



Daffodil
International
University

**DETERMINATION OF KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING
BALANCED DIET AND HEALTHY EATING AMONG UNIVERSITY STUDENTS AT
DAFFODIL INTERNATIONAL UNIVERSITY**

Submitted by

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Submitted to the Department of Nutrition and Food Engineering in the partial fulfilment of B.Sc
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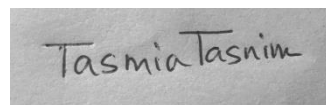
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APPROVAL CERTIFICATION

Md.Mahamudul Hasan, a regular student in the B.Sc. in Nutrition and Food Engineering program at Daffodil International University; Faculty of Allied Health Science with student ID **191-34-846**, has completed his two-month project work program, as detailed in his dissertation titled "**Determination of Knowledge, Attitude, and Practice regarding balanced diet and healthy eating among university students at Daffodil International University.**" Then, in December 2022, he completed preparing her report according to my instructions using her data. We were aware that Md. Mahamudul Hasan's supervisor was present as he completed his report. In addition, we guarantee that the project report meets the requirements of the NFE program.

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LETTER OF TRANSMITTAL

Date:

Dr. Nizam Uddin

Associate Professor & Head (In-Charge)

Department of Nutrition & Food Engineering

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Subject: Submission of project work report.

Sir,

I am honored and grateful for the chance to submit my Project report on the Determination of Knowledge, Attitude, and Practice regarding a balanced diet and healthy eating among university students at Daffodil International University.

This report was composed based on the knowledge and experience I acquired throughout the entirety of my project. Ms. Tasmia Tasnim, Assistant Professor, Department of Nutrition and Food Engineering, has granted me permission to work at your university under her supervision.

Therefore, I humbly request and anticipate that you will consider me for any recommendations and highly valued suggestions, and that you will graciously accept my report for your thoughtful consideration.

Yours Sincerely

Mahamudul

.....

Name: Md.Mahamudul Hasan

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ACKNOWLEDGMENT

I want to begin by thanking Allah, the merciful and omnipotent, for allowing me to conclude my thesis.

Dr. Nizam Uddin, Associate Professor and Head (In-Charge) of the Department of Nutrition and Food Engineering, and Ms. Tasmia Tasnim, Supervisor, Assistant Professor Department of Nutrition and Food Engineering, merit my sincere appreciation for the time and effort they devoted to guiding me through this project. This task would be simpler to accomplish with their assistance. Throughout the research phase, their unwavering support was a source of inspiration, and their wealth of knowledge was indispensable to obtaining the desired results. I want to acknowledge everyone who assisted with the preliminary investigation for this project and those who contributed to its completion. I want to take this opportunity to thank and recognize everyone who helped me in effectively completing my report. Regarding report submission, the author recalls all of them.

Thank you to everyone who assisted me in the Department of Nutrition and Food Engineering at Daffodil International University. My family and friends have always made me feel supported and cherished.

DEDICATION

I'll dedicate my dissertation to my parents.

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ABSTRACT

This study was based on the determination of Knowledge, Attitude, and Practice (KAP) regarding a balanced diet and healthy eating among university students at Daffodil International University. This study mainly found out the knowledge about balanced diet and healthy eating in university students. University students face many difficulties in their life in this phase when they live in a hostel or university hall, some students live with their families but most of the students did not take a balanced diet and healthy diet. My sample size was almost 100. I have collected my data. In this research, 46% of participants are female students and 54% are male students, and their ages are almost 18-23 years. I collected my data from Daffodil International University from October 2022 to December 2022. This whole research was based on a balanced diet and healthy eating. University students share their age, eating habit, sleeping time, how they lead their lifestyle, what they know about balanced diet and healthy eating, etc. All of them know about this but their answer was different. 69% of students are not live with their family and 31% of students live with their family .9% of the students are underweight, 32% are normal, 49% are overweight and 10% are obese. For the answer about breakfast being an important component of your diet I got 68% answered positive and 32% answered said no. We also asked them if they know about the balanced diet was the components of five 53% given they know it. We also add the Department wise Respondent's Knowledge about balance nutrition the respondents were Non-Nutrition students among them 9% said the combination of the above five items,5% said eggs, nuts, and seeds, 3% said fruits, 8% said grain(cereals)foods, milk, cheese of alternatives mostly reduced fat, 1% said lean meats and poultry, fish and lastly 17% said vegetables and beans foods are the sources of balanced nutrition. On the other hand in Nutrition, Food Science, and Health Science students said 44% of combinations of the above five items,2% fruits,8% grain(cereals)foods, milk, and cheese of alternatives mostly reduced fat and 3% said vegetables and beans are the sources of balanced nutrition. All this result based we are sure that they all know about how to maintain a healthy proper diet but some of them do not follow properly. Their knowledge about a healthy diet is completely clear but their attitude and practice should be improved more.

Keywords: KAP, Determinants, Balance diet, University students

CHAPTER 1

1.1 Introduction

Students enrolled in higher education are faced with several obstacles. At this age, they have developed inadequate dietary and lifestyle habits. Therefore, this study set out to evaluate the health literacy of undergraduates at Daffodil International University.

Diet has a significant influence on the character of a person's existence. The nutritional status of a population is a crucial indicator of its overall health and disease prevalence. Improved nutritional awareness is crucial for a variety of reasons, including aiding in the balanced consumption of foods such as those that include vitamins, minerals, proteins, carbs, and fat. Humans must have good eating habits and nutritional understanding in order to lead healthy lives [1].

Healthy diet and lifestyle are simple and low risk methods to encourage and analysis well-being and life expectancy. It has been shown that excessive consumption of saturated fats raises cholesterol levels and increases the chance of developing cardiovascular disease. As a result, eating more fruits, vegetables, whole grains, and seeds while consuming less meals high in fat and sugar. In order to maintain a balance between calorie intake and energy expenditure and prevent uncontrollable weight gain, it is advised to consume foods high in saturated fat, sugar, and salt. Healthy eating choices among university students' were observed to be poor because they are likely to gain individuality after entry to a higher education level and to make meals by themselves. So, the habits formed along the academic journey would have a tendency to persist throughout life. A number of researches shown that among University students consume a lot of fast food, rich and fattening meals, and eat less fruits and vegetables [2].

The most recent research appear to have focused on a more deliberate approach to eating behaviors that takes organic foods into account. Dietary practices include behavioral propensity in connection to intra- and inter-personal elements, such as dietary knowledge and attitudes toward consuming particular foods. In this sense, the connection between eating behavior, attitude, and nutritional knowledge may offer guidance on the best methods to meet requirements for a healthy lifestyle [2].

To encourage a healthy lifestyle, a balanced diet is crucial. To keep yourself healthy, eating a well-rounded diet that provides your body with all the nutrients it needs is vital. Successful weight loss and prevention of chronic diseases, including diabetes, heart disease, and certain cancers, are the results of a well-balanced diet. [3]

Unfortunately, there is an absence of high-quality research articles and dependable data regarding student nutrition in Bangladesh. Consequently, the purpose of the present study is to enhance our understanding of students' nutrition knowledge, attitude, and practice in relation to balanced diets and healthy eating nutrition diets and to propose solutions that will assist in increasing students' awareness of and ability to make healthy food choices. The objective of this study was to assess the nutritional knowledge, attitudes, and dietary habits of college students.

1.2 Significance of the report

The study's emphasis on case studies could benefit researchers and students interested in this field. The paper's validity is kept in very high regard. Anybody interested in working in this profession will be able to find essential or highly relevant information on this subject.

1.3 Operational Definition

Balance Diet

A balanced diet contains the optimal quantity of each vitamin required for growth, maintenance, and disease prevention. A healthy, well-balanced diet provides the vitality you need, prevents vitamin, mineral, and other nutritional deficiencies, and enhances your immune system. [4]

Components of A Balanced Diet

The main elements of a well-balanced diet include proteins, carbohydrates, fats or lipids, micronutrients including vitamins and minerals, and water [4].

Protein – Muscles, hair, and skin all benefit from a healthy dose of protein. Include it in your diet between 10-12% of the total. [4]

Carbohydrates - Carbohydrates give your body energy, which should incorporate 50- 60% of your diet. Even though it's an important part of your diet, you shouldn't treated all carbohydrates equally. [4]

Fat - Widespread is the belief that lipids are inherently toxic. In addition to maintaining a constant body temperature, healthy lipids facilitate the assimilation of vitamins A, D, E, and K. [4]

Vitamins - There are 13 different vitamins that the body needs, but the four most important are A, C, B, and D. [4]

Minerals - Minerals enhance digestion, facilitate nutrient absorption, and promote healthy organ development. Essential minerals include iron, calcium, potassium, iodine, and sodium. [4]

Fiber - In addition to assisting in digestion, fiber helps reduce cholesterol and maintain stable glucose levels. [4]

Water- Each day, you should consume eight glasses of water because it hydrates your body and is essential for several bodily functions. [4]

Nutrients

The World Health Organization defines a nutrient as anything necessary for life, development, and reproduction. To reiterate, nutrients sustain our bodies to perform vital functions. Dietary nutrients are essential for the survival of all life on Earth. However, we can only subsist with the specific nutrients food and water provide. [5]

Healthy Eating

Eating properly is not about starvation, maintaining an unattainable weight, or imposing severe dietary restrictions on oneself. Instead, it's all about bettering one's well-being, contentment, and vigor. [6]

1.4 Questions for Studies

1. Where does the human body get its nourishment from?
2. What are Knowledge, Attitude, and Practices regarding a balanced diet and healthy eating among university students?
3. Why Balance Diet is important?

1.5 Objectives

The purpose of the study was to learn more about university students' Knowledge, Attitude, and Practices regarding a balanced diet and healthy nutrition.

1.6 Particular Objectives

- To discover out the socio-demographic status of the participants
- To evaluate the respondents' anthropometric characteristics
- To determine the respondents' level of physical activity.
- To assess healthy eating practices among the respondents.

1.7 Acronyms

KAP: Knowledge ,Attitude and Practice

BMI: Body Mass Index.

CHAPTER 2

2.1 Literature Review

Nutrition is one of the most substantial factors influencing the way people live their lives. Nutritional status is considered to be a major health tool for evaluating a country's health standard and morbidity pattern. A better understanding of nutrition is essential for several reasons, including helping people consume a range of meals that are balanced in terms of their vitamins, minerals, carbohydrates, proteins and fats. To lead healthy lives, people must practice proper eating habits and have a basic awareness of nutrition [1].

Adjusting to a new environment, feeling overburdened by coursework, failing to effectively manage time, and having a full course load can make university life challenging for young adults. Individuals at this age are more likely to engage in hazardous behaviors, such as skipping breakfast, grazing throughout the day, consuming fast food frequently, smoking, being devoted to the internet, and living a life of inactivity. Although it is generally accepted that knowledge affects eating behaviors, it is clear that, absent the removal of environmental, behavioral, and psychological barriers, having sufficient awareness of risk factors has little impact on food selection. Even though it is assumed that young people would be more health-conscious, they frequently resist dietary changes. As a result, individuals develop an alarming dependence on health-damaging behaviors, such as being overweight, obese, or underweight. [7]

It is difficult to overstate the significance of a healthful diet in promoting regular physical activity. Maintaining a healthy lifestyle may be facilitated by consuming a balanced diet containing all the nutrients the body requires. By following a healthy dietary plan, the risk of developing diabetes, cardiovascular disease, and several malignancies can be reduced, and individuals can also achieve their ideal body weight. [3]

It has become a global problem to prevent overweight, obesity, and the diseases that are associated with it. It has become a global problem to prevent overweight, obesity, and the illnesses that are associated with these conditions. University is a crucial time for weight growth, claims US literature. Those transitioning from high school to University will require time to acclimate to their new environment. Those that are unable to adjust well might have detrimental effects on their weight status as a result of their health behaviors. Students' eating habits have a significant impact on their weight. University students in the US were not eating the necessary quantities of fruits and vegetables and were consuming a growing number of high-fat meals, according to research done there. Moreover, Butler et al. discovered substantial drops in the consumption of bread and vegetables throughout the significant increases in alcohol consumption and the amount of fat consumed in the first year of college among US students. The high caloric intake that may result from improper diets and extensive alcohol consumption may contribute to the weight gain of undergraduates. A similar trend of weight increase among college students is beginning to emerge in Europe. Yet, there is a dearth of European research on the food habits of college students. [8]

CHAPTER 3

3.1 Materials

	Equipment	A reason for being
01	Paper	In order to design a survey
02	Computer	The process of reporting
03	Microsoft	In order to generate a data conversation and table based on a frequency distribution
04	SPSS	Analysis of data
05	Fund	Self-funding to carry out the objective of the thesis

3.2 Methodological Approach

Design of the study

This research will employ a methodology-rich approach that combines the use of many approaches to gather both quantitative and qualitative data. To gather quantitative data for the various study goals, we will conduct a cross-sectional survey among 100 individuals who are currently enrolled in university education; alternatively, we may say that the university students are our target population.

Study population

Students (both male and female) aged 18 to 23+ years old currently studying at Daffodil International University, Daffodil smart city, Ashulia, Dhaka.

Study period

The study period was from 05th October, 2022 to 10th December, 2022.

Data collection period

The data collection period was from 20th October, 2022 to 20th November, 2022

Sampling strategy

The study which has been carried out is a quantitative, cross-sectional, exploratory study. Its objective is to investigate students' knowledge, attitudes, and practices regarding a balanced diet and healthy eating. The study's parameters are examined using the research tool, a questionnaire created by our team, which utilizes a survey methodology. The study that was done was done at Daffodil International University. Students from DIU are the subjects of this study, as the inference of the study's title says they should be. The population of DIU students is used as the source for the study sample, which has a calculated size.

Sample size calculation

$$\text{Sample Size} = \frac{\frac{z^2 \times P(1-P)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)}$$

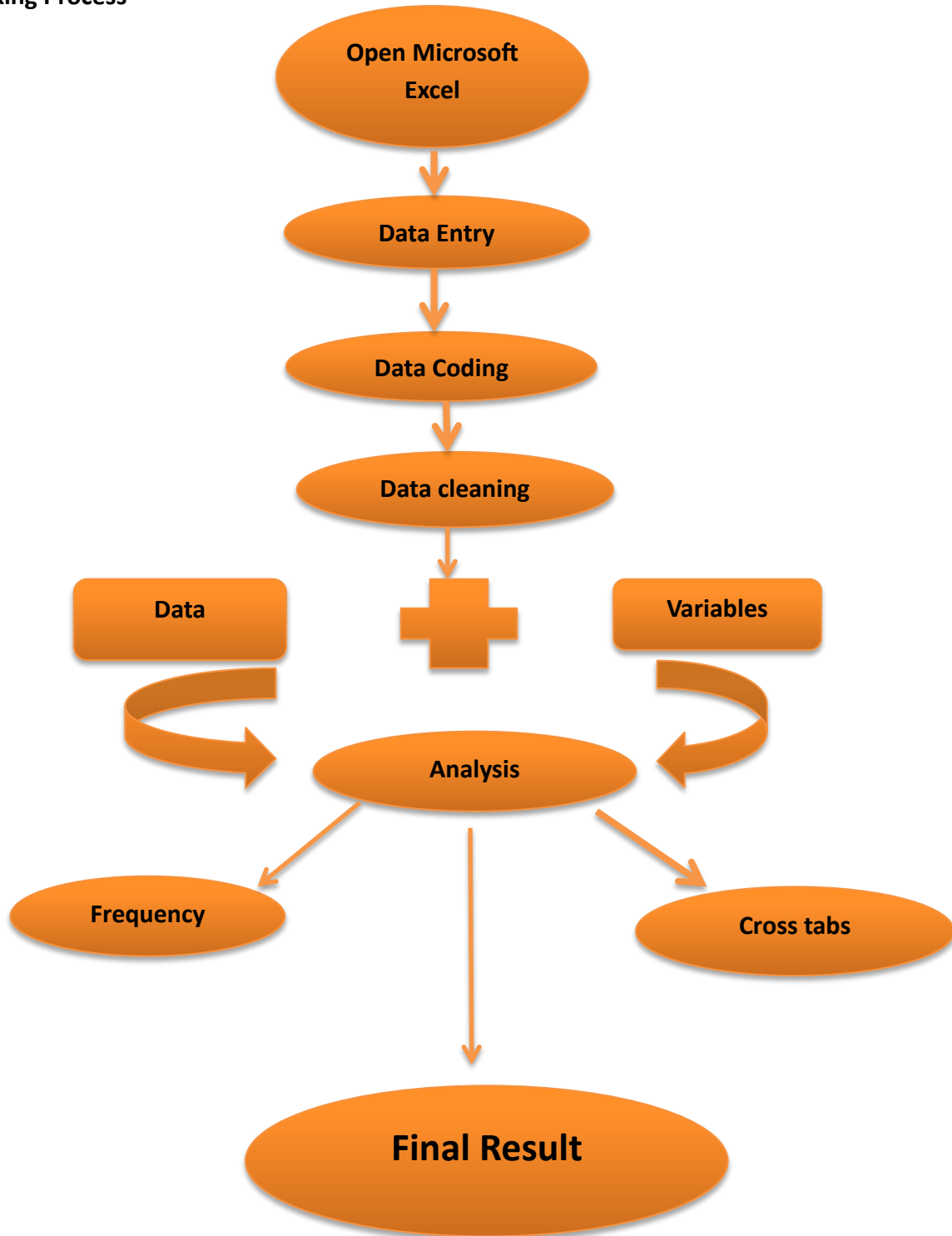
Data collection method

- Classroom to classroom visit.
- Randomized face to face interview.
- Used local language for communication.
- Avoided data collection by using social networks.
- Every respondent was given 8 to 10 minutes.
- Each of the responses was entered into a separate data form.
- Each and every piece of information is gathered with their consent

Data analysis process

I was used Microsoft Excel and SPSS software for data analysis.

Working Process



CHAPTER 4

RESULT

4.1 Background information

4.1.1 Age

Age	Frequency	Percent
18-20	24	24.0
21-23	50	50.0
23+	26	26.0
Grand Total	100	100.0

4.1.1 Frequency distribution of Age

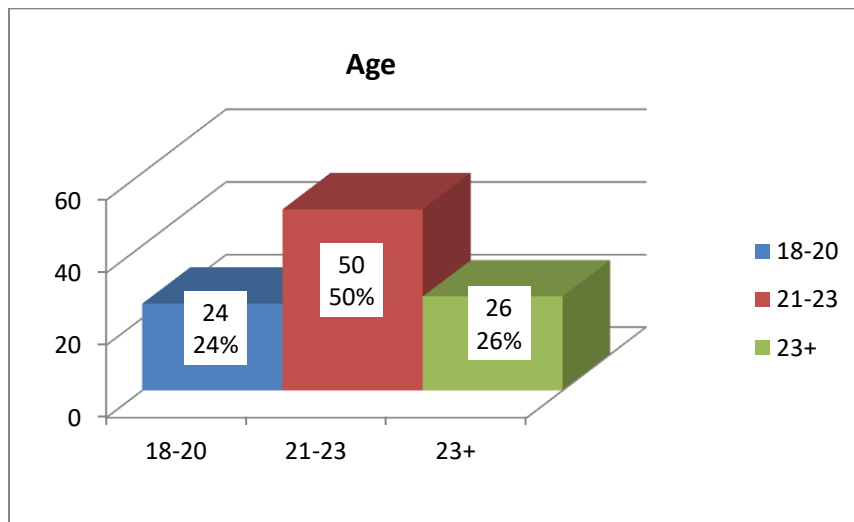


Figure 4.1.1

The following bar chart represents the frequency distribution of age among the interviewed population, among them 26% are 23+ years old, 50% are 21-23 years old and rest 24% are 18-20 years old. So we see that most of the people are aged 21 -23 years old is high of any other age group.

4.1.2 Respondents Gender

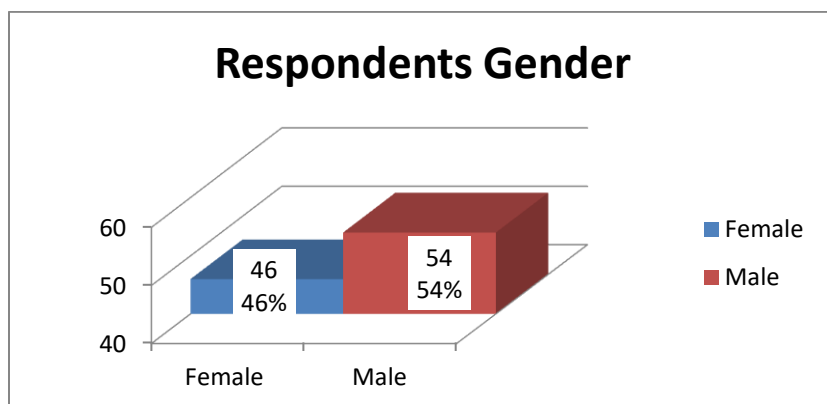


Figure 4.1.2

Gender	Frequency	Percent
Female	46	46.0
Male	54	54.0
Grand Total	100	100.0

4.1.2 Frequency distribution of Gender

The following Table represents the percentage of gender among the interviewed population. Here, we can see that 46% of the population is female & 54% population is male. So the overall result we say that most of the frequency and percentage level of the male is high to compare female.

4.1.3 Department

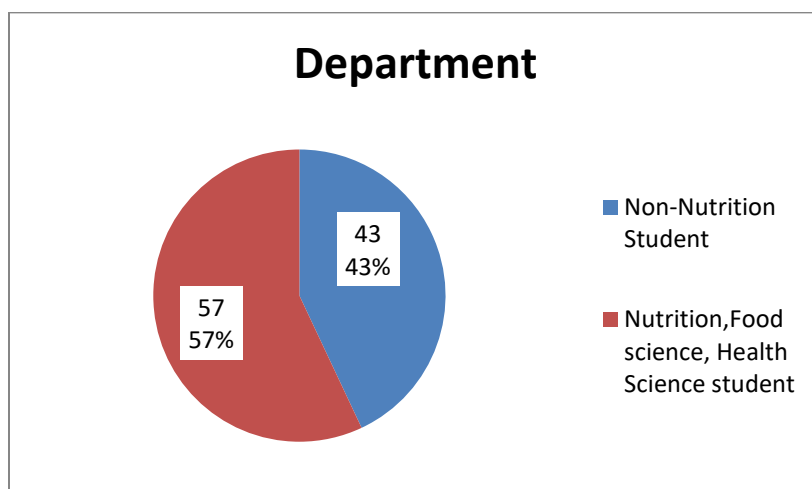


Figure 4.1.3

Department	Frequency	Percent
Non-Nutrition Student	43	43.0
Nutrition, Food science, Health Science student	57	57.0
Grand Total	100	100.0

4.1.3 Frequency distribution of Department

The following Pie chart represents the frequency distribution of the Department among the interviewed population, among them 57 % are Nutrition, Food Science, and Health Science students and 43 % are Non-Nutrition Students. All over show the pie chart we decide that the populations of Nutrition, Food Science, and Health Science student are more than other students.

4.1.4 Academic Year

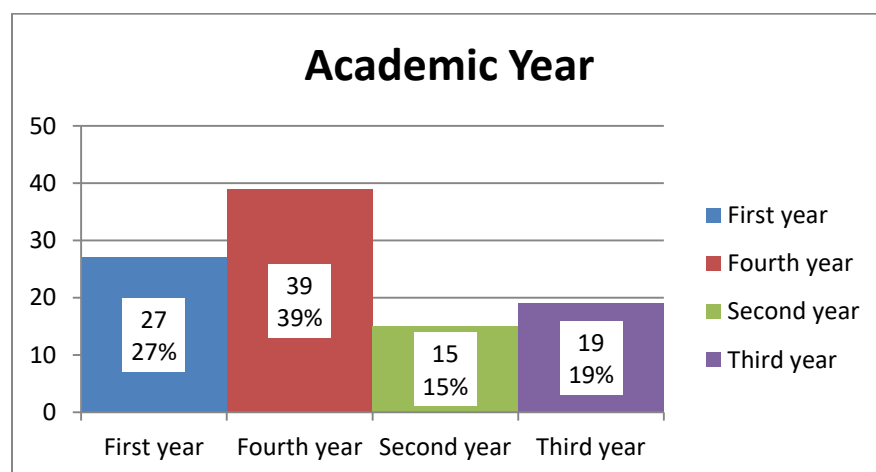


Figure 4.1.4

Academic Year	Frequency	Percent
First year	27	27.0
Fourth year	39	39.0
Second year	15	15.0
Third year	19	19.0
Grand Total	100	100.0

4.1.4 Frequency distribution of Academic year

The following table represents the frequency distribution of the Academic Year. Here, 39% are from the Final year, 27% are from the 1st year, 19% from the 3rd year, and 15% from the 2nd year. This chart shows that the percentage of final-year students is more than other students.

4.2. Socio economic information

4.2.1 Marital status

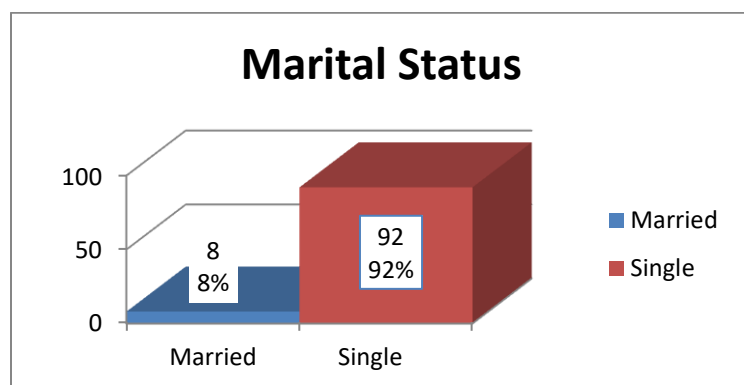


Figure 4.2.1

Marital Status	Frequency	Percent
Married	8	8.0
Single	92	92.0
Grand Total	100	100.0

4.2.1 Frequency distribution of Marital Status

The following bar chart represents the percentage of marital status among the interviewed population. Here, this chart shows that 8% of the population is married & 92 % population is single.

4.2.2 Religion

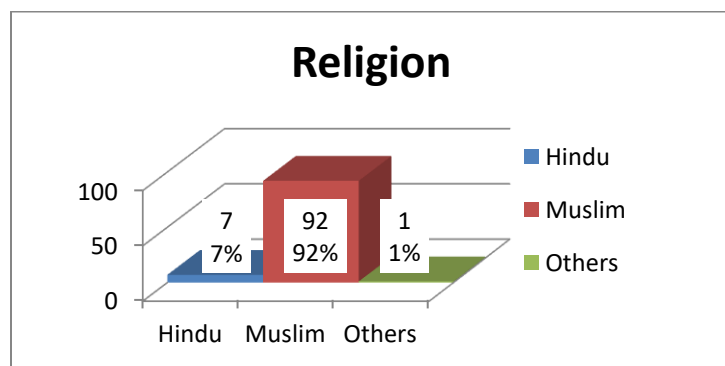


Figure 4.2.2

Religion	Frequency	percent
Hindu	7	7.0
Muslim	92	92.0
Others	1	1.0
Grand Total	100	100.0

4.2.2 Frequency distribution of Religion

There were 92% Muslims, 7% Hindus, and 1% persons from other religions.

4.2.3 Living Arrangement

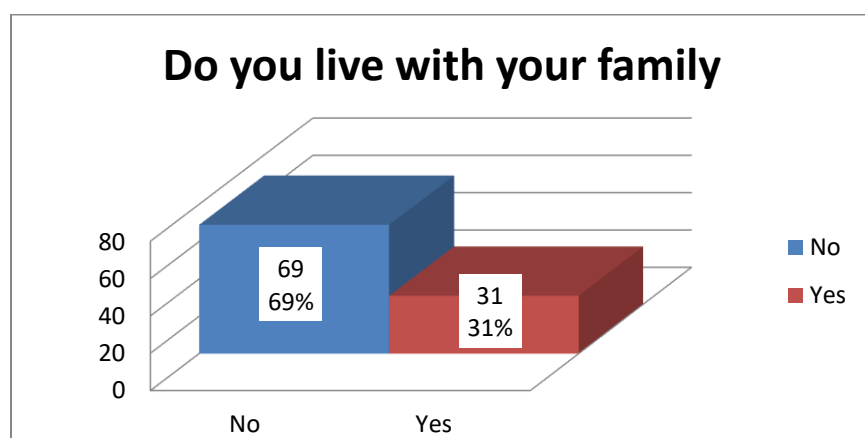


Figure 4.2.3

Live with Family	Frequency	Percent
No	69	69.0
Yes	31	31.0
Grand Total	100	100.0

4.2.3 Frequency distribution of Living Arrangement

The following Table represents the percentage of living arrangements of respondents. Here, 69% of the population are not live with their family & 31 % population lives with their family.

4.2.4: Average Monthly Family Household Income (BDT)

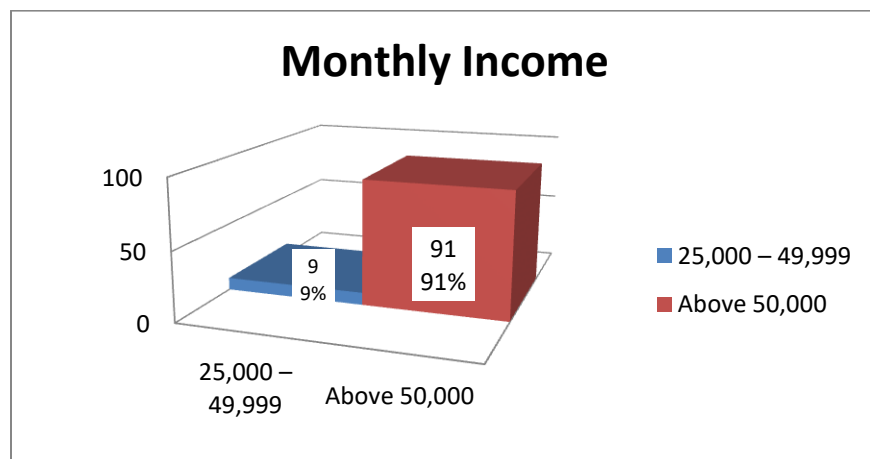


Figure 4.2.4

Monthly Income	Frequency	Percent
25,000 – 49,999	9	9.0
Above 50,000	91	91.0
Grand Total	100	100.0

4.2.4 Frequency distribution of Monthly Income

The following chart shows the monthly income percentage. About 91 % of Households' income was above 50000 and 9 % of other households was 25000-49999.

4.3 Anthropometric information and Physical Activity of the Respondents

4.3.1 BMI

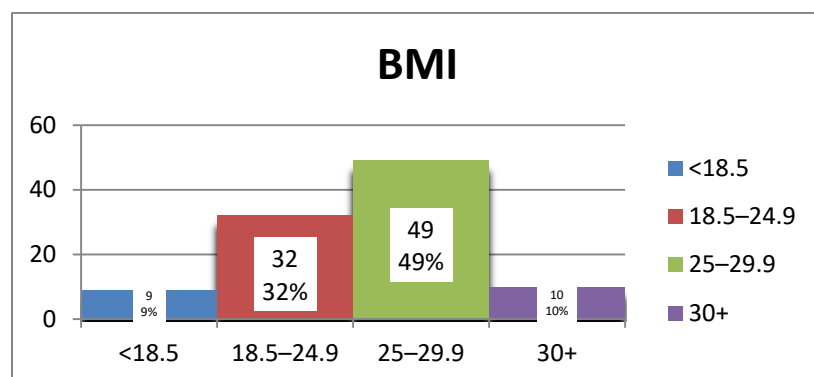


Figure 4.3.1

BMI	Frequency	Percent
<18.5	9	9.0
18.5-24.9	32	32.0
25-29.9	49	49.0
30+	10	10.0
Grand Total	100	100.0

4.3.1 Frequency distribution of BMI

The following table shows the frequency distribution of BMI. 9% of the populations are underweight, 32% are normal, 49% are overweight and 10% are obese. Over all 32% of people are normal in their BMI calculation.

4.3.2 Exercise

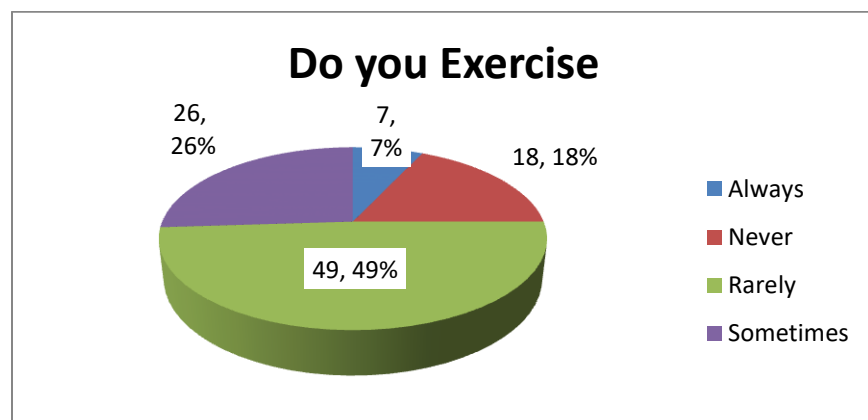


Figure 4.3.2

Exercise	Frequency	Percent
Always	7	7.0
Never	18	18.0
Rarely	49	49.0
Sometimes	26	26.0
Grand Total	100	100.0

4.3.2 Frequency distribution of Exercise

The following table shows the frequency distribution of BMI. 9% of the populations are underweight, 32% are normal, 49% are overweight and 10% are obese. Over all 32% of people are normal in their BMI calculation.

4.3.3 What is the total time that you spend in walking daily?

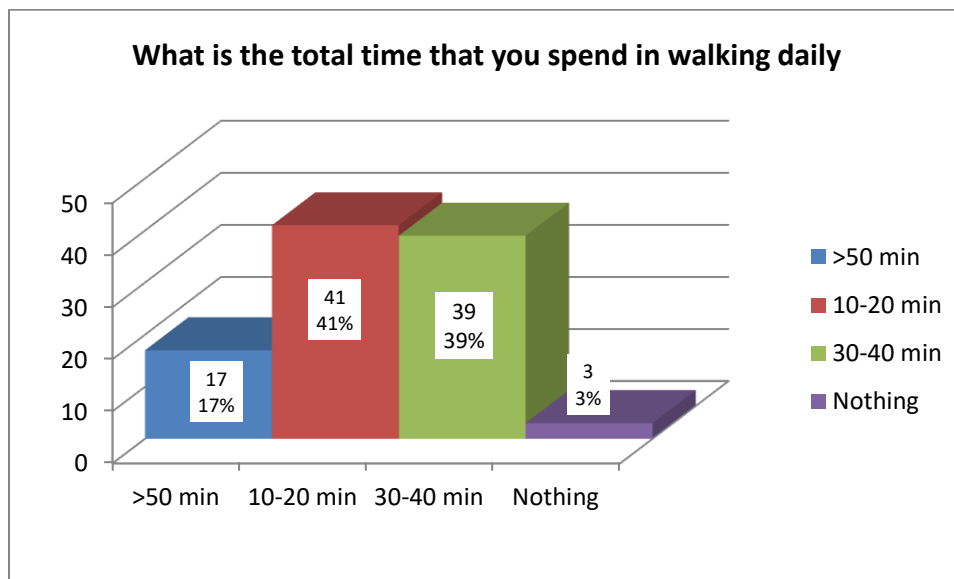


Figure 4.3.3

The following bar chart represents the frequency distribution of the population, indicating What is the total time that they spend walking daily .3% of the population answered Nothing,39 % was walking in 30-10 minutes daily,41% was walking in 10-20 minutes and 17 % of the population was walking above 50 minutes daily.

4.4 KAP about balance diet and healthy eating

4.4.1 Is breakfast an important component in your diet

Answer	Frequency	Percent
No	32	32.0
Yes	68	68.0
Grand Total	100	100.0

4.4.1 Frequency distribution of Is breakfast an important component in your diet

This table shows that breakfast is an important component of their diet percentage. The highest number of people said that breakfast is an important component of their diet (68%) and 32% of people said No in their answer.

4.4.2 How often do you have snacks between meals (chips, chocolate, sweets?)

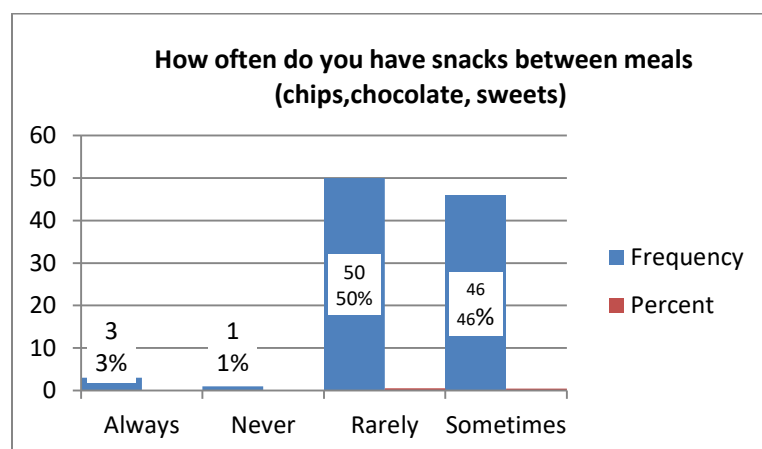


Figure 4.4.2

Answer	Frequency	Percent
Always	3	3.0
Never	1	1.0
Rarely	50	50.0
Sometimes	46	46.0
Grand Total	100	100.0

4.4.2 Frequency distribution of How often do you have snacks between meals (chips, chocolate, sweets)

The following table represents the frequency distribution before taking their meal and if they have between the gap of that time how much people have eaten snacks. Here we can see that 50 % of people said rarely, 46% of people said sometimes, 3% of people said always and 1% of people said their answer was never.

4.4.3 How often do you have stimulants (tea, coffee) in a week?

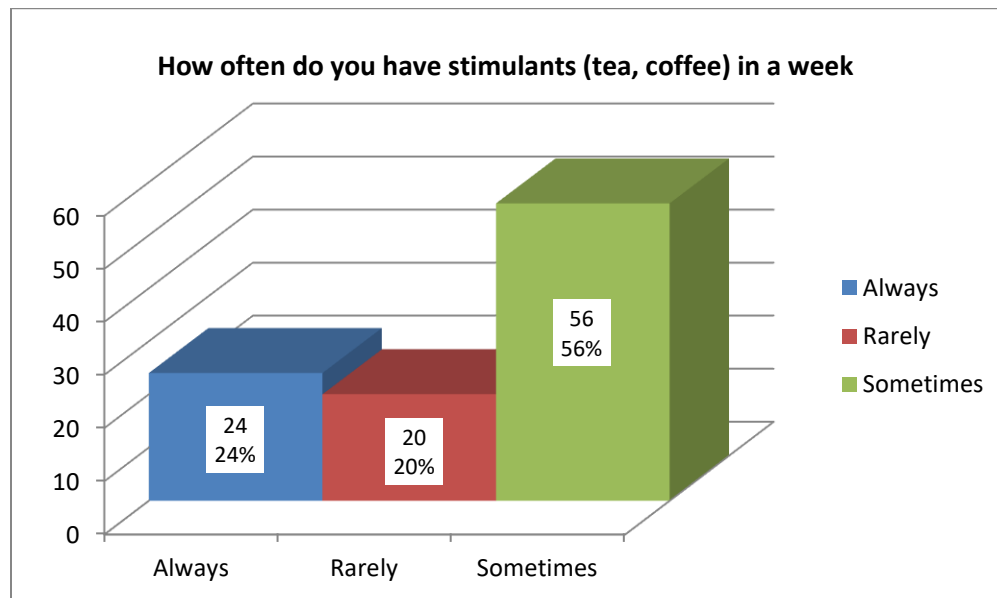


Figure 4.4.3

The following chart shows how much people stimulants (tea, coffee) in a week. Here we can see that 56% of people said sometimes, 24% of people said always and 20% of people said never.

4.4.4 How often do you have vegetables in a week?

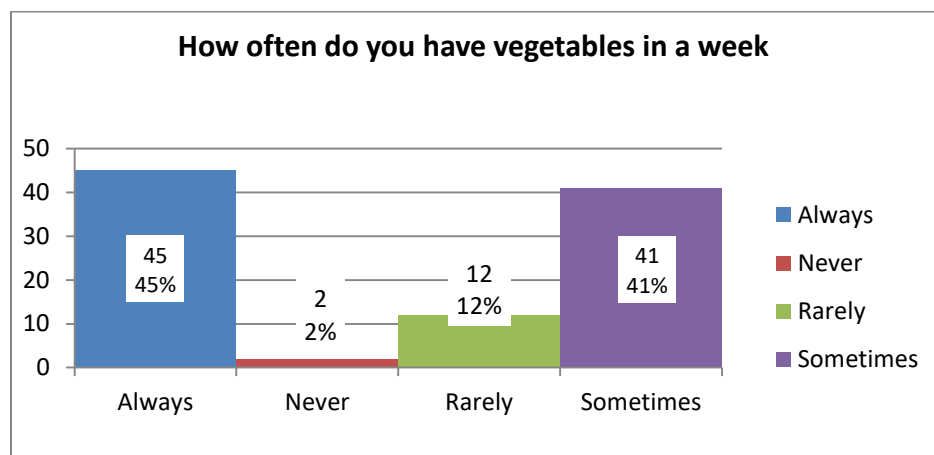


Figure 4.4.4

Answer	Frequency	Percent
Always	45	45.0
Never	2	2.0
Rarely	12	12.0
Sometimes	41	41.0
Grand Total	100	100.0

4.4.4 Frequency distribution of How often do you have vegetables in a week

The following table represents the frequency distribution of how much people eat vegetables in a week. Here we can see that 45% of people said always, 41% of people said sometimes, 12% of people said rarely, and at last 2% of people said their answer was never.

4.4.5 How often do you have meat in a week?

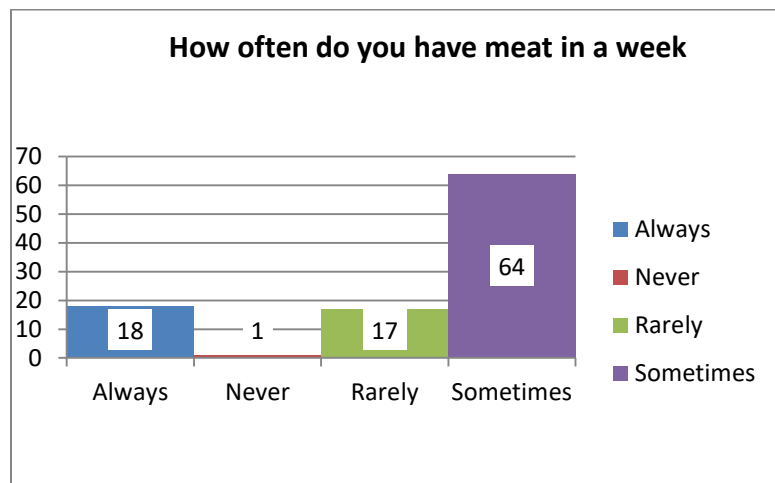


Figure 4.4.5

Answer	Frequency	Percent
Always	18	18.0
Never	1	1.0
Rarely	17	17.0
Sometimes	64	64.0
Grand Total	100	100.0

4.4.5 Frequency distribution of How often do you have meat in a week

The following table represents the frequency distribution of eating meat in a week of the population. The answer people were 64% sometimes, 18% always, 17% rarely, and 1% never.

4.4.6 How often do you have fast food in a week

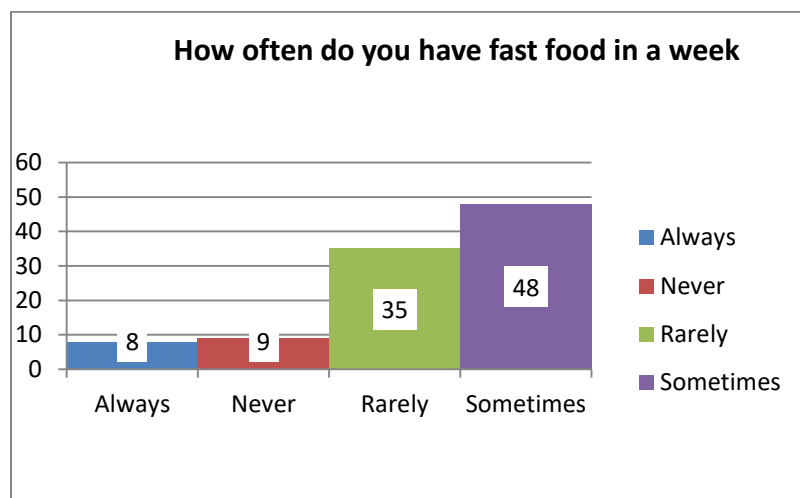


Figure 4.4.6

Answer	Frequency	Percent
Always	8	8.0
Never	9	9.0
Rarely	35	35.0
Sometimes	48	48.0
Grand Total	100	100.0

4.4.6 Frequency distribution of How often do you have fast food in a week

The following table represents the frequency distribution of eating fast food in a week by the population. The answers of people were 48% sometimes, 35% rarely, 8% always, and 9% answer was never. Overall more than a group of the population eats fast food in a week sometimes.

4.4.7 What type of food do you think has a balanced nutrition?

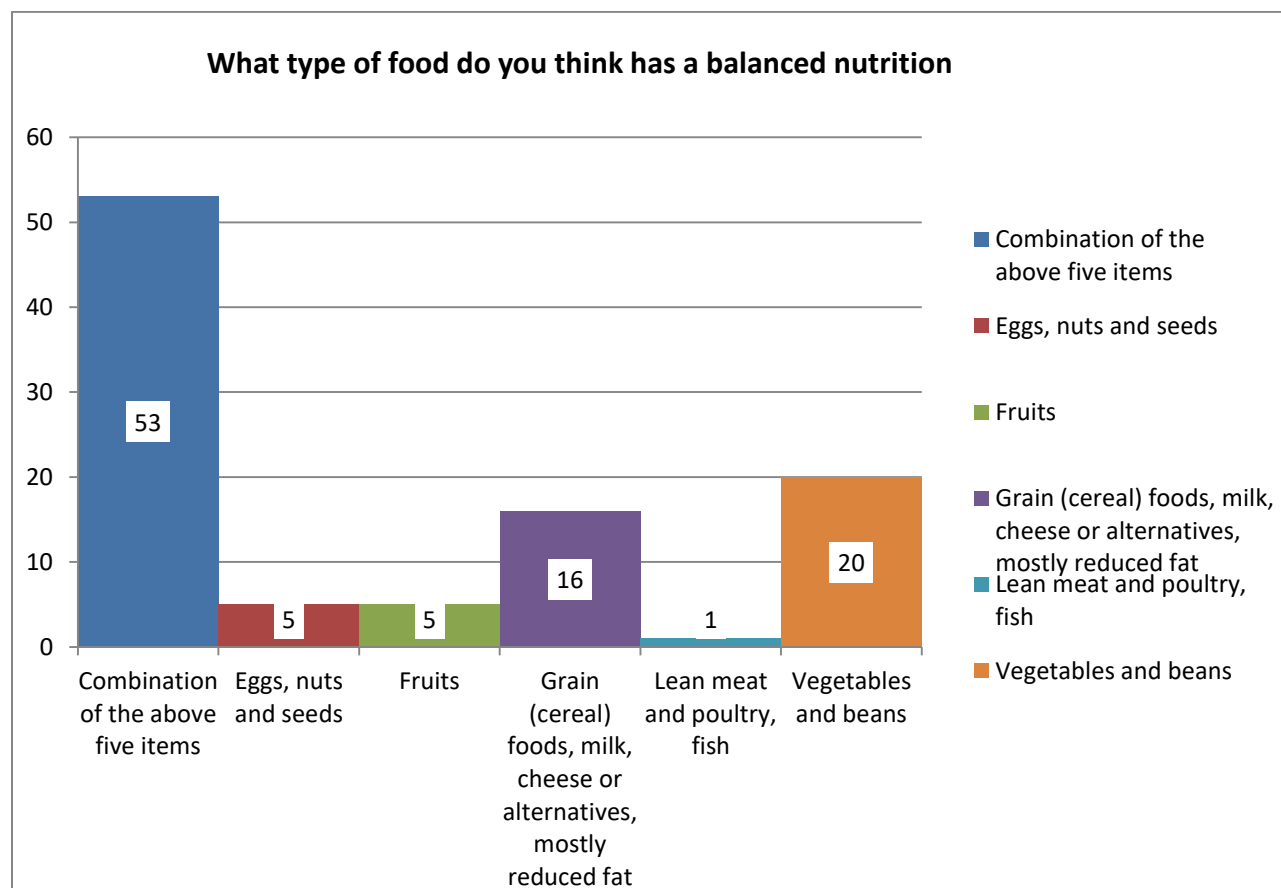


Figure 4.4.7

Answer	Frequency	Percent
Combination of the above five items	53	53.0
Eggs, nuts and seeds	5	5.0
Fruits	5	5.0
Grain (cereal) foods, milk, cheese or alternatives, mostly reduced fat	16	16.0
Lean meat and poultry, fish	1	1.0
Vegetables and beans	20	20.0
Grand Total	100	100.0

4.4.7 Frequency distribution of What type of food do you think has a balanced nutrition

The following chart shows the types of balanced nutrition. Here we can see that 53% of people said a Combination of the above five items, 20 % of people said Vegetables and beans, 16% of people said Grain (cereal) foods, milk, cheese or alternatives, mostly reduced fat, both eggs, nuts, and seeds and fruits are answer 5% of people and 1% of people said leans meat and poultry, fish.

4.4.8 What time do you go to bed?

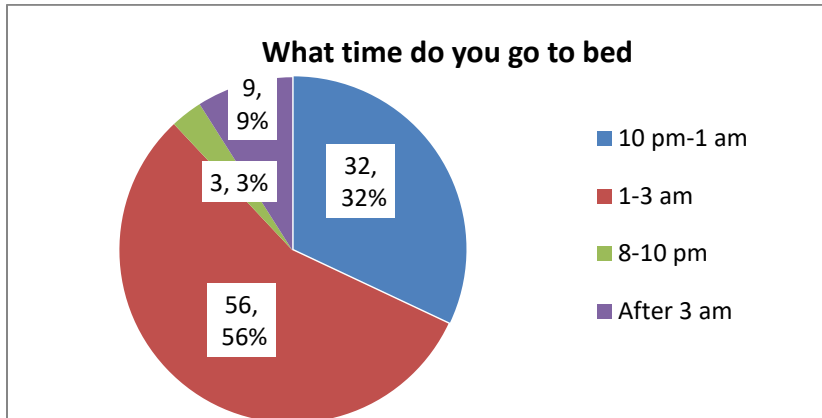


Figure 4.4.8

The following chart shows the time of people when they go to bed. Here we can see that most people go to bed at 1-3 pm almost 56%, which is bad for their health. And 32% of people go to bed at 10-1 pm. And fewer people go to bed after the time at 3 pm.

4.4.9 How many hours you sleep daily?

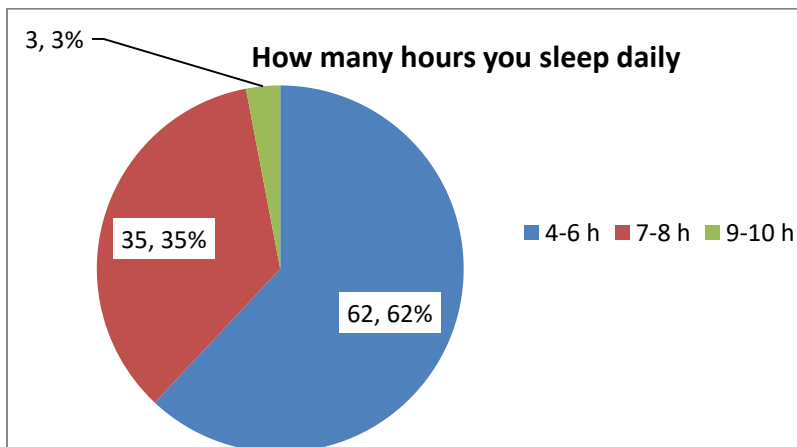


Figure 4.4.9

The following chart shows the daily sleeping hours of the population. Here we can say that most people almost 62% sleep 4-6 hours and while others sleep 35% 7-8 hours.

4.4.10 Are you a smoker?

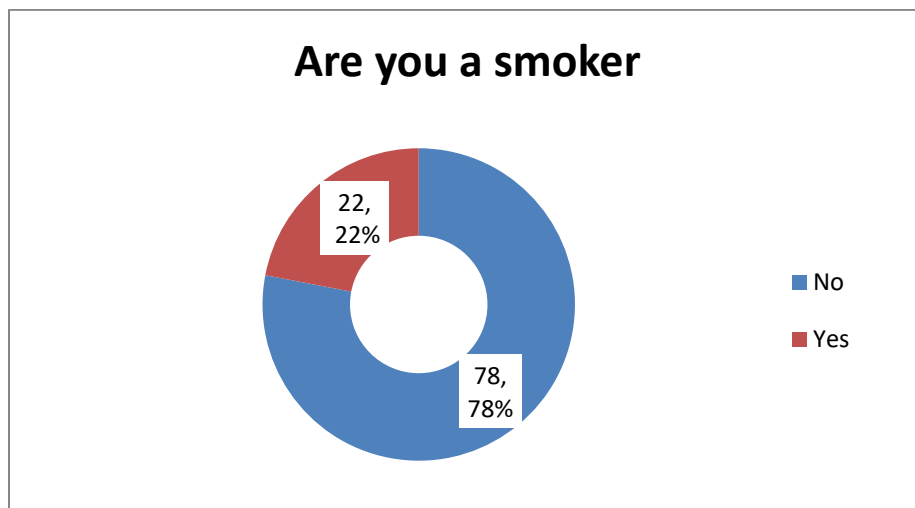


Figure 4.4.10

The following chart shows how many people are non-smokers. Here we can see that 78% of people are non-smokers and 22% are smokers.

4.4.11 Do you usually sit with smokers while they are smoking?

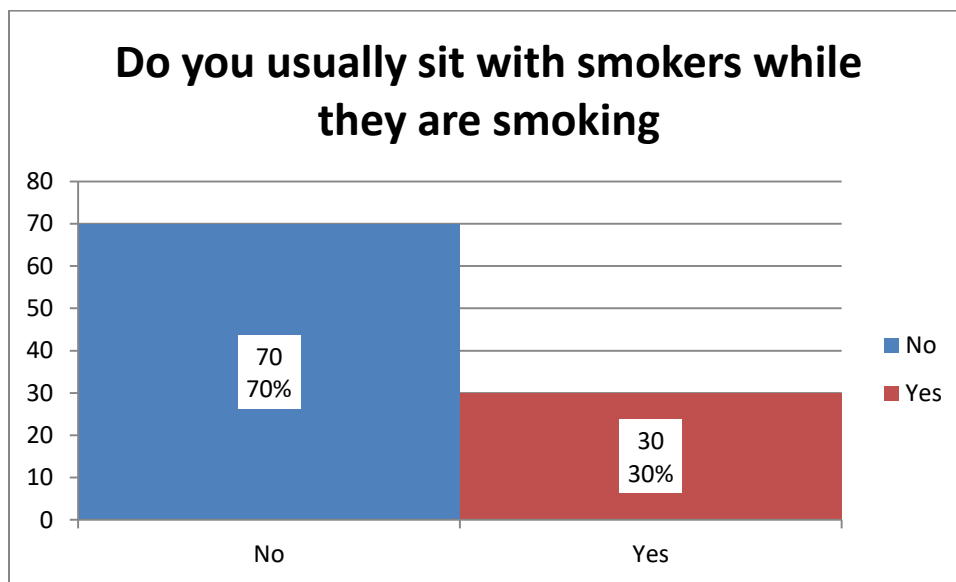


Figure 4.4.11

The following chart represents how much people sit with smokers while they were smoking. Here we can say that 70% of people answer no and 30% of people said yes.

4.5 Cross tabulation

4.5.1 Monthly Income wise Respondent's BMI Cross tabulation

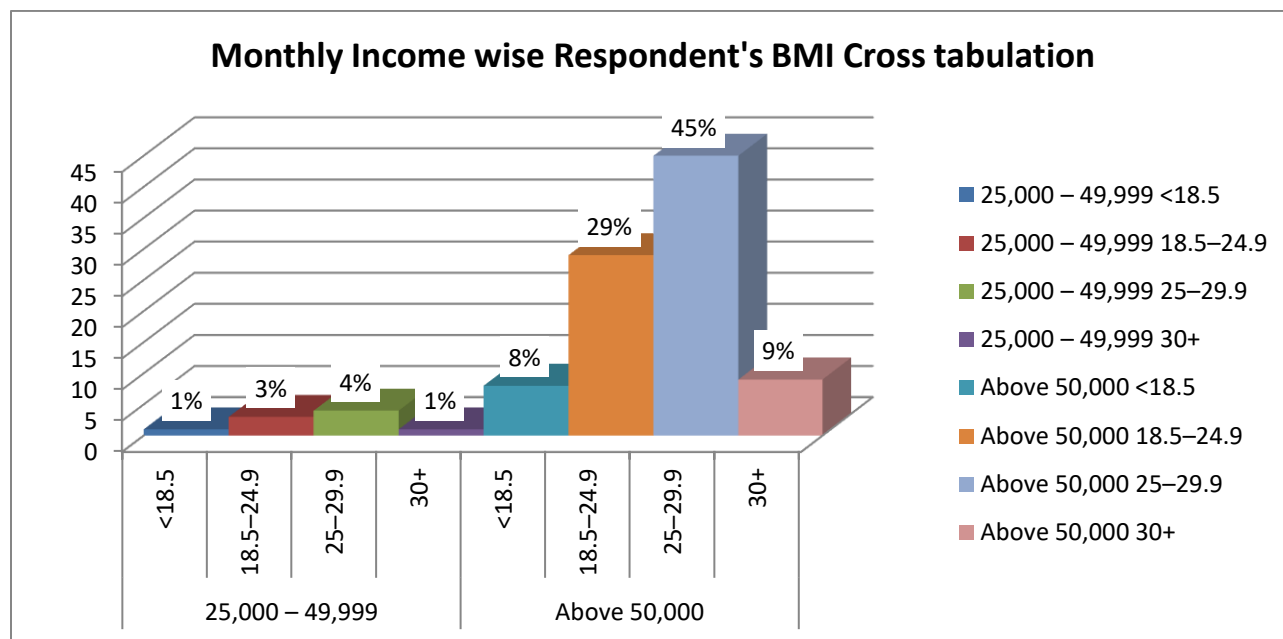


Figure 4.5.1

The following table represents the percentage of monthly income-wise respondents' BMI. Among the which population monthly income was 25,000-49,900 4% of people have a BMI of 25-29.9 which was the stage of obese type 1, 3% of people's BMI of 18.5-24.9 which was normal, and underweight below a BMI of 18.5 people are 1%, also 1% of people are categories in obesity. We also show that those people's monthly incomes were above 50,000 among them 45% of people's BMI was 25-29.9 was the stage of obese type 1, 29% of people's BMI of 18.5-24.9 normal, and 8% and 9% of people are underweight and obesity. Overall we said that those people's monthly income was 25,000-49,900 most of them are obese and their monthly income was above 50,000 they are also obese .so that we see most of the people suffer from obesity.

4.5.2 BMI wise Respondent's Exercise Cross tabulation

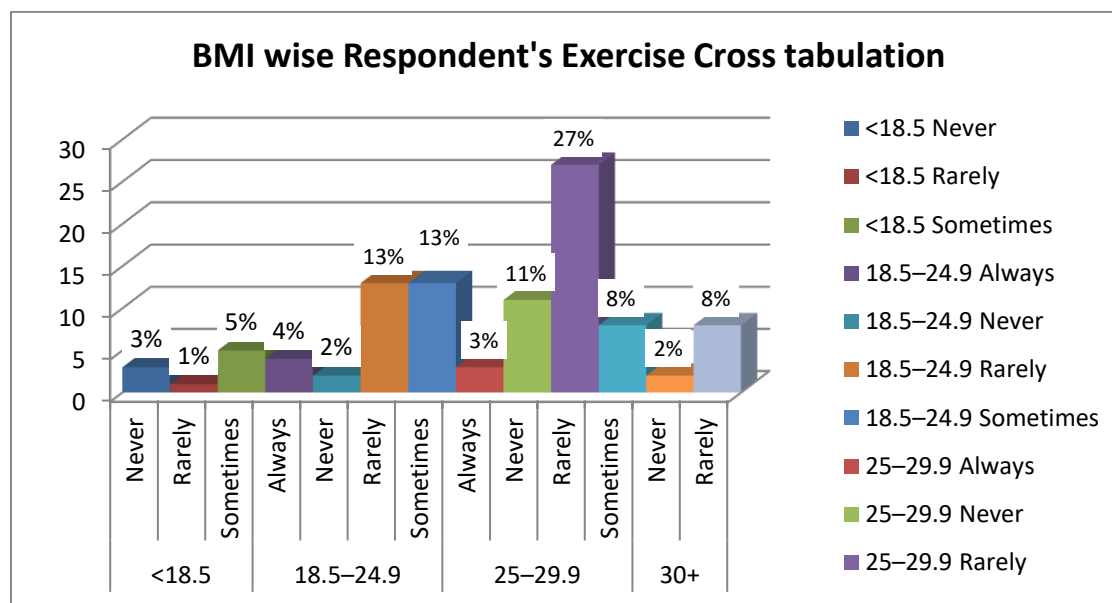


Figure 4.5.2

The following figure shows the percentage of BMI respondent's exercise. We show that among those people whose BMI was below 18.5, 3% don't do exercise, 1% do rarely and 5% do sometimes. Also, those people's BMI was 18.5-24.9 which was normal BMI 4% said they do their exercise always, 2% never and 13% of people said they do their exercise sometimes and rarely. BMI 25-29.9 of people's answer about doing their exercise was 3% always, 11% never, 27% rarely, and 8% sometimes. Lastly, those people BMI was 30+ they said that 2% of people do their exercise never and 8% do rarely.

4.5.3 Department wise Respondent's Breakfast Importance

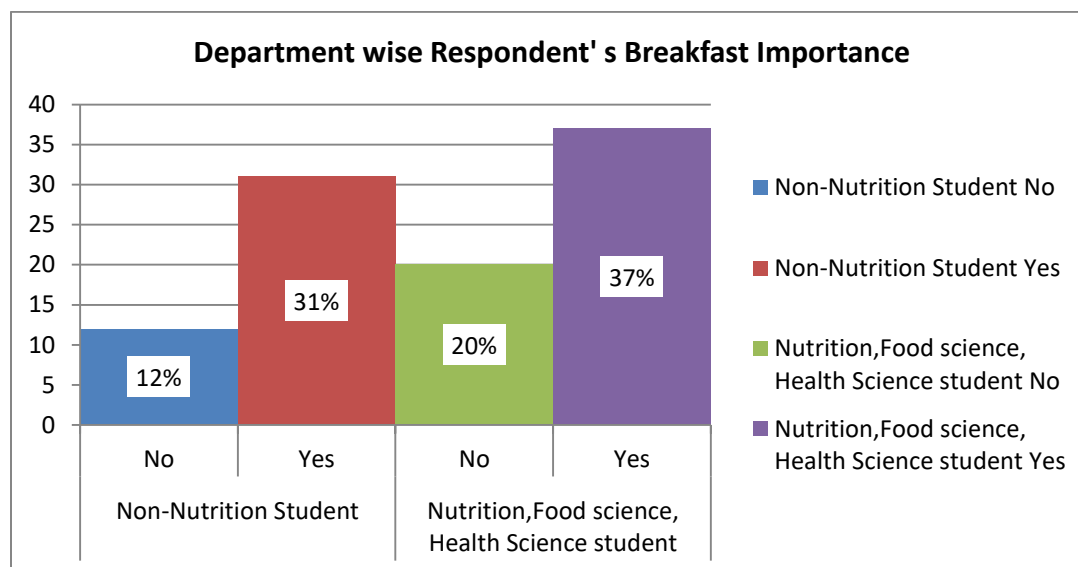


Figure 4.5.3

This table represents the percentage of non-nutrition and nutrition food science health science students who responds to breakfast's importance. We said that their answer was divided into two categories just like yes or no. Of non-nutrition students, 31% said that breakfast is important in their life to stay a healthy life and, 12% said no. And nutrition food science and health students among them 37% said yes breakfast is important, and 20% said no breakfast is not important.

4.5.4 Sleeping time wise Respondent's thinking their sleep duration is enough

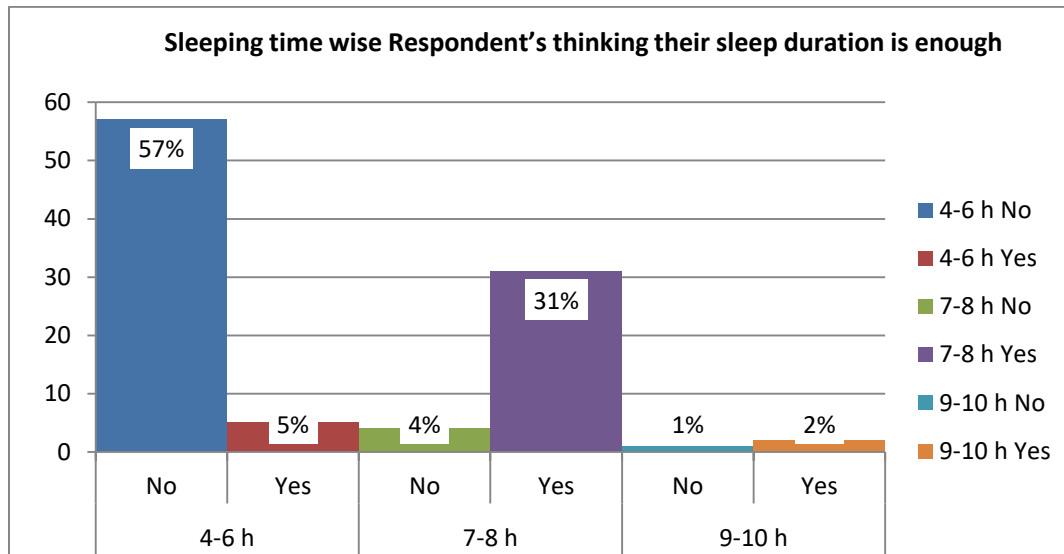
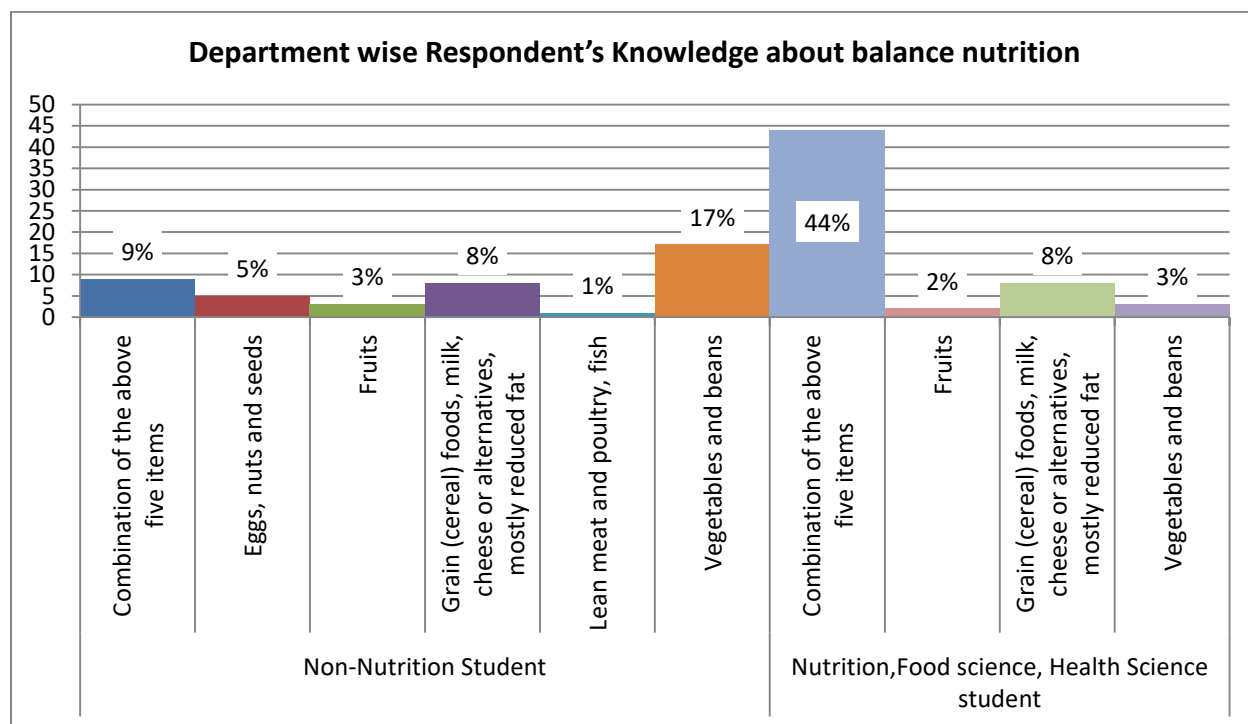


Figure 4.4.4

In this table, we show that sleeping time-wise respondents thought their sleep duration time was enough. 4-6 hours of those people's sleeping time 57% said it was not enough of them, and 5% said it was enough of them. 7-8 hours sleeping time people them 37% answered was their sleeping time enough for them, 4% said their sleeping time was not enough, and lastly, we saw that those people have slept 9-10 hours they said 2% their sleeping time was enough of them and 1% said not enough. So that we said those 7-8 hours of sleeping duration was perfect because respond's positive answer was high in this time duration.

4.5.5 Department wise Respondent's Knowledge about balance nutrition



The following table shows the Department-wise Respondent's Knowledge about balanced nutrition. Here we are divided into two categories one is a Non-Nutrition student and another one is a Nutrition, Food Science, and Health Science student. We show their response about knowledge of which food gives us balance nutrition. In Non-Nutrition students among them 9% said the combination of the above five items, 5% said eggs, nuts, and seeds, 3% said fruits, 8% said grain(cereals) foods, milk, cheese of alternatives mostly reduced fat, 1% said lean meats and poultry, fish and lastly 17% said vegetables and beans foods are the sources of balance nutrition. On the other hand in Nutrition, Food Science, and Health science students said 44% of combinations of the above five items, 2% fruits, 8% grain(cereals) foods, milk, and cheese of alternatives mostly reduced fat and 3% said vegetables and beans are the sources of balance nutrition.

4.5 Comparisons of answers between students of Nutrition, Food science, Health Science student and Non-Nutrition Student for diet related questions

Question	Answer	Nutrition ,Food science, Health Science student (%)	Non-Nutrition Student (%)	Total (%)	P value
Is breakfast an important component in your diet?	Yes [1]	37	31	68	.446
	No [2]	20	12	32	
	Total	57	43	100	
How often do you have snacks between meals (chips, chocolate, sweets)?	Never [1]	3	1	4	.688
	Rarely [2]	28	19	50	
	Sometimes [3]	25	21	46	
	Always [4]	1	2	3	
	Total	57	43	100	
How often do you have stimulants (tea, coffee) in a week?	Never [1]	0	0	0	.140
	Rarely [2]	15	15	30	
	Sometimes [3]	31	25	56	
	Always [4]	11	13	24	
	Total	57	43	100	
How many fish meals does your diet contain in a week?	Never [1]	4	0	4	.183
	Rarely [2]	10	13	23	
	Sometimes [3]	37	26	63	
	Always [4]	6	4	10	
	Total	57	43	100	
How often do you have vegetables in a week?	Never [1]	0	2	2	.438
	Rarely [2]	7	5	12	
	Sometimes [3]	24	17	41	
	Always [4]	26	19	45	
	Total	57	43	100	
How often do you have meat in a week?	Never [1]	1	0	1	.488
	Rarely [2]	9	8	17	
	Sometimes [3]	39	25	64	
	Always [4]	8	10	18	
	Total	57	43	100	
How often do you have fast food in a week?	Never [1]	6	3	9	.897
	Rarely [2]	20	15	35	
	Sometimes [3]	26	22	48	
	Always [4]	5	3	8	
	Total	57	43	100	

What type of food do you think has a balanced nutrition?	Vegetables and beans [1]	3	17	20	<.001
	Fruits [2]	2	3	5	
	Lean meat and poultry, fish [3]	0	1	1	
	Eggs, nuts and seeds [4]	0	5	5	
	Grain (cereal) foods, milk, cheese or alternatives, mostly reduced fat [5]	8	8	16	
	Combination of the above five items [6]	44	9	53	
	Total	57	43	100	

The outcome of the table indicates Students of Nutrition, Food Science, Health Science, and Non-Nutrition Student diet were provided with questions

Regarding dietary components whether it was healthy or not. In a question about whether Is breakfast an important component of your diet the answer between the two groups was not significant (p -value = .446). Questions about How often you have snacks between meals (chips, chocolate, sweets), How often you have stimulants (tea, coffee) in a week, How many fish meals your diet contain in a week, How often you have vegetables in a week, How often do you have vegetables in a week, How often do you have fast food in a week, their answers between two groups were also not significant (p value= .688, .140, .183, .438, .897). But the question about What type of food you think has a balanced nutrition answer between the two groups was significant ($p < .001$), this question have a significant difference, though it impacts practice in many studies. This answer could be attributed to the fact that the majority of the respondents (were nutrition students 57% non-nutrition students 43%). They, therefore, had better understanding levels requiring continuous follow-up to ensure good practices are followed.

Comparing the responses of Nutrition, Food Science, Health Science, and Non-Nutrition students to diet-related questions reveals a statistically significant association with the practice of a healthy diet. Despite a statistically significant association, the effect of the answer to the question "What type of food do you think has a balanced nutrition?" was found to be insignificant. This study contradicts this study's findings, which saw a significant relationship between the answers of nutrition, food science, health science, and non-nutrition students to questions about diet. Practice levels are related to other variables.

The results showed that the answers of nutrition and non-nutrition students in their life how they maintain a healthy diet. The study further revealed breakfast as an important component in your diet, How often you have snacks between meals (chips, chocolate, sweets), How often you have stimulants (tea, coffee) in a week, How many fish meals your diet contain in a week, How often do you have vegetables in a week, How often do you have vegetables in a week, How often do you have fast food in a

week all had a positive relationship with engagement with the participants. Only What type of food do you think has balanced nutrition had a not significant difference with practice? As respondents maintained a healthy diet for extended periods, their compliance with the recommended dietary plan tended to decrease. This could be attributed to the study's presumption that all participants have acquired and retained nutrition information throughout their lives. Maintaining the participants' quality of life and focusing on any peculiar changes in their eating patterns necessitated continued close monitoring and motivation for sustaining a healthy lifestyle.

CHAPTER 5

5.1 Discussion

This study was based on the determination of Knowledge, Attitude, and Practice (KAP) regarding a balanced diet and healthy eating among university students. We discovered some intriguing and distinctive findings, which are described below. Analyze the data to determine accurate participant percentages and information. I have divided my participants into two groups just Nutrition, Food Science, and Health Science students and Non-Nutrition Students. We are all aware that a wholesome lifestyle can help you prosper as you progress through life. To maintain a proper healthy lifestyle we should eat a healthy balanced diet. we found that most of the students in all departments students are overweight.

We found some interesting answers between nutrition and non-nutrition students. Just like the highest percentage of students is overweight 49%, 32% are normal, 10% are obese, and 9% of the population is underweight. In our daily life exercise is a very important part to lead a healthy life. In my survey, we show that a BMI base below 18.5 among them 3% don't do exercise, 1% do rarely and 5% do sometimes. Also, those people's BMI was 18.5-24.9 which was normal BMI 4% said they do their exercise always, 2% never and 13% of people said they do their exercise sometimes and rarely. BMI 25-29.9 of people's answer about doing their exercise was 3% always, 11% never, 27% rarely, and 8% sometimes, 69% of students are not live with their family and 31% of students lives with their family, so we saw that a huge number of students did not live with their family, they face many difficulties to maintain a healthy lifestyle. some important answers just like what is the importance of breakfast and they got their answer, non- nutrition students 31% said that breakfast is important in their life to stay healthy life and, 12% said no. And nutrition food science, and health students among them 37% said yes breakfast is important, and 20% said breakfast is not important. But they all know that breakfast is so much important to lead a healthy life. we also find this result from their sleeping duration time was enough, 4-6 hours those people sleeping time them 57% said it was not enough for them, and 5% said it was enough for them. 7-8 hours sleeping time of people 37% answered was their sleeping time enough for them, and 4% said their sleeping time was not enough. We asked when they go to their bed they answer that most people go to bed at 1-3 pm almost 56%, which is bad for their health, And 32% of people go to bed at 10-1 pm. And fewer people go to bed after the time at 3 pm. We discuss Department wise Respondent's Knowledge about balance nutrition the respondents were Non-Nutrition students among them 9% said the combination of the above five items, 5% said eggs, nuts, and seeds, 3% said fruits, 8% said grain(cereals)foods, milk, cheese of alternatives mostly reduced fat, 1% said lean meats and poultry, fish and lastly 17% said vegetables and beans foods are the sources of balanced nutrition. On the other hand in Nutrition, Food Science, and Health Science students said 44% of a combination of the above five items, 2% 40 fruits, 8% grain(cereals)foods, milk, and cheese of alternatives mostly reduced fat and 3% said vegetables and beans are the source of balance nutrition.

All this result based we are sure that they all know about how to maintain a healthy proper diet but some of them do not follow properly. Their knowledge about a healthy diet is completely clear but their attitude and practice should be improved more.

This is the first study to compare undergraduates majoring in nutrition to those majoring in other disciplines. This research is expected to cast light on the extent to which non-nutrition majors are aware of their dietary decisions' impact on their daily lives. This study has important implications for the healthcare system because it reflects the attitudes of prospective nutritionists toward nutrition care and its effective practice; the study's primary objective was to assess nutrition students' awareness and preparation of a healthy diet, as well as their knowledge of a healthy diet.

We have conducted research on papers with comparable topics to mine. They worked with both medical and non-medical students on the same issues. According to the study, medical students had a clearer understanding of the importance of a nutritious diet. Compared to non-medical students, more meat and vegetables were consumed by medical students. Medical students were aware of the advantages of a well-balanced diet. The number of medical students who finish fast cuisine exceeds that of non-medical students. Whether or not it was a nutritional dietary component, medical students consumed more than non-medical students. According to the survey, most medical and non-medical students slept between 4 and 6 hours daily. Both medical and non-medical students occasionally engage in physical activity, with ball sports and aerobics being their two most popular activities. As anticipated, the prevalence of smoking among medical students decreased. [9]

CHAPTER 6

6.1 Conclusion

The major goal of this study was KAP about balanced diet and healthy eating among university students I give my best to gather the data about their knowledge. The KAP concerning about students' healthy lifestyles, and their awareness of a balanced diet and healthy eating. Healthy eating or a balanced diet is really an important part of our daily life so we should always be aware of what we eat, and how we lead our lifestyle. University students are a huge population in Bangladesh so they play an important role to progress our country in the future. University students must know about balance diet and healthy eating. We should add all the components and help which was developed to gather knowledge about this.

CHAPTER 7

7.1 References

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7.2 Questionnaire

Determination of Knowledge, Attitude and Practice regarding balance diet and healthy eating among university students at Daffodil International University

A) Background information

1. Name of the respondent:
2. Department: Nutrition, Food science, Health Science student [1] / Non-Nutrition Student [2]
3. Respondent's sex : Male [1] / Female [2]
4. Respondent's age : Below 18 [1] 18 – 20 [2] 21 – 23 [3] 23+ [4]
5. Educational qualification/ academic year of the respondent:
 - First year [1]
 - Second year [2]
 - Third year [3]
 - Fourth year [4]

B) Socio-Demographic Characteristics

6. Marital status
 - Single [1]
 - Married [2]
7. Religion
 - Muslim [1]
 - Hindu [2]
 - Others [3]
8. Do you live with your family?
 - Yes [1]
 - No [2]
9. Average Monthly Family Household Income (BDT)
 - Below 25,000 [1]
 - 25,000 – 49,999 [2]
 - 50,000+ [3]

C) Anthropometric information and Physical Activity of the Respondents:

- I) Weight in Kg:
 - II) Height in cm:
10. Do you exercise?
 - Never [1]
 - Rarely [2]
 - Sometimes [3]
 - Always [4]

11. What is the total time that you spend in walking daily?

- Nothing [1]
- 10-20 min [2]
- 30-40 min [3]
- >50 min [4]

D) KAP about balance diet and healthy eating

12. Do you have any chronic diseases?

- Yes [1]
- No [2]

13. Is breakfast an important component in your diet?

- Yes [1]
- No [2]

14. How often do you have snacks between meals (chips, chocolate, sweets)?

- Never [1]
- Rarely [2]
- Sometimes [3]
- Always [4]

15. How often do you have stimulants (tea, coffee) in a week?

- Never [1]
- Rarely [2]
- Sometimes [3]
- Always [4]

16. How many fish meals does your diet contain in a week?

- Never [1]
- Rarely [2]
- Sometimes [3]
- Always [4]

17. How often do you have vegetables in a week?

- Never [1]
- Rarely [2]
- Sometimes [3]
- Always [4]

18. How often do you have meat in a week?

- Never [1]
- Rarely [2]
- Sometimes [3]
- Always [4]

19. How often do you have fast food in a week?

- Never [1]
- Rarely [2]

- Sometimes [3]
- Always [4]
-

20. What type of food do you think has a balanced nutrition?

- Vegetables and beans [1]
- Fruits [2]
- Lean meat and poultry, fish [3]
- Eggs, nuts and seeds [4]
- Grain (cereal) foods, milk, cheese or alternatives, mostly reduced fat [5]
- Combination of the above five items [6]

21. What time do you go to bed?

- 8-10 pm [1]
- 10 pm-1 am [2]
- 1-3 am [3]
- After 3 am [4]

22. How many hours you sleep daily?

- 4-6 h [1]
- 7-8 h [2]
- 9-10 h [3]
- >10 h [4]

23. Do you think your sleep duration is enough?

- Yes [1]
- No [2]

24. Do you find a relationship between your sleep duration and your energy during the next day?

- Yes [1]
- No [2]

25. Are you a smoker?

- Yes [1]
- No [2]

26. Do you usually sit with smokers while they are smoking?

- Yes [1]
- No [2]

27. Are you aware of its bad effect on your health?

- Yes [1]
- No [2]

Thanks for Your Cooperation

.....

Signature of the respondent