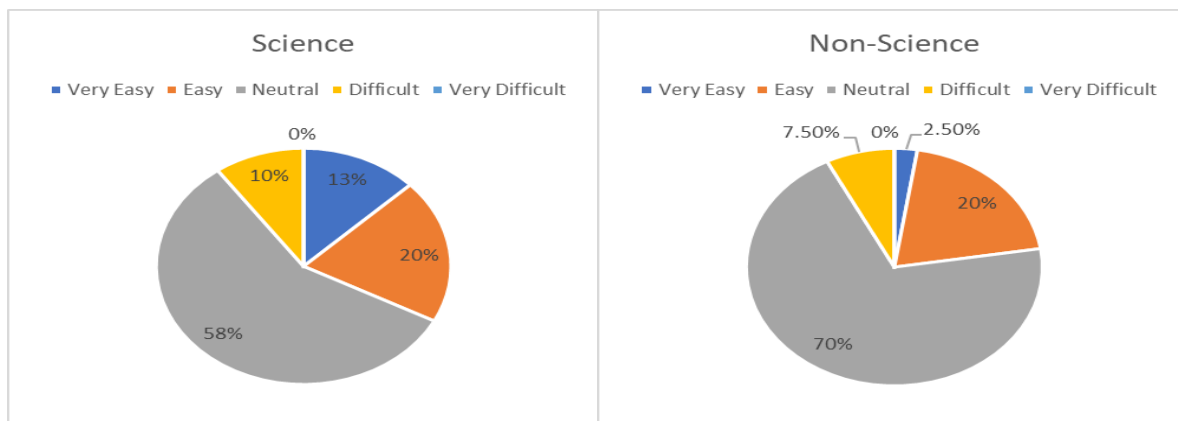| STREAM | SCIENCE | NON-SCIENCE |
|--------|---------|-------------|
| **STRONGLY AGREE** | 12.5% (n=5) | 2.5% (n=1) |
| **AGREE** | 20% (n=8) | 20% (n=8) |
| **NEUTRAL** | 57.5% (n=23) | 70% (n=28) |
| **DISAGREE** | 10% (n=4) | 7.5% (n=3) |
| **STRONGLY DISAGREE** | 0% (n=0) | 0% (n=0) |

*Figure*-**9.14**

## 9.15.    Dietary Concept of Eating Practice of 3 Meals With 2 Snacks A Day

To study the attitude towards the dietary concept of eating practice of 3 meals with two snacks a day, the students rated this on a Likert scale. The responses as revealed in **Figure 9.15** that science students Strongly Agreed (10%), Agreed (5%), Neutral (47.5%), Disagreed (32.5%), And Strongly Disagreed (5%), respectively. While Non-Science Students reported they Strongly Agreed (2.5%), Agreed (7.5%), Neutral (32.5%), Disagreed (47.5%), And Strongly Disagreed (10%), respectively, regarding the entire population.

*Table*- **9.15**

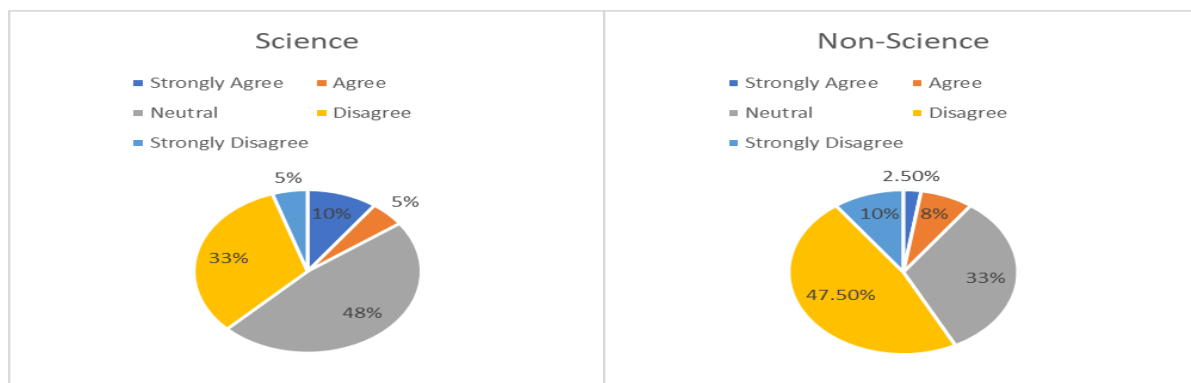| STREAM | SCIENCE | NON-SCIENCE |
|---|---|---|
| **STRONGLY AGREE** | 10% (n=4) | 2.5% (n=1) |
| **AGREE** | 5% (n=2) | 7.5% (n=3) |
| **NEUTRAL** | 47.5% (n=19) | 32.5% (n=13) |
| **DISAGREE** | 32.5% (n=13) | 47.5% (n=19) |
| **STRONGLY DISAGREE** | 5% (n=2) | 10% (n=4) |



*Figure*-**9.15**

## 10.    HYPOTHESES TESTING

Table. 10.1

| S. No. | Domains | Students | N | Mean | Std. Deviation | Std. Error Mean | 't' value | Degree of freedom | Sig. (2-tailed) | P-value (0.005) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | DIETARY KNOWLEDGE | Science | 40 | 2.4000 | 0.59052 | 0.09337 | 3.025 | 78 | .0034 | <0.005 | **Significance Difference** |
|  |  | Non-Science | 40 | 1.7750 | 1.16548 | 0.18428 |  |  |  |  |  |
| 2. | NUTRITIONAL AWARENESS | Science | 40 | 3.0000 | 1.17670 | 0.18605 | 3.028 | 78 | .0033 | <0.005 | **Significance Difference** |
|  |  | Non-Science | 40 | 2.1750 | 1.25856 | 0.19900 |  |  |  |  |  |
| 3. | EATING HABITS | Science | 40 | 1.0000 | 0.75107 | 0.11875 | 0.151 | 78 | .881 | >0.005 | **No Significance Difference** |
|  |  | Non-Science | 40 | 0.9750 | 0.73336 | 0.11595 |  |  |  |  |  |

### 10.1. NULL HYPOTHESIS 1-

To compare the (Dietary Knowledge) among girls pursuing undergraduate science and non-science courses, an independent sample '*t*'-test was applied. The results found a significant difference (*t (78) = 3.025, p=0.0034) i*n the scores, with the mean score for science (M=2.4000, SD=0.59052) higher than non-science (M=1.7750, SD=1.16548). For the two groups the magnitude of the mean difference (mean difference=0.62500, 95% Confidence interval: 0.21373 to 1.03627) was significant. **Hence H₀ was supported.**

### 10.2. NULL HYPOTHESIS 2-

To compare the (Nutritional Awareness) among girls pursuing undergraduate science and non-science courses, an independent sample '*t*'-test was applied. The results found a significant difference (*t (78) = 3.028, p=0.0033*) in the scores, with the mean score for science (M=3.000, SD=1.17670) higher than non-science (M=2.1750, SD=1.25856). For the two groups the magnitude of the mean difference (mean difference=0.82500, 95% Confidence interval: 0.28265 to 1.36735) was significant. **Hence H₀ was supported.**

### 10.3. NULL HYPOTHESIS 3-

To compare the (eating habits) among girls pursuing undergraduate science and non-science courses., an independent sample '*t*'-test was applied. There was found no significant difference (*t (78) =151, p=0.881) i*n the scores, with the mean score for science (M=1.0000, SD=0.75107) higher than non-science (M=0.9750, SD=0.73336)). For the two groups the magnitude of the mean difference (mean difference=0.02500, 95% Confidence interval: -0.3543 to 0.35543) was very small. **Hence H₀ was not supported.**

## 11. RESULTS AND DISCUSSION

Approximately one billion adolescents worldwide, rationalizing about 20 to 25% of the total inhabitants in developing nations. Due to "the population moment effect," this distinct age bracket of the public will grow tremendously in the coming 30 years [2]. After interpreting the data of the present study, results evidently suggested to have a significant difference in the dietary knowledge and nutritional awareness between the non-science and science undergraduate students, respectively; the outcomes of the current study also depicted that there was no significant difference between the eating habits of the two groups which very well coincide with the study done by Andonova, Albena. (2018) found that students are well acquainted with the basic fundamentals of healthy nutrition, but a sizeable number of students tended not to adhere to it or apply it in daily food choices, thus, advocating a critical attitude towards the diet regime.[1]. The outcomes of the present analysis also disclosed that there was higher nutritional awareness among science students than among non-science students, which is also supported by a previous study conducted by Shivakumar S P Buvanendiram (2018); the results established significant differences in health awareness among female students from different educational divisions in Karnataka, India—suggesting that educational background has an impact on the awareness level regarding nutrition and dietetics and health-related issues. Comprehensible nutritional labels on pre-packed foods are still a lucrative grass root-level intervention with unparalleled magnitude. Thus, this potential needs to be capitalized in the most efficient way, for which governments and private organizations must look into innovative tactics to ensure nutrition information is effortlessly understandable and conveniently accessible [3]. Thus, we find it a pressing priority to amplify nutrition education at the institutional level's full potential, as studies suggest that nutrition education is powerful in raising the level of nutrient intake and its knowledge [20]. The results interpreted by the present study disclosed that it was not very comprehendible for youngsters to read nutritional labels before making a purchase decision, which was also revealed in a study conducted by (Deshmukh, 2017) in the Indore city of Madhya Pradesh that most consumers were not well acquainted with the language, terminology, and numeracy on the nutritional fact label, directing toward a call for focal elementary nutrition education accompanied by comprehensible and convenient label formats.

We need more research to be conducted for subcategories of populations such as children and adolescents, specifically regarding dietary knowledge and subsequent food consumption practices. Ample authenticated data exists for recommendations pertaining to public health to curb fast food consumption, rectify faulty food habits, and facilitate the selection of healthier menu options, but the actual implementation is still at the far edge. For future significance, strategic nutrition education policies should, therefore, be inculcated into an eclectic range of perception and behavior change approaches in regard to assisting in narrowing the gap between dietary recommendations and current dietary practices.

## 12. CONCLUSION

There are approximately one billion adolescents globally, making up 20 to 25 percent of the population in developing nations. Due to the population moment effect [2], the size of this population subgroup is anticipated to increase over the next 30 years. [12]. Due to accelerated growth spurt and increased physical vigor, adolescents have surged nutritional demands, requiring a diet plentiful in protein, essential fats, and other nutrients to uphold the rising demands. According to research, the adolescence to young adulthood transition is also marked by independence, making it continually challenging to make healthy food choices [10]. A child develops the attitudes and convictions necessary for productive participation in society at a crucial age. Numerous factors, including early-life nutrition influence adult and adolescent life quality. It is imperative that adolescents, particularly females, have fundamental knowledge about nutrition because the severity of adolescent health issues is greater for adolescent girls due to their lower access to facilities and knowledge-gaining platforms, which is exacerbated by gender biases. [1] Colleges and universities are potential target locations for promoting healthy lifestyles and rendering health-related information among the adult population [18]. Student health initiatives should be implemented at all levels, focusing on providing services such as health management, nutritional education, and dietary counseling [18]. Special attention should be paid to female students because they are sometimes also the victims of gender biases, making it even more difficult for them to pursue proper knowledge and application. Eventually, their lack of knowledge increases their susceptibility to malnutrition. Developing and implementing strategies for a rich, productive, and healthy life, especially diet, nutrition, and lifestyle modifications, is crucial for shielding and enhancing individual and public health,

notably in children and adolescents. Regardless of their geographical origins, young women are still marginalized for many reasons; hence they need to develop their health for an accomplished fruitful life, and for the future to have and raise the next generation should be given priority. Hence, creating sensible eating habits and healthy lifestyles should commence from these formative years of youth and should continue throughout life. From the educator's frame of reference, universities and colleges represent the potential opportunity for a significant number of students to receive nutritional education. The present research outcome advocates the need for frameworks to enhance competency in the field of nutrition, particularly in terms of information regarding sources of nutrition, diet management, and the formation of healthy eating patterns.

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