Project Report On

Fruits and Vegetable Consumption Patterns at Selected Households in Dhaka City

Submitted To

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Date of Submission 12 April 2021

LETTER OF TRANSMITTAL

12-04-2021

Dr. Sheikh Mahatabuddin

Associated Professor & Head,

Department of Nutrition and Food Engineering

Faculty of Allied Health Science (FAHS)

Daffodil International University

Subject: Submission of project work report.

Dear Sir,

It is a great pleasure and honour for me to have the opportunity to submit my project work

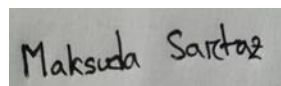Report on **Fruits and vegetables consumption pattern at selected household in Dhaka City.**

I have prepared this report based on the acquired taste knowledge during my Project Period.

Without your help, this report would have been impossible to complete. I have got the opportunity to work in your University under the supervision of **Ms. Fouzia Akter, Assistant Professor**.

I, therefore, request and expect that you will appreciate me with any sort of recommendation

And valued suggestion and will cordially receive this report for your kind assessment.

Sincerely Yours,

Maksuda Sartaz
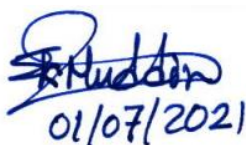

Maksuda Sartaz

ID: 163-34-576

Department of NFE

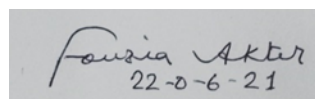Faculty of Allied Health science

Daffodil International University.

APPROVAL CERTIFICATION

I do hereby declare that the project report entitled "**Fruits and vegetables consumption patterns at selected Household in Dhaka City"** is a record of original work carried out by the author under the supervision of Ms. Fouzia Akter, Assistant Professor, Department of Nutrition and Food Engineering, Daffodil International University, Dhaka-1207, Bangladesh. This project work or any part thereof has not been submitted elsewhere for the award of any degree, diploma, associate ship or fellowship.

01/07/2021

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<u>Acknowledgement</u>

All praises and gratitude to the almighty of Allah for the good health and wellbeing

That were needed to complete this project work. The author would like to thank honourable teacher **Dr. Sheikh Mahatabuddin, Associate Professor and Head** of the Department of Nutrition and Food Engineering, for giving the opportunity to conduct this project work. . The author also would like to thank honourable teacher **Ms. Fouzia Akter, Supervisor, Assistant Professor**, Department of Nutrition and Food Engineering, for his excellent guidance and patience and for being supportive throughout the period of this project work. Without their instruction, this project work could not be possible to conduct. Their encouragement has been a driving force during study period and their immense knowledge has massively contributed to the successes of this project work. The author also thankful to the all people who participated in the studies that formed the foundation for this project and everyone who contributed in diverse ways to the realization of this project. Author took this opportunity to express gratitude and veneration to all who helped the author doing this report.

<u>Dedication</u>

Every challenging work needs self efforts as well as guidance of elders especially those who are very close to our heart. This study is dedicated to my beloved parents.

Abstract:

Fruit and vegetables are an excellent source of vitamins and minerals, including folate, vitamin C and potassium. They're a good source of dietary fiber, which can help to maintain a healthy gut and prevent constipation and other digestion problems. A diet high in fiber can also reduce risk of bowel cancer.

Here, 40 respondent gave their information regarding their fruits and vegetables consumption patterns, daily intake of vegetables and fruits . We have interviewed 45% women and 55% men from Mohammadpur , Dhaka within the age limit of 12 to 77 years old. The monthly household income limit were 10000 to <50,000 BDT. The high income group spend more on buying fruits and vegetables while the low income group spend a little for keeping fruits and vegetables in their diet. For example, people who spend more than 5000 BDT on fruits and vegetables are 15%, 3500 BDT 35.50%, 2000 BDT 20% and less than 2000 BDT 5%.

Key word: *Knowledge, Nutrition, Vegetables, Fruits, Vitamin, Minerals, Fibre, Immunity*

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4 Cross tabulation:

Introduction:

Knowledge is a familiarity, awareness, or understanding of someone or something, such as

Facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning.

Most of us know that food is very important for the human body. The main purpose of this survey is to inform people about the importance of vegetables and fruits. Find out how much they know about it. Find out how many fresh vegetables and fruits the people of Dhaka city are consuming. To this end, I have come to know about different types of food in different places of Dhaka city and people of different professions.

The extra nutrients that pregnant women need can be found in fruits and vegetables or 70% of them. Vegetables also play an important role in the growth of babies, physical growth, and increase immunity. It is seen that the people of the village normally consume fresh fruits and vegetables. But I see in the survey that people in the city are not getting fresh vegetables. They may be storing them in the fridge, but they also contain adulterated food and formalin. Even for all these formalin, the people of the city are taking less fruit or losing interest in receiving[2]

Vegetables and fruits contain important vitamins, minerals and plant chemicals and fiber. . There are lot of fruits and vegetables available and many ways to prepare, cook. . A diet high in fruit and vegetables can help protect against cancer, diabetes.[3]

1.2. Justification of the study

The main purpose of this study, find out, fruits and vegetables consumption patterns at selected household in Dhaka city, how much they are aware of, how much money they spend on fruits and vegetables, and how little they know about it. As we all know, pregnant women need more nutrition than most, at this time they have to give extra fruits and vegetables. This helps in the development of the child's talent.

Fruits and vegetables contain nutrients, all kinds of vitamins, calcium, potassium, magnesium. Which helps in the growth of children's body. Awareness of this was part of my job. Since I did the survey during Corona, the most talked about topic of the time is heard immunity, which can

increase vitamin C intake. In this case, I asked the respondents if they know the source of vitamin C. [4][2]

1.3. <u>Operational definition :</u>

<u>Nutrition:</u> The process of taking in food and using it for growth, metabolism, and

Repair. Nutritional stages are ingestion, digestion, absorption, transport, assimilation, and excretion. [4]

<u>Vegetable:</u> a usually herbaceous plant (such as the cabbage, bean, or potato) grown for an edible part that is usually eaten as part of a meal, also: such an edible part. [2]

<u>Fruit:</u> Fruit, the fleshy or dry ripened ovary of a flowering plant, enclosing the seed or seeds. Thus, apricots, bananas, and grapes, as well as bean pods, corn grains, tomatoes, cucumbers, and (in their shells) acorns and almonds, are all technically fruits.[1]

<u>Fibre:</u> Dietary fiber is found in cereals, fruits and vegetables. Fiber is made up of the indigestible parts or compounds of plants, which pass relatively unchanged through our stomach and intestines. Fiber is mainly a carbohydrate. The main role of fiber is to keep the digestive system healthy. [5]

<u>Immunity:</u> Immunity refers to the **body's ability to prevent the invasion of pathogens**. Pathogens are foreign disease-causing substances, such as bacteria and viruses, and people are exposed to them every day. Antigens are attached to the surface of pathogens and stimulate an immune response in the body. An immune response is the body's defense system to fight against antigens and protect the body.[6]

1.4. **Research question :**
- What are the Fruits and Vegetable Consumption Patterns at   Selected Households in Dhaka city?
- How many people have knowledge about fruit consumption?
- How Many people have knowledge about vegetables consumption?

1.5 General objective:

To find out the Fruits and Vegetable Consumption Patterns at   Selected Households in Dhaka City.

1.6   Specific objective:

- To identify the Socioeconomic information of respondent's family
- To access the knowledge level of proper nutritional fact of fruits and vegetables.
- To access the fruits and vegetables consumption pattern of Dhaka city people
- To access the information about the knowledge about fruits and vegetables of the respondents
- To identify fruit and vegetables frequency patterns of respondents.

Chapter 2

2.1 Literature Review:

Statistics shows that, with an average national per capita consumption of 23 g of leafy vegetables, 89 g of non-leafy vegetables and 14 g of fruit, the average Bangladeshi eats a total of 126 g of fruit and vegetables daily.[7]

In whole world, around 2.8% of deaths are attributable to low fruit and vegetable (FAV) consumption, and these deaths are mainly from gastrointestinal cancer, coronary heart disease, and stroke.1Low FAV consumption contributes to 1.8% of the global burden of disease. [2] Regular, adequate consumption of FAVs has been reported to improve survival3 and may confer protection against chronic diseases. [4, 5] When consumed inadequate amounts on a regular basis, FAVs can play an important role in management of weight, [6] lowering the risk of obesity, and can ward off many oxidative stress related chronic diseases. One report shows that higher FAV intake is associated with better overall nutritional intake from other food sources as well [7].

Dietary guidelines throughout the world are increasing the emphasis on consuming FAVs. The World Health Organization (WHO) recommends FAV as central to a healthy diet and has long advocated for increased consumption through targeted campaigns. Despite the growing body of

evidence and promotion of consumption in guidelines and by other means, FAV intake is far less than the recommended amount in many low- and middle-income countries (LMICs).[8]

Among these are some countries where the majority of the population is engaged in agriculture, which confounds the availability and accessibility hypothesis of FAV consumption. Studies [9-13] have investigated correlates of low FAV consumption in different populations and identified several sociodemographic, psychosocial, and behavioural factors. They found associations of FAV consumption with place of residence, socioeconomic status, educational attainment, occupational category, household income, and television viewing along with non-modifiable factors such as age, gender, and ethnicity.[7]

Chapter 3

3.1 Materials

No	. Equipment	purpose
1.	Paper	To produce questionnaires
2.	Computer	To entry data
		To analyses the data
		make presentation
		For report writing
3.	Fund	Self-funding to run the purpose of thesis work

3.2 Methodological Approach:

Study location:

In order to study the Fruits and vegetables consumption patterns at selected household in Dhaka City, Bangladesh. . All the data directly from the filed by visiting door to door. The data collected

Form one place to another place were visited by me to complete my sample size.

Study design:

The study was a randomized type of cross sectional study .The data for this research were

Obtained through personal interviews of each respondent on structured questionnaires

Including both open–ended and close-ended questions. The knowledge related information,

Vitamins and minerals of fruits and vegetables, buying systems of fruits and vegetables, way of eating, hygiene maintain etc.

Study population:

This study was conducted among the all people and every profession in Dhaka city, Bangladesh.

Study period:

1st December 2020 to 1st march 2021.

Data collection period:

1st November to 15 November, 2020

Sample Size:

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

N= population size
e = Margin of error (percentage in decimal form)
z = z-score

[N. B: Though I started my internship when corona virus was deeply spreading. Some people are not co operate with me, some are agree. So, my sample size was not huge. I only collect 40 information of data.]

Sampling Method:

The targeted population were selected by thoroughly studying their educational history to identify their literacy background, socio-economic condition. Based on that all professional people were joined this report by give their personal information or food pattern.

Data Collection Procedure:

Data was collected from both primary and secondary sources. The study is mainly based on the primary data and it becomes more relevant by the associated literature reviews. The structure of the questionnaire was based on socioeconomic condition

(Educational level, occupation, husband's occupation, family income, etc.), monthly income, monthly spent on buying food and vegetables, knowledge level of vitamin C.

Data Analysis:

Data were entered and analysed by using Statistical Package for the Social Science (SPSS)

Version 25. Here, data were entered, coded, cleaned, and analysed thoroughly. From the Analysed data, the frequency of the different variables were calculated and noted thereby.

Moreover, correlation between haemoglobin level and different variables were also being

Statistically calculated through SPSS.A questionnaire survey technique was used and it was an open ended interview questionnaire

Chapter 4

4.1 Result:

The information presented in this chapter is an analysis of data collected from the different age of people, different sex, different profession which was started at the age of 12 – 80 years. Firstly an overview on the socio-demographic characteristic of the household sample is first presented subsequently, the estimate of the key knowledge and their behaviour (dependent and independent variable) of vegetables and fruits consumption at Dhaka city people.

As my sample size was about 40 and it was collected when corona virus was out break. The respondent rate according to my sample size was 100% and that was very good the execution were

too tough. My sample size was not quite enough to get a distribution of the sample. But i tried my best.

Respondents, different male and females, different profession and their knowledge about fruits and vegetable and their consuming patterns.

In the survey the respondents were asked some question by me on their socio-demographic characteristics , knowledge about fruits and vegetables, educational qualification, knowledge about vitamins and family size engagement as shown in their in the table below .

1. Socio- Demographic Information :

1.1 Distribution of age range of respondents
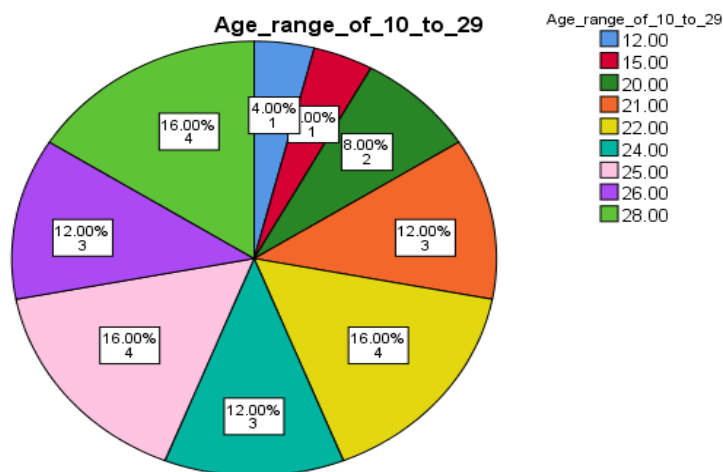
In table 1.1, we can see, the age of respondents start with 12 and end 29.
There is 4% for 12 years, 4% for 15 years, 8% for 20 years, 12% for 21 years, 16% for 22 years, 12 % for 24 years, 16% for 25 years, 12 % for 26 years, 16 % for 28 years.

1.2 Distribution of age range of the respondents (30-75):

Age_range_of_30_to_75
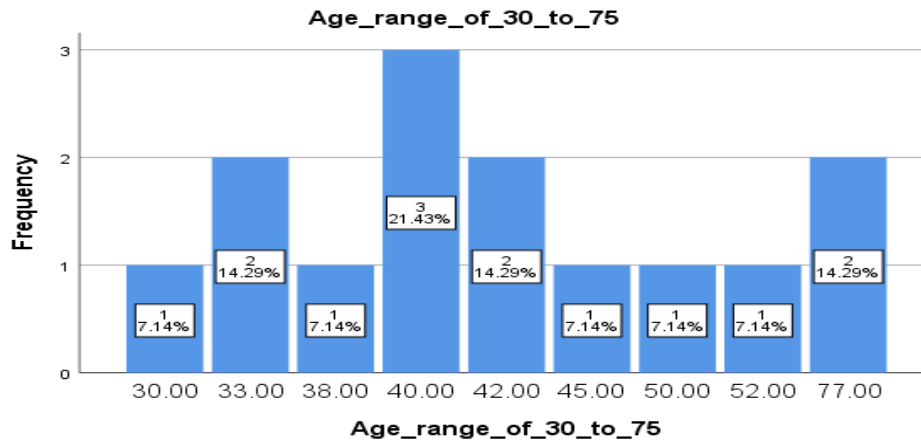
In table 1.2 we can see that, age range of the respondents start with the 30 and end in 75 years. There is 7.14 % for 30 years, 14.29% for 33 years, 21.43 % for 40 years, 14.29 % for 42 years, 7.14 % for 45 years, 7.14 % for 50 years, 7.14 % for 52 and lastly 14.29 % for 77 years.

1.3. Distribution of sex of the respondents:
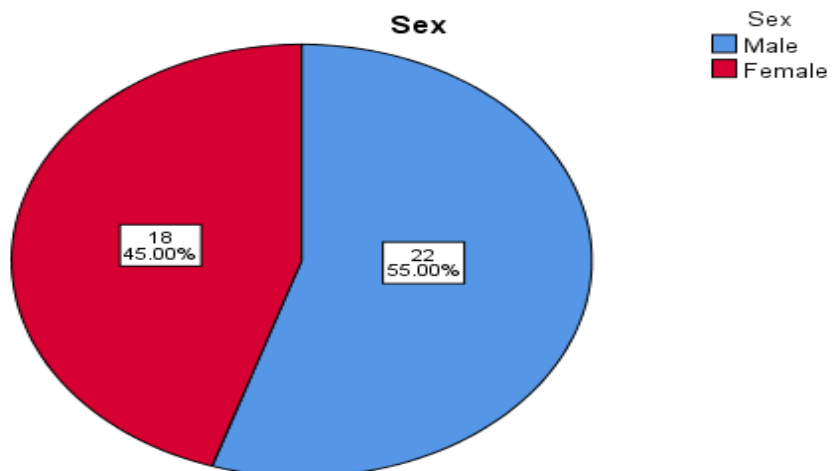
In table 1.3 shows that, sex of respondents is 45 % female and 55 % of male.

1.4 Distribution of profession of the respondents:
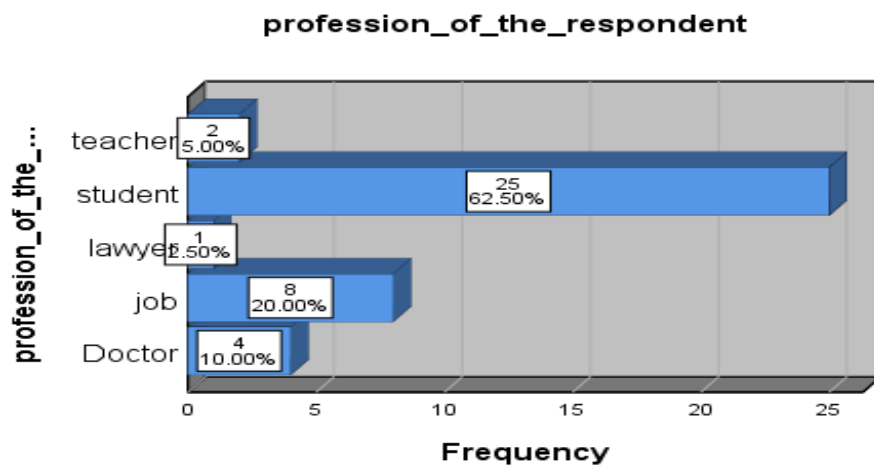
In table 1.4 shows that, different profession of the respondents. There is Doctor 10%, lawyer 2.5 %, teacher 5%, students 25 % and other job 20 %.

1.5 Distribution of the family member of respondents:
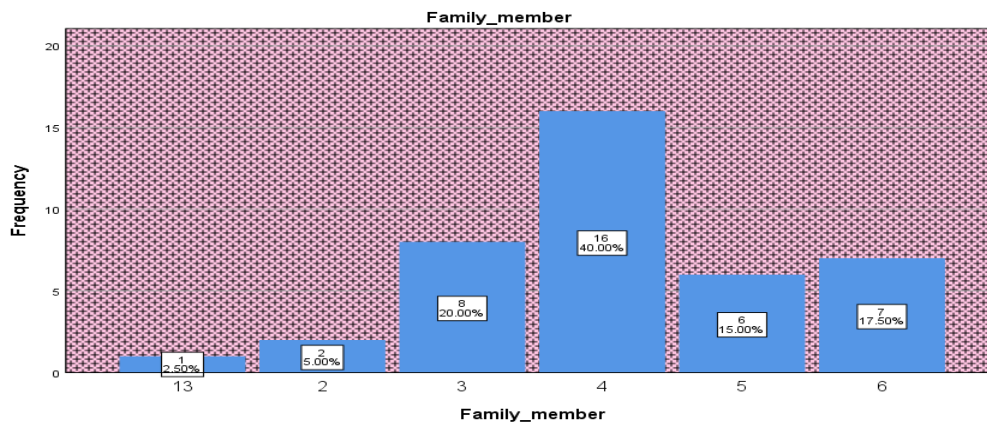
In table 1.5 shows that family member of the respondents. As can be seen here, the number of members in a family is 13 which is 2.5%, 2 people in 2 families which is 5 %, 3 people in 8 families which is 20 %, 4 people in 16 families which is 40 %, 5 people in 6 families which is 15 %, 6 people in 7 families which is 17.5 %.

1.6 Distribution of monthly income of the family:
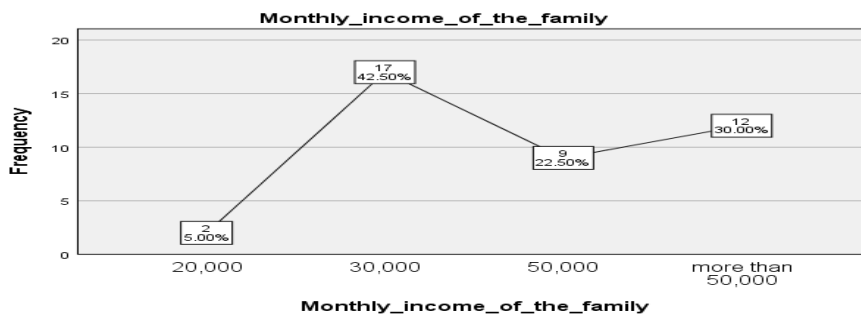
In table 1.6 can be seen that, 5% of the people here have a monthly income of 20 thousand, 42.5 % of the people have 30 thousands, 22.5 % have 50 thousands, and 30 % have more than 50 thousands.

1.7 Distribution of households buying system of the respondents:
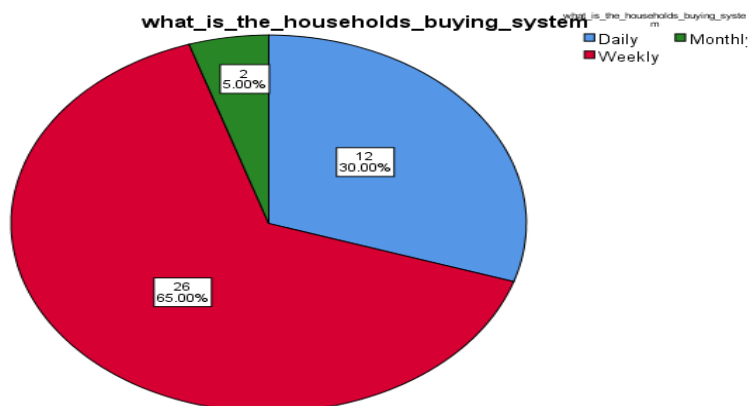
In table 1.7, Here, 30% of people households buying system daily, 65 % weekly and 5 % monthly .

1.8 Distribution of monthly spent for fruits and vegetables of the respondents:

In table 1.8, shows that, monthly spent for fruits and vegetables of the respondents (per family). Here 25% of people spent 5,000 taka per month to buy fruits and vegetables, 32.5 % for 3500 taka, spend money for buy fruits and vegetables. 20 % for 2000 taka, 5 % for less than 2000 taka and 17.5 % people more than 5000 taka.

2. **Knowledge information :**

2.1 knowledge about proper nutritional value of fruits in the respondents:
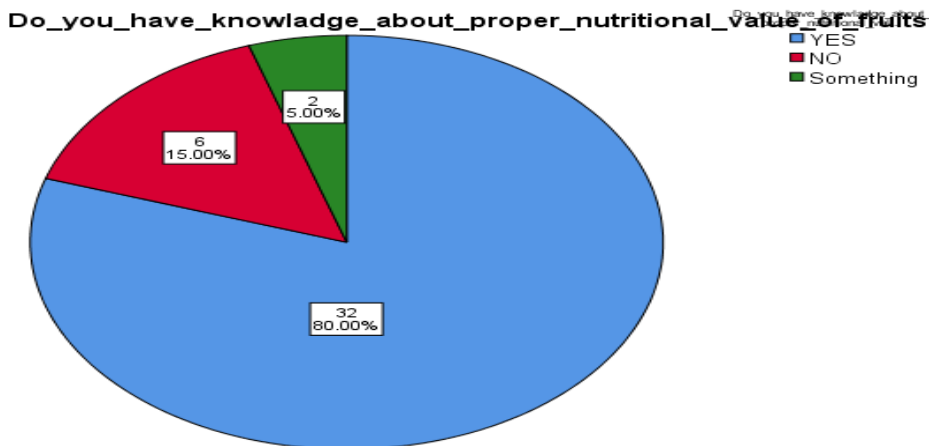
Here, 80% people have proper knowledge about nutrition of fruits, 15 % have no idea and 5 % have something idea about proper nutritional value of fruits.

2.2 Distribution of knowledge about nutritional value of vegetables:

Do_you_have_knowladge_about_nutritional_value_of_vegetables
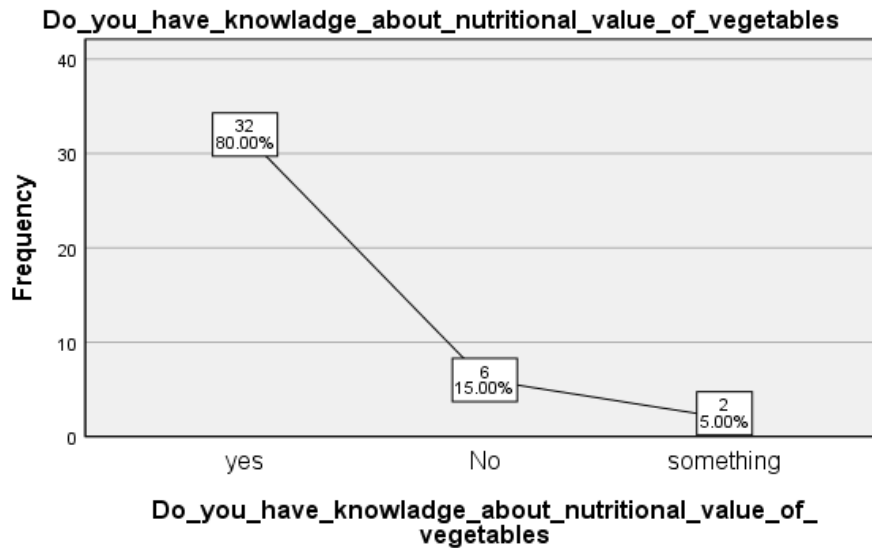
Here, 80% people have knowledge about nutritional value of vegetables, 15 % have no knowledge and 5 % have little knowledge.

2.3 Distribution of price of fruits and vegetables dominate nutritional facts to the respondents:

price_of_fruits_and_vegetables_dominate_nutritional_facts
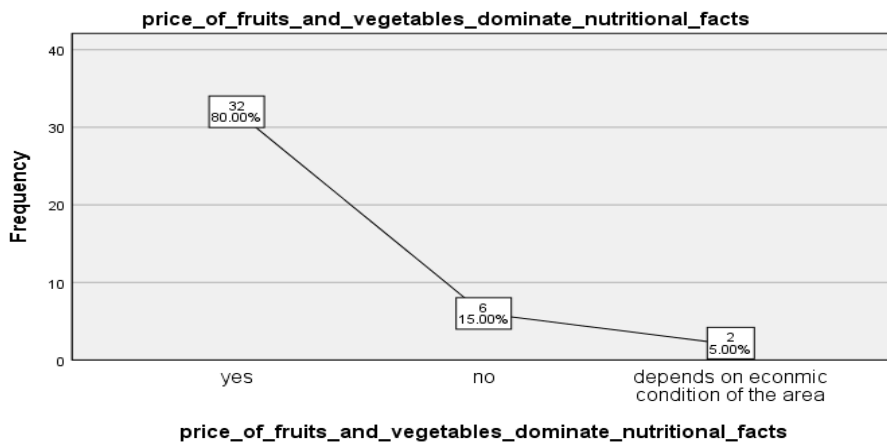
Here, 80 % give their opinion "yes", 15 % no, 5 % thought depends on economic condition of the area.

2.4 Information of buy or eat costly fruits regularly of the respondents:
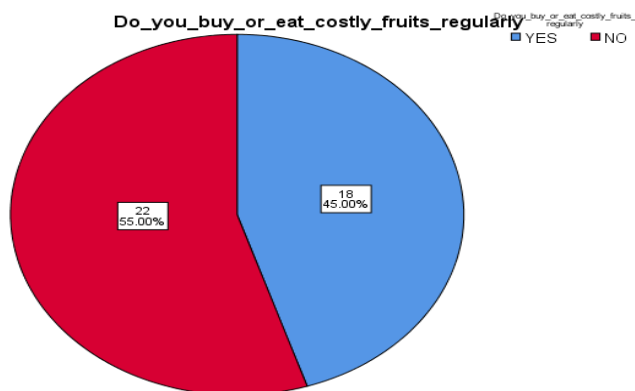
Here, 45 % people buy or eat costly fruits regularly, 55 % people did not buy or eat costly fruits regularly.

2.5 Information about ways of fruits intake of the respondents:

What_are_the_ways_of_fruits_intake
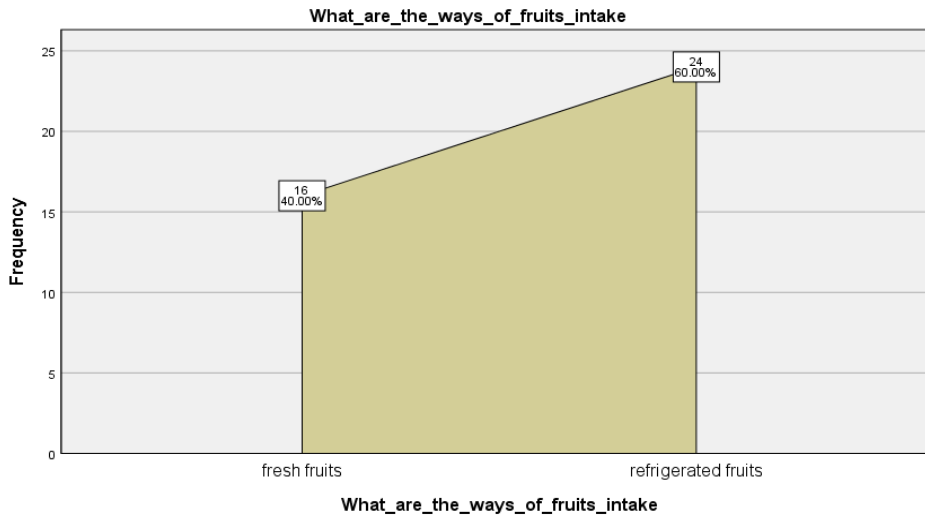
Here, 40 % people consumed fresh fruits, 60 % people consumed refrigerated fruits.

2.6 Information about wash and clean fruits and vegetables before intake:

Do_you_wash_and_clean_your_fruits_and_vegetables_before_taking

yes
No
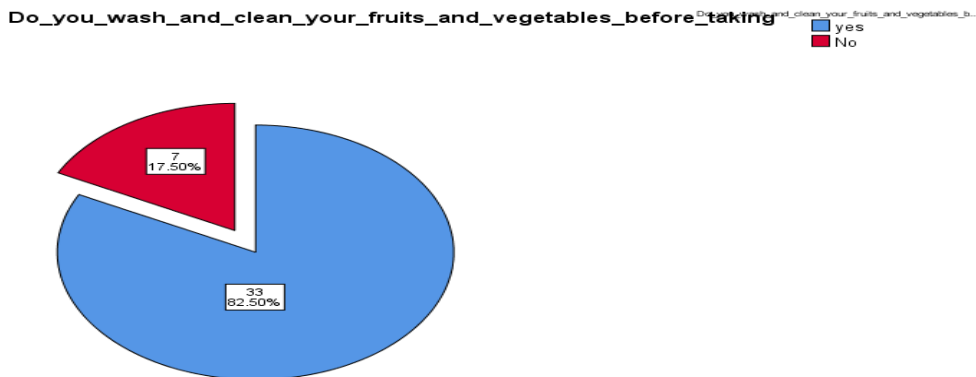
In table 2.6, can be seen that, 82 % respondents are wash and clean their fruits and vegetables before intake.
17 % respondents are not aware about wash and clean their fruits and vegetables before intake.

2.7. Information about the source of getting fruits and vegetables of the respondents:
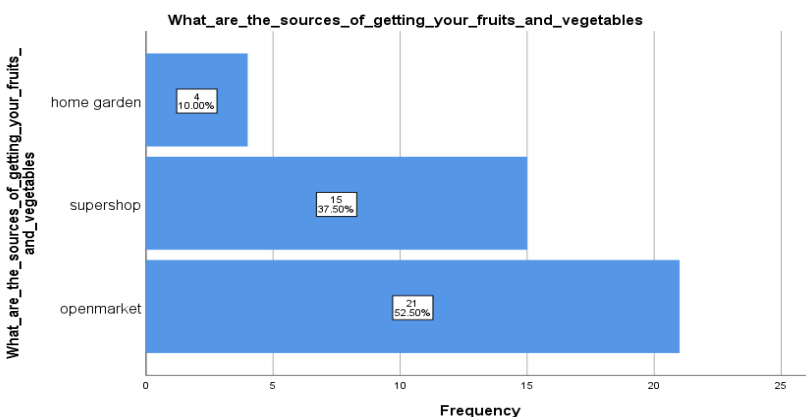
In table 2.7, can be seen that, 52 % people are buy their fruits and vegetables from open market, 37% people from super shop and 10 % people are get their fruits and vegetables from home garden.

2.8 Information about the proper way of vegetables intake:

what_are_the_proper_way_of_intake_vegetables
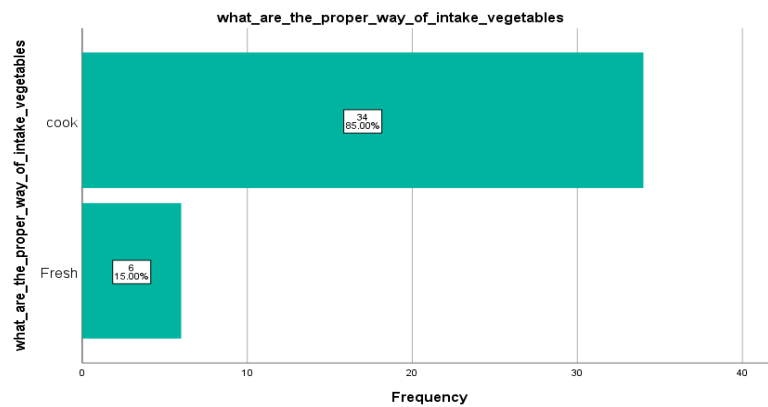
In table 2.8, can be seen that, 15 % people are eating fresh vegetables and 85 % people are eating cooked vegetables.

2.9 knowledge about the name of vitamin C rich fruits:

Do_you_know_name_of_vitamin_C_rich_fruits
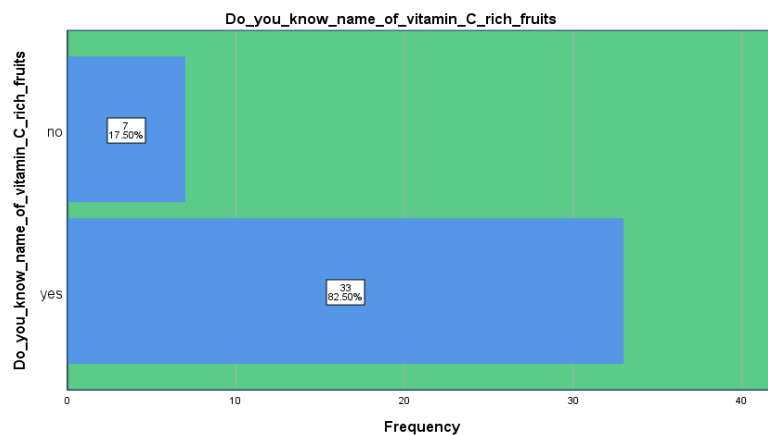
In table 2.9, can be seen that, 82 % people   have knowledge about the vitamin C rich fruits and 17 % have no idea.

2.10 Knowledge level of vitamin and minerals rich vegetables:

Do_you_know_some_name_of_vitamin_and_mineral_rich_vegetables
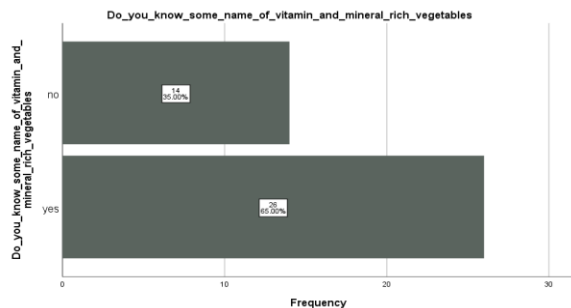
In table 2.10, can be seen that, 65 % people have knowledge about the vitamin and minerals rich vegetables and 35 % have no idea.

3. Information about Dietary history:

3.1 Information about how many time they took grapes in last seven days:

How_many_time_you_took_grapes_in_last_seven_days
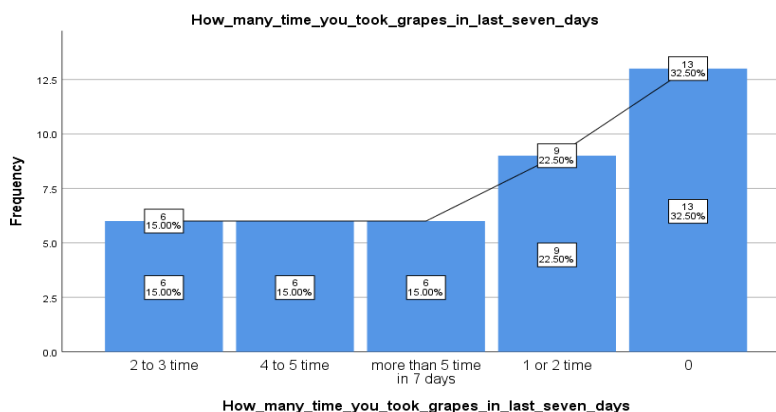
In table 3.1,   can be seen that,   15 % peoples consumed grapes 2 to 3 times in last seven days, 15 % consumed 4 to 5 times, 15 % consumed more than 5 time in seven days, 22 % consumed 1 or 2 time and lastly 32 % people were 0 % consumed grapes in last seven days.

3.2   Information about the intake of apple in last seven days:

Apple_you_took_in_last_seven_days
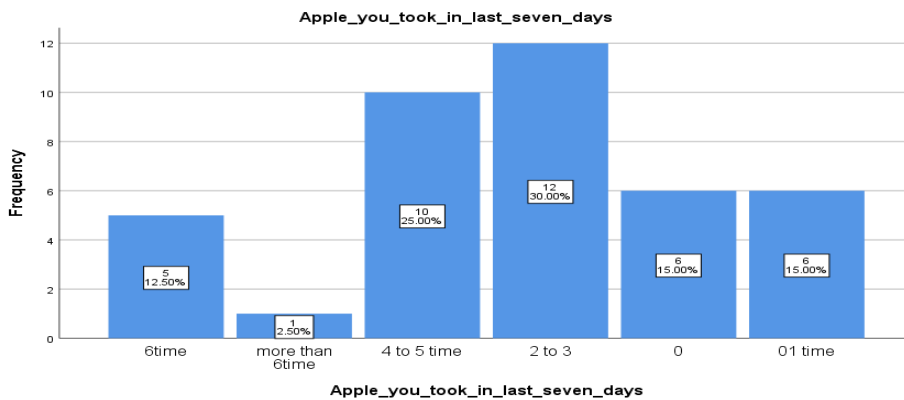
In table, 3.2. can be seen that, 12.5 % people consumed Apple 6 time in last seven days, 2.5% intake more than 6 time,   25 % intake 4 to 5 time, 30 % for 2 to 3 time, 15 % for 1 time and 15 % for 0 time.

3.3. Information about intake of orange in last seven days:
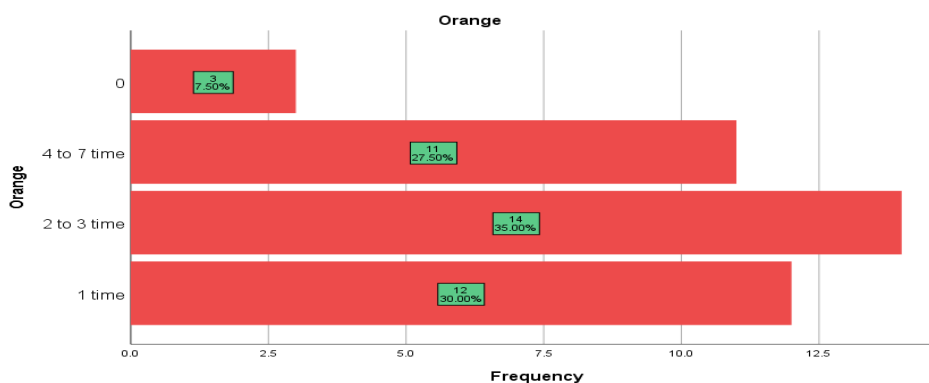
Orange

In table, 3.3, can be seen that, 30 % people consumed orange 1 time in last seven days, 35 % for 2 to 3 times, 27.5 % for 4 to 7 times, 7.5 % for 0 time.

3.4   Information about intake of banana in last seven days:
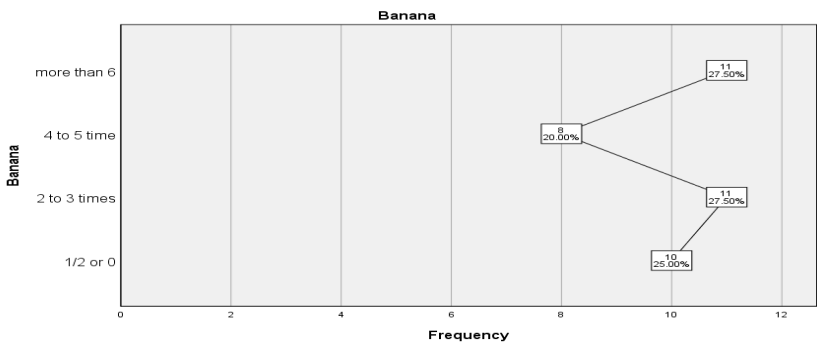
In table, 3.4 , can be seen that, 25 % people consumed banana for ½ or 0 time in last seven days, 27.5 % for 2 to 3 times, 20 % for 4 to 5 times, 27.5 % for more than 6 times.

3.5. Information about the intake of seasonal fruits in last seven days:
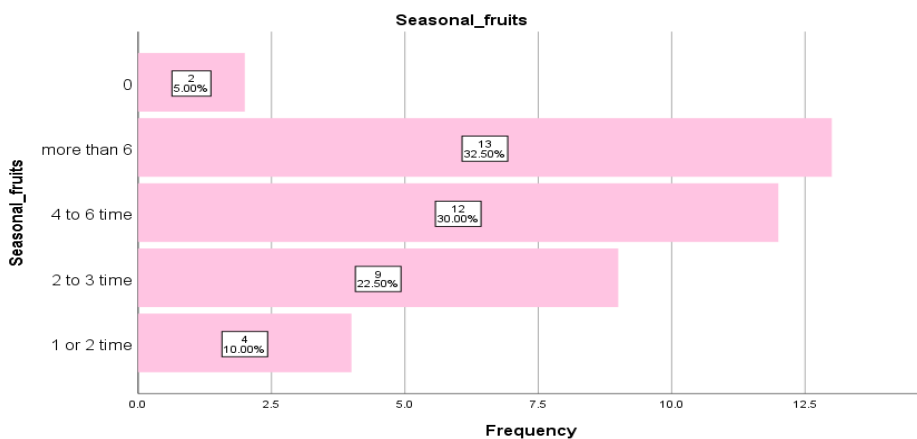
In table, 3.5, can be seen that, 10 % people intake seasonal fruits for 1 or 2 time in last seven days, 22.5 % for 2 to 3 times, 30 % for 4 to 6 times, 32.5 % for more than 6 tines, 5 % for 0 time.

3.6. Information about taking green vegetables in last seven days:

Green_vegetables_you_took_in_last_seven_days
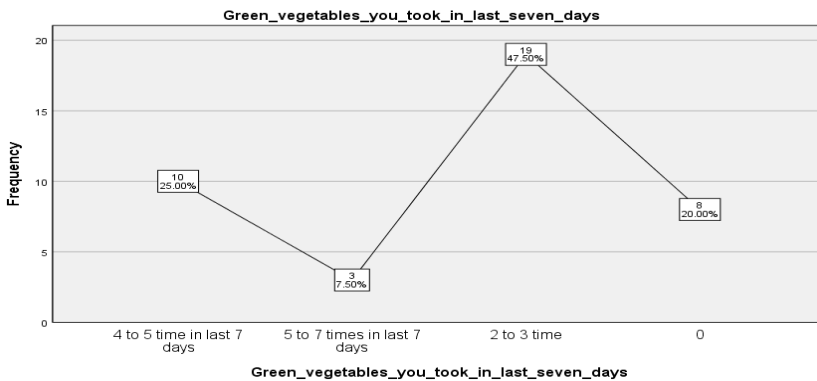
In table, 3.6, can be seen that, 25 % people are taking green vegetables in last seven days for 4 to 5 times, 7.5 % for 5 to 7 times, 47. 5 % for 2 to 3 times and 20 % for 0 time.

3.7 Information about intake of colorful vegetables in last seven days:
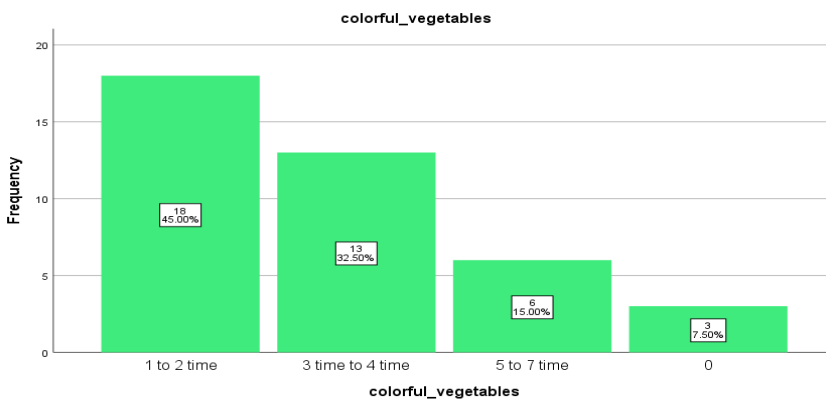
In table 3.7 , can be seen that , here 45 % people are taking colorful vegetables in last seven days for 1 to 2 time, 32 % for 3 times to 4 times, 15 % for 5 to 7 times, 7.5 % for 0 time.

3.8. Information about intake of mixed vegetables in last seven days:
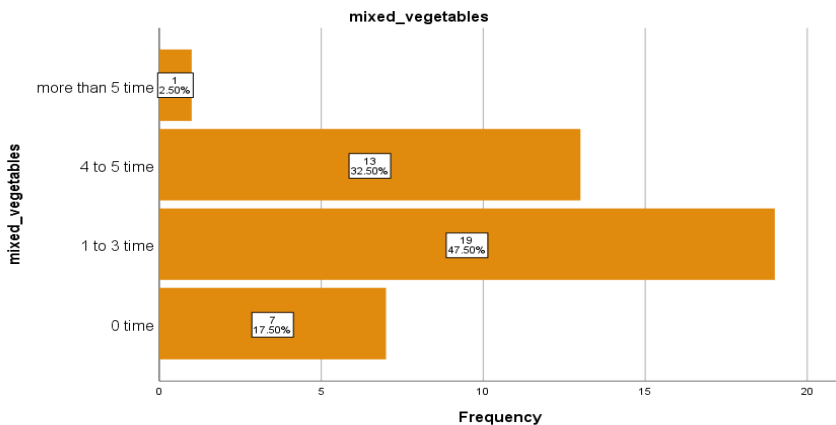
mixed_vegetables

In table , 3.8, can be seen that, here 17.5 % people are taking mixed vegetables in last seven days for 0 time, 47.5 % for 1 to 3 time, 32.5 % for 4 to 5 time, 2.5 % for more than 5 times.

3.9   Information about intake of seasonal vegetables in last seven days:

seasonal_vegetables
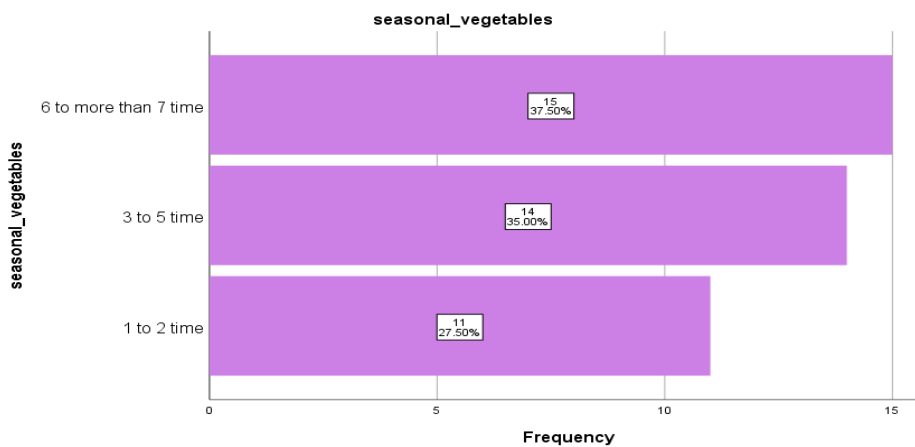
In table , 3.9, can be seen that, here 27.5 % people are taking seasonal vegetables in last seven days for 1 to 2 time,   35 % for 3 to 5 times, 37% for 6 to more than 7 times.

4. Cross tabulation:

4.1 Distribution of monthly income and monthly spent:

Bar Chart
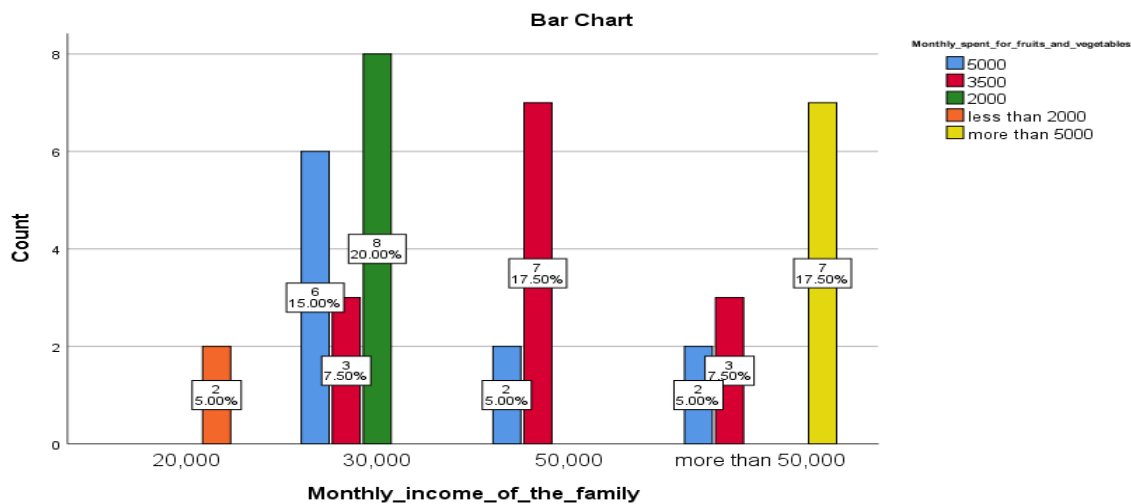
In graph 4.1, can be seen that,
Here, of those whose income is 20 thousand, 5% of them spend less than 2 thousand taka every month to buy fruits and vegetables, 30 thousand of those whose income is 2 thousand for 20%, 3.5 thousand for 7.5%, 5 thousand for 15%, Those whose income is 50 thousand BDT they spend 3.5 thousand for 17.5% of them and 5 thousand 5% people, lastly those whose income is more than 50 thousand BDT, they spend more than 5 thousand 17. 50%, 3.5 thousand spend 7.5%, 5 thousand Costs 5% people.

Chapter 5

5.1 Discussion:

Low fruit and vegetable consumption is a quintessential hazard bother for energy diseases, on the superb hand for many (mainly developing) countries, no incidence documents have ever been published. This discover out about affords statistics on the incidence of low fruit and vegetable consumption for fifty two world locations and for a fluctuate of sociodemographic companies and settings at some hassle of these countries. Data from 196,373 persona contributors from fifty two world areas taking vicinity in the World Health Survey (2002-2003) had been analysed in the summer time of 2008. Low fruit and vegetable consumption used to be as quickly as soon as quickly as unexpectedly as described in accordance to the WHO pointers of a minimal of 5 servings of fruits and/or veggies daily. [8][9]   Low fruit and vegetable consumption incidence ranged from 36.6% (Ghana) to 99.2% (Pakistan) for guys and from 38.0% (Ghana) to 99.3% (Pakistan) for women. Significant versions in the hazard of low fruit and vegetable consumption between guys and woman have been positioned in 15 countries.[9] The incidence of low fruit and vegetable consumption tended to extend with age and avoid with income. Although urbanity used to be as unexpectedly as no longer related everyday with low fruit and vegetable consumption, city and rural editions have been massive for eleven countries. Overall, 77.6% of guys and 78.4% of lady from the fifty two in most stipulations low- and middle-income world areas fed on a lot a splendid deal m asses an entire lot a lot much less than the minimal delivered about 5 day with the beneficial clearly useful beneficial resource of day servings of fruits and vegetables. Baseline world documents on low fruit and vegetable consumption received in this take seem to be at about can assist policymaker's world set up interventions for addressing the global electricity sickness epidemic. [9]

Bangladesh is a developing country. Yet people do not know much about the nutritional value of food. Even many educated people are not aware of this. Not everyone knows the amount of nutrients in fruits and vegetables. Many difficult diseases can be cured by taking these fruits and vegetables. For example, one argentine had very rare skin disease, which did not heal even after taking a lot of medicine. Then a doctor told him to eat only fruits and vegetables, and he recovered slowly .[8]

From my study, the percentage of the respondents are female 45% and male 55 %.

Profession of the respondents are different, there are 10% doctors, 2.5% housewives, 2.5% lawyers, 7.5% teachers, 65% students, different job like, engineer, banker (12.5%). Since there are more students here, students are playing an important role in this survey.

The percentage of the family member of the respondents are 13 person in a family for 2.5%, 2 people for 5 %, 3 for 20%, 4 for 40%, 5 for 15 %, 6 for 17.5 %.Those whose monthly income is more than 50,000 taka spend more than 5,000 taka on buying fruits and vegetables. 30 thousand whose income they spend 2 thousand rupees 20%, 3.5 thousand rupees 7.5%, 20 thousand whose income they spend less than 2 thousand 5%. Here it is seen that those who have more income and more people in the family have more expenses.

Household Buying System of Respondents Are Daily 30%, Weekly 75% Monthly 5%.

From knowledge information, 80% of people here know about Proper Nutritional Value, while the remaining 15% do not know, 5% know something.

Chapter 6

6.1. Conclusion:

From this study found that, the people of Dhaka city (Mohammadpur) are lagging behind in terms of consumption of fruits and vegetables. Which is less in developed countries and rural people.

Fruits and vegetables contain many vitamins and minerals that are good for your health. These include vitamins A (beta-carotene), C and E, magnesium, zinc, phosphorous and folic acid. Folic acid may reduce blood levels of homocysteine, a substance that may be a risk factor for coronary heart disease.

Bangladesh is a developing country, living below the maximum poverty line. They lack education and knowledge. Again, due to the constant rise in food prices, people cannot buy and eat fruits and vegetables all the time even if they want to. Buying fruits and vegetables at the cost of living in Dhaka city is not possible for many families. On top of that there is adulteration in food, formalin is used in fruits and vegetables, fabric colors are used, many people are afraid to take fruits and vegetables. First we have to take legal action against it. Again, the general public needs to be made aware through various campaigns so that they regularly consume fruits and vegetables. Keeping us in mind all the time, prevention is better than cure. Fruits and vegetables are able to prevent our diseases.

Chapter 7

7.1 Questionnaire: Sl. No.

Questionnaire on

"Fruits and Vegetable Consumption Patterns at Selected Households in Dhaka City"

A) Background Information

1. Name of the Household Head:

2. Name of the Respondent:

3. Age:

4. Sex

5. Religion:

6. Home District/Town (Upazilla):

7. Profession of the respondent:

8. Households Size: 3/ 4 / 5 / 6/ 7/ 8/

9. Monthly income of the Households:

10. Monthly spent on fruits and vegetables:

B) Information of Dietary knowledge and behavior

What are the sources of energy giving foods?

    a) Rice, bread and cereals   b) Milk and milk products

    c) Meat, fish, egg and poultry   d) Fruits and vegetables

    e) Pulses and legumes   f) others

What are the sources of body building foods?

    a) Rice, bread and cereals   b) Milk and milk products

    c) Meat, fish, egg and poultry   d) Fruits and vegetables

    e) Pulses and legumes   f) others

What are the sources of protective foods?

    a) Rice, bread and cereals   b) Milk and milk products

    c) Meat, fish, egg and poultry   d) Fruits and vegetables

    e) Pulses and legumes   f) others

What are the sources of iron rich foods?

a) Rice, bread and cereals   b) Milk and milk products

c) Meat, fish, egg and poultry   d) Fruits and vegetables

e) Pulses and legumes   f) others

What are the main sources of Vitamins rich foods?

a) Rice, bread and cereals   b) Milk and milk products

c) Meat, fish, egg and poultry   d) Fruits and vegetables

e) Pulses and legumes   f) others

11. Do you know the sources of vitamin C rich fruits? Yes/No

12. If yes, please mention some vitamin C rich fruits? -------------

13. Do you know the sources of vitamins and minerals rich vegetable? Yes/No

14. If yes, please mention some vitamins and minerals rich vegetable?

C) Information of the Fruits and vegetables Frequency Questionnaire for the Last Week

Food item	Daily	Frequently time (4/5)	(2/3) time per week	Rarely (1-2)
Grapes				
Apple				
Orange				
Banana				
Seasonal fruits				

Vegetables:

Food item	Frequently time (4/5	5-7 times per week	Oftenly (2-3)	Never (0)

	time) per week			
Green vegetables				
Mixed vegetables				
Colorful vegetables				
Seasonal vegetables				

D) Information of the consumption patterns and behavior

15. What are the Households marketing system? Daily/ weekly/ Monthly

16. .How many times do your household members take their fruits daily? 1/ 2/ 3/ 4/ 5/

17. .Do you mention about the knowledge of adequate fruits intake and their importance?

18...Do you know the proper idea of nutritional value of fruits?

19. .Do you think, fruits intakes are dominant by its nutritional price?

20. Please, names out the family's seasonal fruits intake.

21. Please give your opinion about the effect of financial condition on fruits purchase.

-----

22. Are you regularly buy and intake of costly fruits?

23. What are the ways of fruits intake? Fresh fruits / Refrigerated / Cooked

25. Do you washing your fruits before consumption? Yes/ No

26. Washing time of the fruits: Before cut/ after

27. Do you keeping your fruits long time after cutting? Yes/No

28. Do you give fruits to your baby as a complimentary food? Yes/No

29. Do you offer extra fruits intake of your family's growing children/pregnant mother/ lactating mother? Yes/No

30. Do you mention about the knowledge of adequate vegetable intake and their importance?

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31. Do you know the proper idea of nutritional value of vegetables?

32. Do you think, fruits intakes are verifying by its nutritional price?

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33. Are you regularly buy and intake of vegetable?

34. What are the ways of vegetable intake? Fresh / Refrigerated / Cooked

35. Do you washing your vegetable before consumption? Yes/ No

E) Information of the sources of fruits and vegetable purchase and safety matters

36. What are the sources of getting your fruits and vegetable? Open Market/ Super shop/ Home garden/ others

37. 8Do you know about the preservation uses in the fruits and vegetable? Yes / No, If yes please mention about preservation in these items?

38The common phenomena in Bangladesh is some fruits and vegetable are adulterated please give your opinion/ idea

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Thank You for Your Cooperation

Date of Interview: Sign of the
Interviewer

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