



**NUTRITIONAL KNOWLEDGE, ATTITUDE, AND PRACTICES ABOUT
MICRONUTRIENT DEFICIENCY DISEASES AMONG SELECTED
HOUSEHOLDS IN MIRPUR 10, DHAKA**

A PROJECT REPORT

BY

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

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APPROVAL

This Project titled “**Nutritional Knowledge, Attitude, and Practices about Micronutrient Deficiency Diseases among Selected Households in Mirpur 10, Dhaka**” submitted by Katha Mondal Dristi to the Department of Nutrition and Food Engineering, has been accepted as satisfactory for the Partial Fulfilments of the Requirements for the Degree of B.Sc. in Nutrition and Food Engineering and approved as to Its Style and Content. The presentation is still on.

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DECLARATION

By signing this document, I certify that the project "**Nutritional Knowledge, Attitude, and Practices about Micronutrient Deficiency Diseases among Selected Households in Mirpur 10, Dhaka**" was completed under the guidance of **Md. Harun -Ar Rashid**, Assistant Professor Department of NFE, Daffodil International University. I further certify that neither this project nor any of its non-essential components have been submitted to any other institution for the award of a degree or certificate.

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Additionally, I'd want to thank all of my friends who have consistently encouraged and helped me produce quality work.

ABSTRACT

The primary objective of the investigation was to examine the Knowledge, Attitudes, and Practices (KAP) concerning Micronutrient Deficiency Diseases among specific households in Mirpur 10, Dhaka. The investigation involves a total of 100 participants. All participants were from Mirpur 10, Dhaka and were of various ages. The research focuses on considerate the perceptions of individuals residing in urban areas of our country. However, it was found that the majority of the participants only have a basic considerate of the structural features of the topic. Out of 100 candidates, (5%) people know about cause of VADD, (7%) people know about cause of IDD and (6.4%) people know about cause of IDA but (95.5%), (93.7%) and (93.6%) of accused conveyed no knowledge regarding the factors contributing to VADD, IDD, IDA. In terms of the percentage dispersion of the regular intake of vitamin enriched foods, (6.4%) of defendants specified they had knowledge about regularly consuming such foods. Around (32.3%) participants BMI remained Normal. Around (8.4%) participants had knowledge about micronutrient deficiency disease and (91.6%) people didn't had knowledge about micronutrient deficiency disease. About (12.6%) people give their child vitamin A capsule two times per year. About the diseases of Iodine, (90.3%) didn't know about this. The percentage circulation of iron rich foods, data point out that the majority of respondents (67.4%) chose fruits & vegetables. Subsequently, (20.6%) chose meat, fish, egg & poultry, while (8.8%) chose pulses and legumes and (3.2%) chose others. The consumers of vitamin rich foods amongst the participants are (80.2%) responded fruits and vegetables, (6.6%) meat, fish, egg and poultry, (8.2%) pulses & legumes & (5%) others. In terms of the percentage (60.8%) participants, they prefer to eat abundant leafy and non-leafy vegetable.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the current period of rapid development besides technological advancement, it is alarming that malnutrition continues to be a significant public health concern worldwide, with devastating consequences on individual and societal well-being. Micronutrient deficiency diseases, specifically, pose a major threat to human health, leading to a range of preventable health issues and impairments. These deficiencies, primarily caused by inadequate intake or poor absorption of essential vitamins and minerals, affect millions of people globally, exacerbating health inequalities and hindering sustainable development goal (Ajzen, et al., 1991).

Bangladesh, like many other developing countries, is not immune to the impact of micronutrient deficiency diseases. With its dense population and socio-economic diversity, the urban area of Mirpur 10 in Dhaka presents a microcosm of the broader nutritional challenges faced by many households in the country. (Creswell et al., 2014) Understanding the level of nutritional knowledge, attitudes, and practices within these households is vital to address the root causes of micronutrient deficiencies and formulate targeted interventions to alleviate the burden of malnutrition in the region.

This thesis proposal aims to conduct an in-depth investigation into the nutritional knowledge, attitudes, and practices among selected households in Mirpur 10, Dhaka, with a particular focus on the prevalence and understanding of micronutrient deficiency diseases. (Ahmed et al., 2017). By exploring the factors that influence the nutritional choices and behaviours of these households, we aspire to identify potential barriers to adopting a balanced and nutrient-rich diet.

Micronutrient deficiency diseases, a pressing concern in the realm of global health, present a formidable challenge that plagues various regions across the globe, with Bangladesh being no exception. These diseases, characterized by an inadequate intake or absorption of essential micronutrients, afflict vulnerable populations, exacerbating the already precarious state of their health. The gravity of this issue cannot be overstated, as it not only compromises the well-being of individuals but also hampers the overall development and progress of societies. Micronutrients, a term encompassing vitamins and minerals, play a pivotal role in sustaining a multitude of physiological functions within the human body. (Stevens et al., 2013) These vital elements are indispensable for the proper functioning of various bodily systems, and any insufficiency in their intake can potentially result in grave health implications. The absence or inadequate levels of micronutrients can disrupt the delicate balance required for optimal bodily performance, thereby compromising overall well-being. Consequently, it becomes imperative to recognize the significance of these micronutrients and ensure their adequate consumption to safeguard against potential health risks. In the context of Bangladesh, a country that has made commendable strides in enhancing the

overall nutritional status of its population, it is disconcerting to note that the issue of micronutrient deficiencies continues to persist.

This concern is particularly pronounced among a specific subset of households residing in the Mirpur 10 area of Dhaka, the capital city. Despite the commendable efforts made to address the broader nutritional challenges faced by the nation, the persistence of micronutrient deficiencies in this specific locality calls for a deeper understanding and targeted interventions to alleviate this pressing issue. In order to effectively address the issue of micronutrient deficiency diseases, it is imperative to gain a comprehensive understanding of the nutritional knowledge, attitudes, and practices prevalent within households. (Ahmed et al., 2017) By delving into these aspects, interventions can be devised that are tailored to the specific needs and challenges faced by individuals and families. This deeper understanding will enable the development of targeted strategies that can effectively combat the prevalence of micronutrient deficiencies and their associated health consequences. By acknowledging the significance of these factors, researchers and policymakers can work towards implementing evidence-based interventions that promote optimal nutrition and overall well-being within households.

1.1 Objectives

1.1.1 General objective: The aim of the research was to learn more about city dwellers' knowledge and prevention measures for micronutrient deficiency disorders.

1.1.2 Specific objective:

- To provide the respondent's family with socioeconomic data
- To obtain the interlocutors' information history
- To categorize respondents' eating habits
- To gain access to information regarding people's food backgrounds
- To learn about the interviewer's anthropometric measurements

CHAPTER 2

LITERATURE REVIEW

2. Literature Review

According to Sharma et al., (2014) this study aimed to address a notable gap in understanding the dietary behaviours of supplement users in India, focusing specifically on health sciences students. Two primary objectives guided the investigation: firstly, to gauge the prevalence of dietary supplement usage among health sciences students, and secondly, to assess their knowledge, attitudes, and beliefs regarding micronutrients. The study revealed that the most common reasons for supplement consumption were to maintain good health (40.1%) and ensure adequate nutrition (36.9%). However, respondents' opinions about dietary supplements ranged generally between 'unsure' and 'agree,' indicating a degree of uncertainty or variability in perceptions. In terms of knowledge about micronutrients, medical students exhibited the highest percentage (44.84%), outperforming nursing (43.17%) and dental (37.8%) students. Notably, a significant difference in knowledge scores was observed between medical and dental students ($p=0.005$), while the scores of medical and nursing students did not significantly differ. Gender-based analysis within the nursing group revealed that female students scored higher than males ($p=0.036$), emphasizing potential gender-related disparities in nutritional knowledge. In conclusion, the study illuminates the prevalent use of dietary supplements among health sciences students in India while underscoring the existing gaps in knowledge. It emphasizes the urgency of incorporating targeted nutritional education in the curricula to produce well-informed professionals capable of positively influencing public health outcomes. (Sharma et al.,2014)

The objective of the study conducted by Heshmat et al., (2015) aimed to calculate nutritional knowledge, attitudes, and practices in both urban and rural households in Iran, emphasizing the critical role of a healthy diet in maintaining weight and preventing chronic diseases. The findings indicated a variable frequency of knowledge about food sources of essential nutrients. For example, awareness of calcium sources ranged from 11.6% to 64.7%, while knowledge about food sources of zinc was approximately 12.8% to 16.7%. Notably, the understanding of meat as a source of iron was around 50.9% and 46.5% in urban and rural regions, respectively. Attitudes towards dietary choices were also explored. A positive attitude toward using full-fat dairy was noted in about 25.1% of cases, contrasting with a negative attitude prevailing at 71.4%. Interestingly, positive attitudes were slightly lower in rural areas compared to urban areas. Examining dietary practices revealed that the frequency of red meat consumption in urban households varied, with 10.8%, 73.7%, and 15.5% reporting daily, weekly, and rare consumption, respectively. Furthermore, the study highlighted significant differences between urban and rural households in the daily use of milk, yogurt, and cheese, with urban households exhibiting higher frequencies. The study's national scope underscores the presence of a gap between knowledge and behavior among Iranian households. While there is awareness of nutritional information, particularly about certain nutrients like calcium and zinc, translating this

knowledge into dietary practices seems inconsistent. The negative attitude towards full-fat dairy and variations in the consumption of red meat and dairy between urban and rural settings point to the complex interplay of factors influencing dietary choices. These insights emphasize the need for targeted interventions and educational programs to bridge the gap between knowledge and behaviour, promoting healthier dietary practices across diverse populations in both urban and rural contexts in Iran. (Heshmat et al.,2015)

In the study conducted by Hisam et al., (2014) aimed to assess the Knowledge, Attitude, and Practice (KAP) regarding Folic Acid Deficiency among Women of Child-Bearing Age (WPCBA) and to investigate the association between education levels and folic acid practices. The mean age of respondents was 30.31 years, with 58.75% being literate and 41.25% illiterate. The findings revealed that only 43% had knowledge about the need for folic acid, and 40.25% recognized its deficiency as a potential cause of abnormalities in new-borns. Concerningly, despite the importance of folic acid in pregnancy, only 51.25% received folic acid supplementation. Significantly, the study highlighted a notable association between education levels and folic acid practices ($p=0.009$ at 95% confidence level). This underscores the pivotal role of education in influencing preventive measures against micronutrient deficiencies. In summary, the study identified a low level of knowledge and poor attitudes among WPCBA regarding folic acid deficiency, leading to unsatisfactory practices. The association between education levels and folic acid practices emphasizes the need for targeted educational interventions to enhance awareness and promote better practices, particularly among those with lower educational backgrounds. These interventions can contribute significantly to preventing folic acid deficiency and associated risks during pregnancy, ultimately promoting better maternal and child health outcomes. (Hisam et al.,2014)

According to the Gebre et al., (2023) this study aimed to assess the gender-based differences in knowledge, attitude, and practices related to malnutrition and micronutrient deficiency in two regional states in Ethiopia, based on primary data analysis. The results indicated that females generally exhibited a higher proficiency in identifying malnutrition symptoms. However, concerning vitamin A and iodine, male respondents demonstrated better knowledge and consumption practices. Notably, the study highlighted a significant lack of awareness about bio fortified and fortified foods, with males showing a relatively better understanding than females. The findings underscore the importance of improving community knowledge and perceptions of these fortified foods to enhance diet quality and increase micronutrient intake, especially in a context where malnutrition is prevalent. While the majority of respondents acknowledged the importance of consuming micronutrient-rich foods and expressed positive attitudes toward them, there was a noticeable gap in translating this awareness into practice. The study suggests the necessity for targeted campaigns to bridge this gap, enhancing the community's ability to adopt healthier practices while mitigating barriers to the consumption of nutritious diets. In conclusion, the results provide valuable insights for development agents working to improve nutrition in Ethiopia. Focusing on gender-specific knowledge gaps and addressing misconceptions about fortified foods can contribute to more effective interventions. Moreover,

targeted campaigns should not only emphasize the importance of nutritious diets but also work towards eliminating practical barriers, fostering a community-wide shift toward healthier practices and improved overall nutrition. (Gebre et al.,2023)

This book conducted by Marias et al., (2014) serves as a comprehensive reference guide and practical tool for conducting surveys on nutrition- and health-related knowledge, attitudes, and practices (KAP) at the community level. It recognizes that while indicators of nutritional status are crucial for assessing the impact of nutrition interventions, a deeper understanding of people's dietary habits requires an exploration of their knowledge, attitudes, and practices. The significance of this manual lies in its ability to assist in formulating and designing targeted nutrition programs and interventions by providing insights into the personal determinants of dietary habits. It emphasizes that effective program planning goes beyond measuring nutritional status and necessitates an understanding of what individuals actually eat and the factors influencing their choices. Key features of the manual include model questionnaires or modules, facilitating the design of KAP survey questionnaires. These modules encompass predefined questions covering 13 common nutrition topics, including infant feeding, child nutrition, pregnancy and lactation, undernutrition, deficiencies (iron, vitamin A, iodine), food safety, hygiene, water and sanitation, dietary guidelines, and issues related to overweight and obesity. Targeted at professionals responsible for planning, implementing, and evaluating food security and nutrition projects, the manual addresses a diverse audience, including project managers, nutritionists, health workers, and planning and evaluation specialists. By providing a structured approach to assessing KAP, it equips practitioners with valuable tools for effective project planning and evaluation, enhancing the potential impact of nutrition interventions at the community level. (Marias et al.,2014)

CHAPTER 3

MATERIALS AND METHODOLOGY

3.1 Research Design:

This study will employ a cross-sectional research design to collect data from selected households in Mirpur 10, Dhaka, allowing for the assessment of nutritional knowledge, attitudes, practices, and the prevalence of micronutrient deficiency diseases at a specific point in time.

3.2 Study Area and Sample Selection:

Mirpur 10, Dhaka, will be the study area due to its high population density and diverse socio-economic backgrounds. A multi-stage random sampling technique will be used to select households for data collection, ensuring representation from different sections of the community.

3.3 Data Collection Methods:

Data will be collected through the following methods:

3.3.1 Questionnaires:

Structured questionnaires will be administered to household members to assess their nutritional knowledge, attitudes, and practices. The questionnaire will include validated scales to measure attitudes and knowledge levels.

3.3.2 Focus Group Discussions:

Focus group discussions will be conducted to gain deeper insights into the factors influencing nutritional behaviors, perceptions of micronutrient deficiency diseases, and barriers to adopting healthier practices.

3.3.3 In-depth Interviews:

In-depth interviews will be conducted with key informants, including health experts and local community leaders, to obtain expert opinions and community perspectives on the issue.

3.4 Data Analysis Techniques:

Data analysis will involve both quantitative and qualitative methods.

3.4.1 Quantitative Analysis:

The quantitative statistics collected through the questionnaires will be summarized using descriptive statistics, specifically frequencies and percentages. The present study will employ inferential statistical methods, including Chi-square tests and logistic regression, to investigate and elucidate potential associations and connections among the variables under examination.

3.4.2 Qualitative Analysis:

The application of thematic analysis will remain utilized toward examine the qualitative data collected through focus group discussions and in-depth interviews. This analytical method aims to identify and elucidate the prominent themes and patterns that emerge from the participants' responses.

3.5 Sample size

$$\begin{aligned} \text{Sample size, } n &= \frac{z^2 \times \hat{p}(1 - \hat{p})}{\varepsilon} \\ &= \frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.08)^2} \\ &= \frac{3.8416 \times 0.25}{0.0064} \\ &= \frac{0.9604}{0.0064} \\ &= 100 \end{aligned}$$

Were,
Confidence Level
z is the z score
 ε is the margin of error
 $\hat{p}$ is the population proportion

3.6 Statistical analysis:

Data entry and cleansing activities were executed using Microsoft Excel 2021, a product of Microsoft. Statistical analysis was carried out utilizing IBM's SPSS version 22. Descriptive statistics were employed to present frequency distribution, percentages, means, and standard deviations. Inferential statistics were applied with a significance level of 0.05 and an assurance interval of 95%.

CHAPTER 4

RESULT AND DISCUSSION

4.1 Result

A. Background information

Figure 4.1.1 represents the gender description. Out of 100 candidates, 87% remained male while 13% remained female.

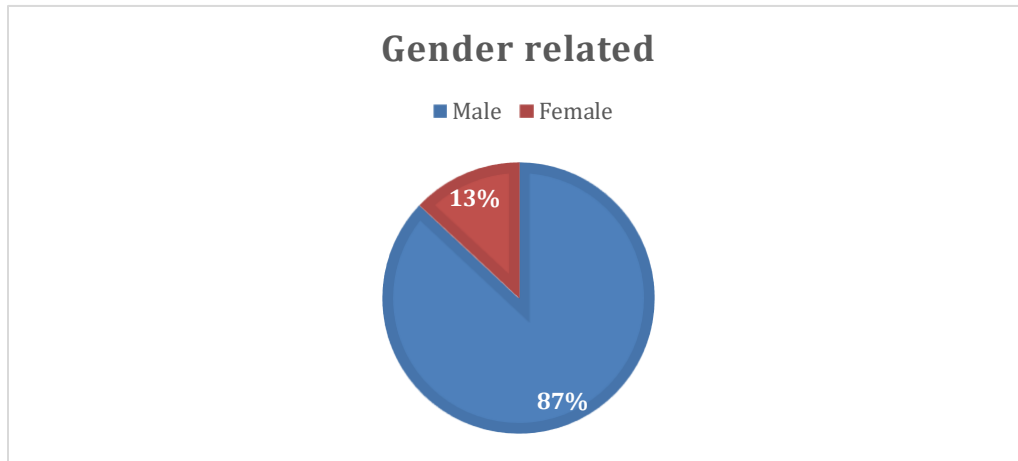


Figure-4.1.1: Respondents Gender

Figure 4.1.2 represents the age group. The respondents age brackets are 20 to 45, with the generality falling into the 20 to 30 ages 15.6% and between ages 30 to 45 ages 84.4%.

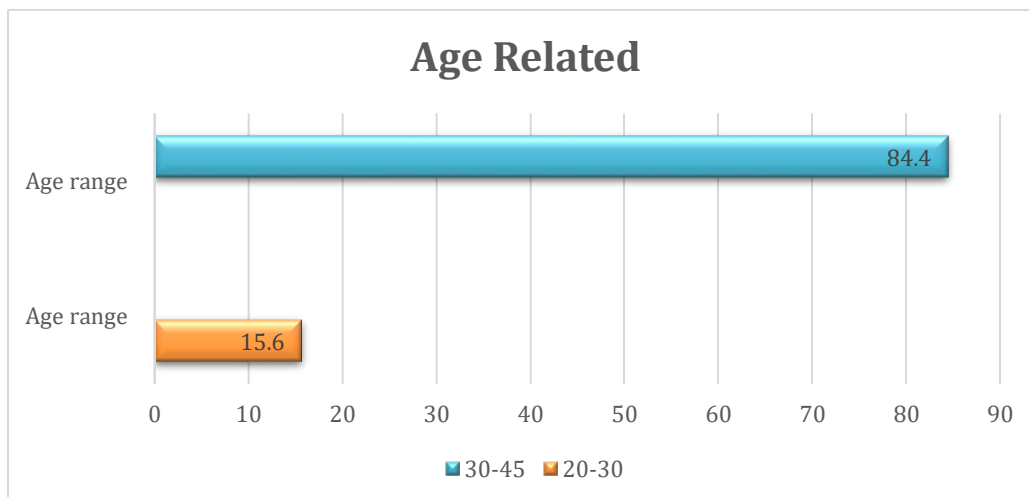


Figure-4.1.2: Respondents Age

Figure 4.1.3 represents education qualifications. Basically, the majority of the respondents were primary (94.8%), some were secondary (3.2%), and less of them graduated (2.1%).

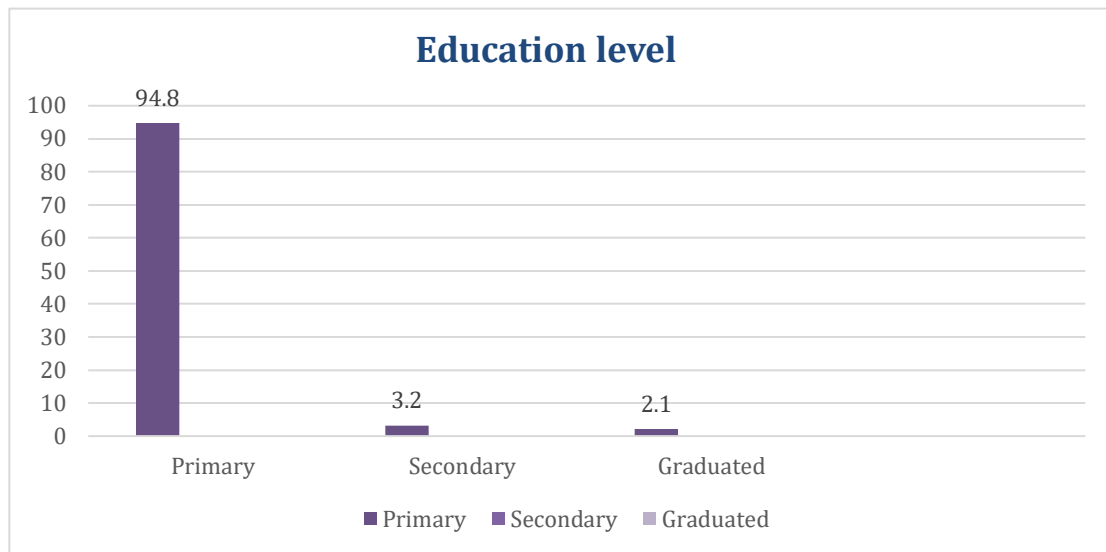


Figure- 4.1.3: Respondents Educational Qualification

B. Socio economic information of respondents family

Figure 4.1.4 represents family status. Most members of the respondent's household remained nuclear. Around 96.8% remained nuclear & 3.2% remained Joint.

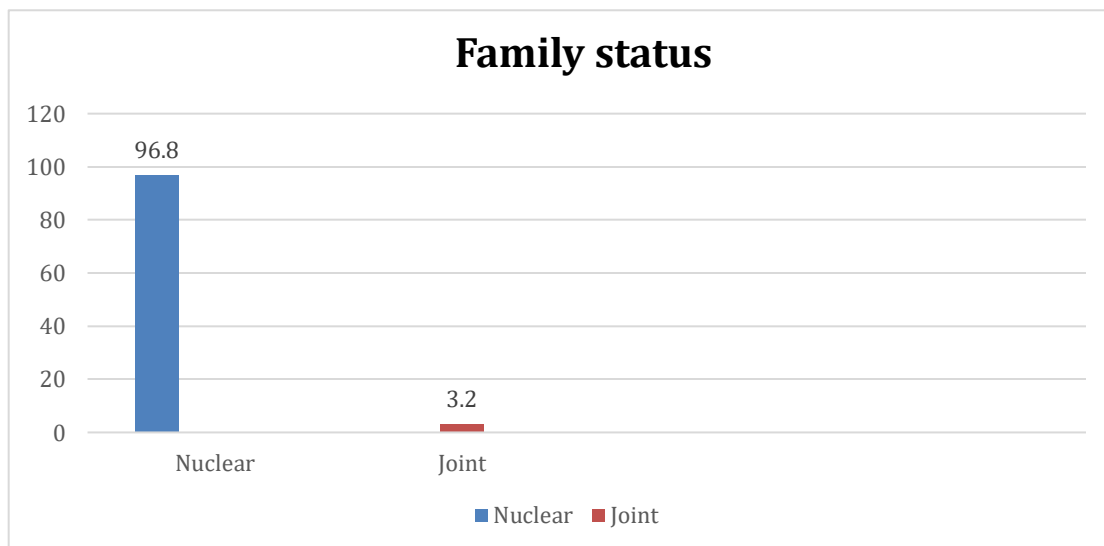


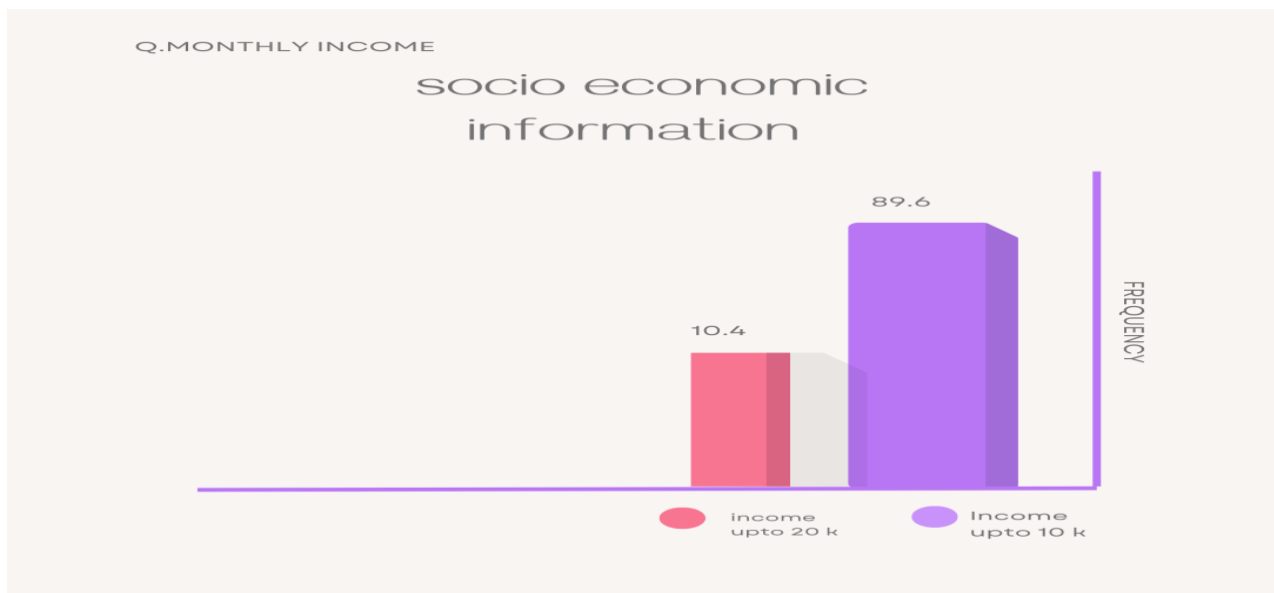
Figure- 4.1.4: Family Status

Figure 4.1.4 represents religion status. Being a largely Muslim country, the majority of respondents identified as Muslim. Almost 97.8% of the participants identified as Muslims, and 2.2% remained others.



Figure- 4.1.5: Respondents Religion

This figure 4.1.6 display monthly income. Approximately 89.6% Families income remained 10000+ and 10.4% Families income remained 20000+.



Figures- 4.1.6: Monthly Income

Figure 4.1.7 represents the respondent's occupation. Here, labor was 94.8% and others were 5.2%.

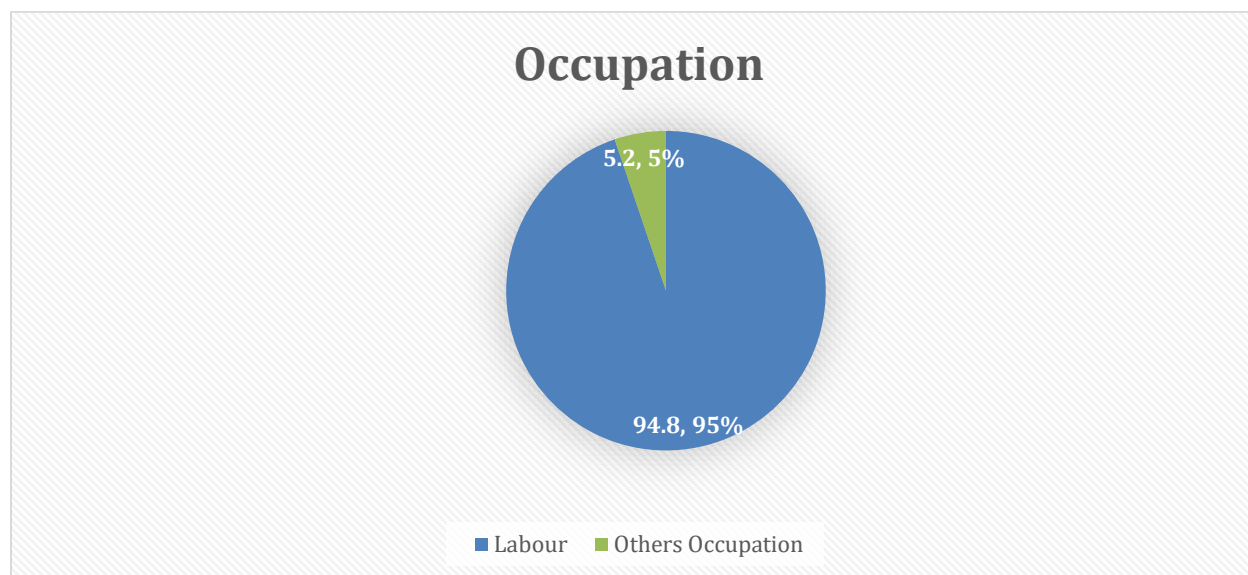


Figure- 4.1.7: Occupation

C. Anthropometric information of respondents

This box showing BMI percentage. Here the percentage of normal BMI number were 32.3%, underweight 58%, overweight 6.7% and obese 3%.

Body Mass Index (BMI)	
Normal weight	32.3
Underweight	58
Overweight	6.7
Obese	3

Figure- 4.1.8: Respondents BMI

D. KAP about micronutrient deficiency disease

This figure 4.1.9 presented those respondents who are knowing about types of micronutrient deficiency diseases where 8.4% had knowledge about it but 91.6 % prefer not to say.

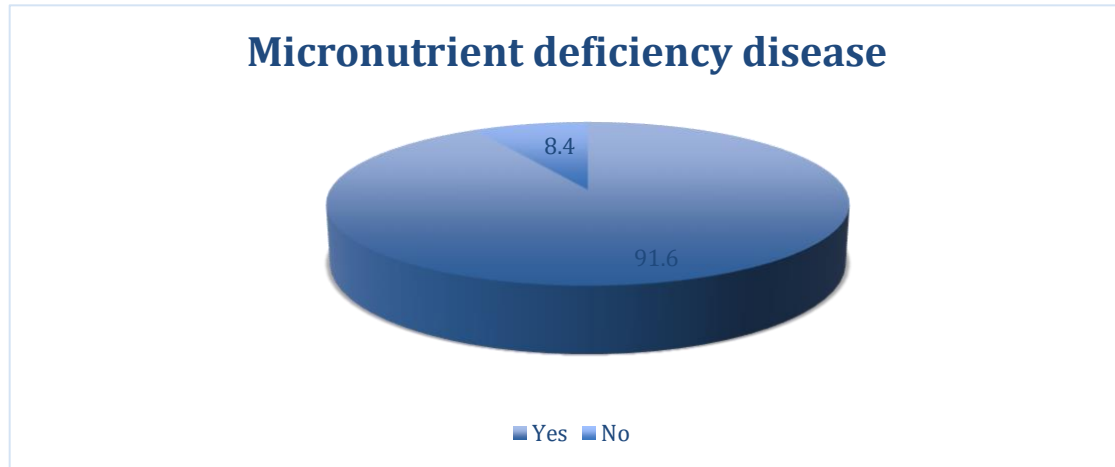


Figure- 4.1.9: Micronutrient Deficiency Diseases

This figure 4.1.10 presented those respondents who are knowing about iodine deficiency where 9.7% had knowledge about it but 90.7% prefer not to say.

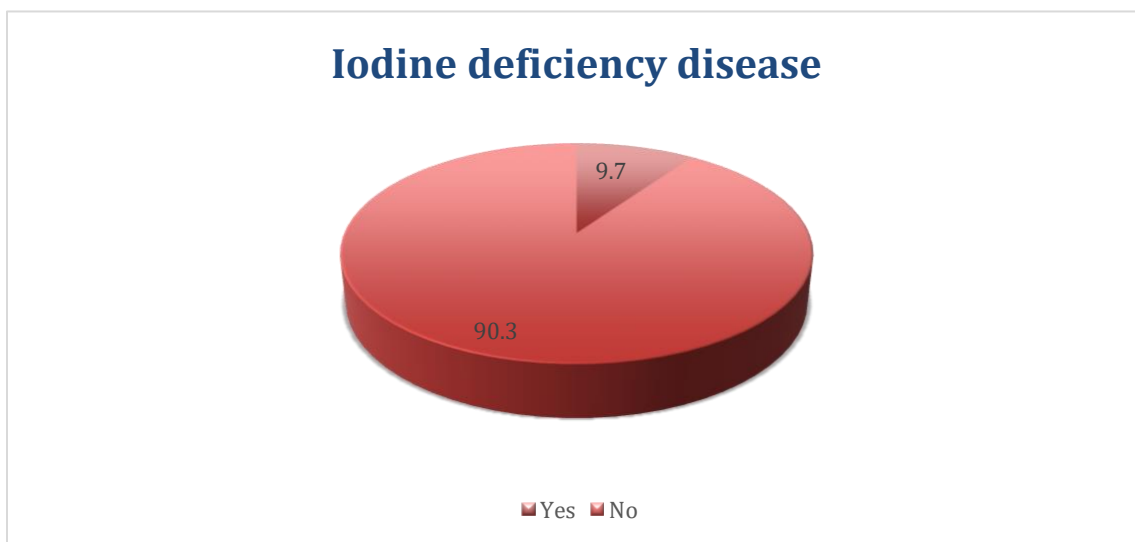


Figure- 4.1.10: Know about Iodine Deficiency

This figure 4.1.11 depicts those respondents who are took 2 capsules of vitamin A each year. 12.6% of respondents answered yes, they took vitamin A capsules twice annually but 87.4% of respondents answered no they didn't take.

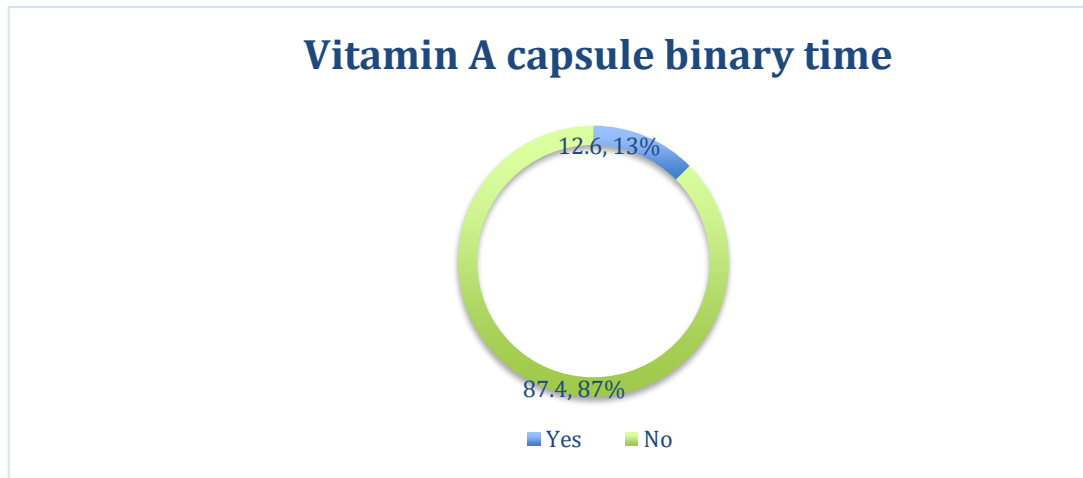


Figure - 4.1.11: Vitamin A capsule twice annually

This figure 4.1.12 depicts the percentage of Cause of the VADD. The maximum numeral of participants was 95%, they had no idea about the Cause of VADD, while 5% claimed to have knowledge about it.

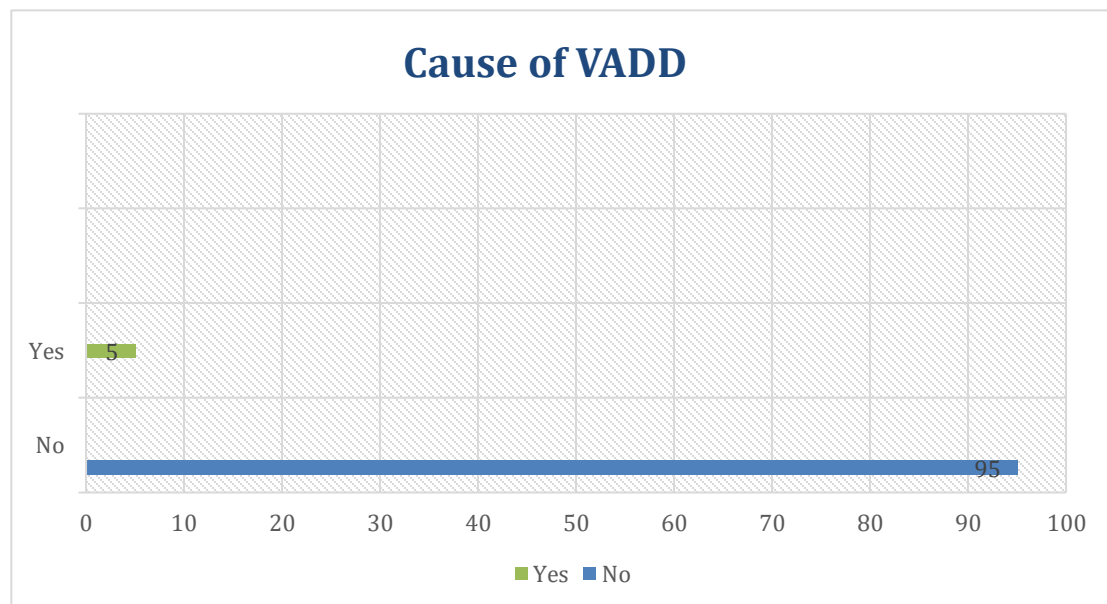


Figure 4.1.12: Cause of VADD

This figure 4.1.13 depicts the percentage distribution of the cause of iodine deficiency disorders (IDD). The data indicates that 93% of the accused conveyed no knowledge about the cause of IDD, while 7% claimed to have knowledge about it.

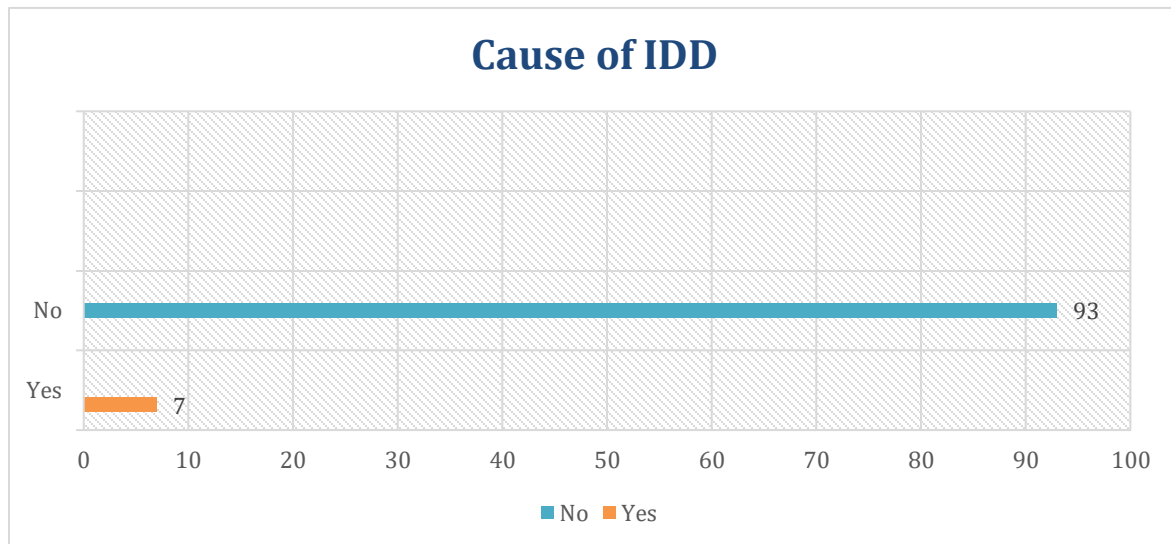


Figure- 4.1.13: Cause of IDD

This figure 4.1.13 depicts the percentage distribution of the cause of IDA. The data indicates that 93.6% of accused conveyed no knowledge about the cause of IDA, while 6.4% claimed to have knowledge about it.

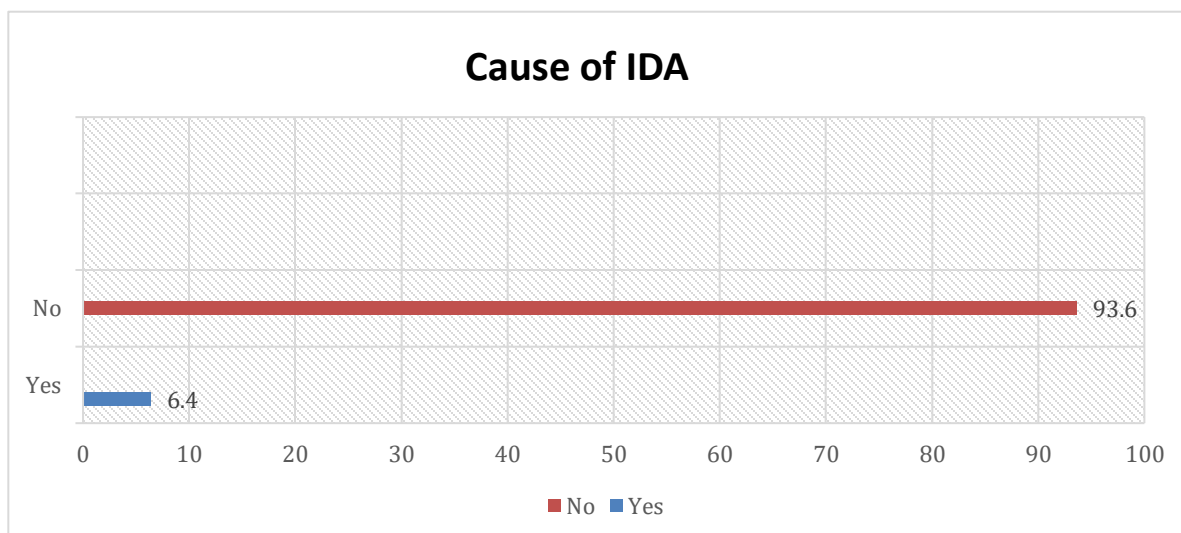


Figure- 4.1.14: Cause of IDA

This figure 4.1.15 depicts the percentages of rich source of vitamin. The uppermost numeral 90.4% of small fish and 9.6% of others.

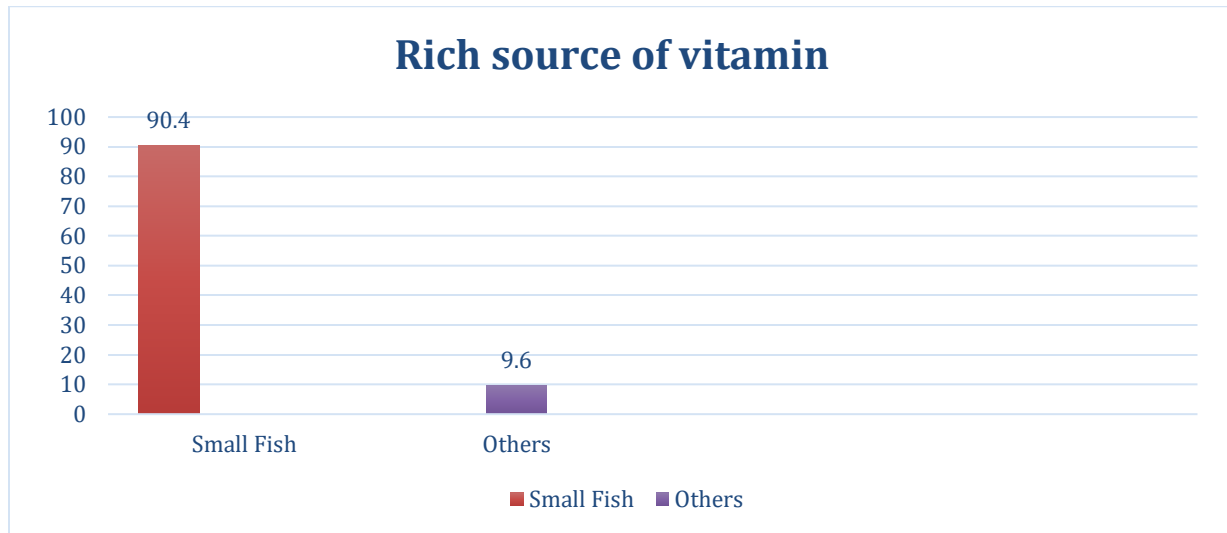


Figure- 4.1.15: Rich source of vitamin

Figure 4.1.16 displays the percentage dispersion of the regular intake of vitamin- enriched foods. 6.4% of defendants specified they had knowledge about regularly consuming such foods, while 80.4% described no awareness.

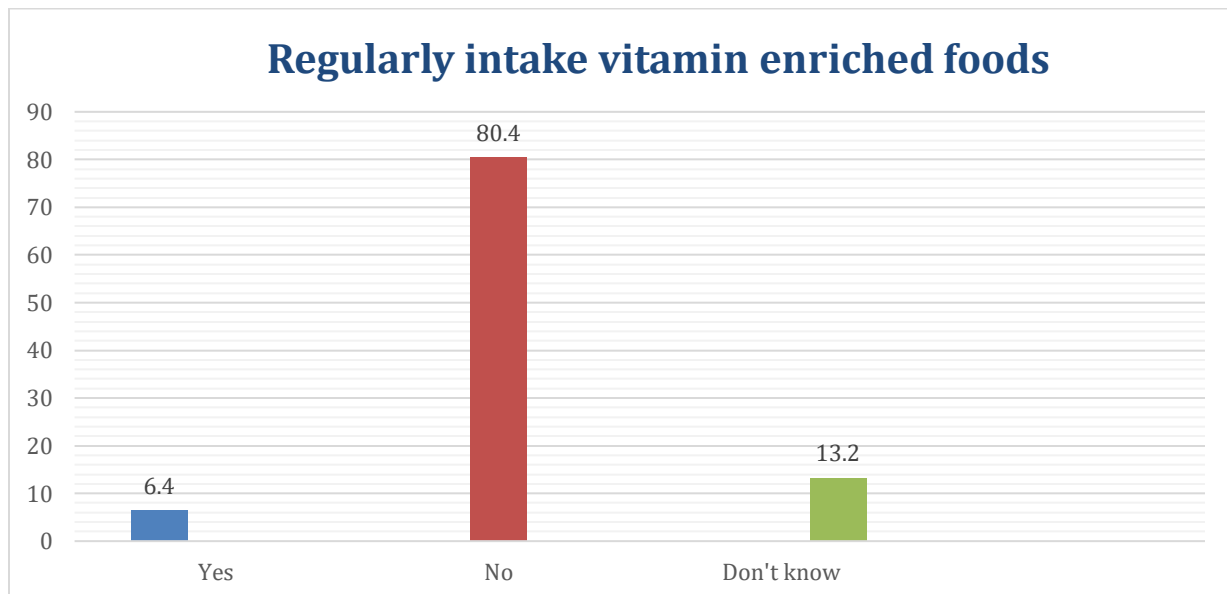


Figure- 4.1.16: Regularly intake Vitamin enriched foods

This figure 4.1.17 displays almost (60.8%) participants, favor abundant leafy and non-leafy vegetable. While (39.2%) do not favor such consumption.

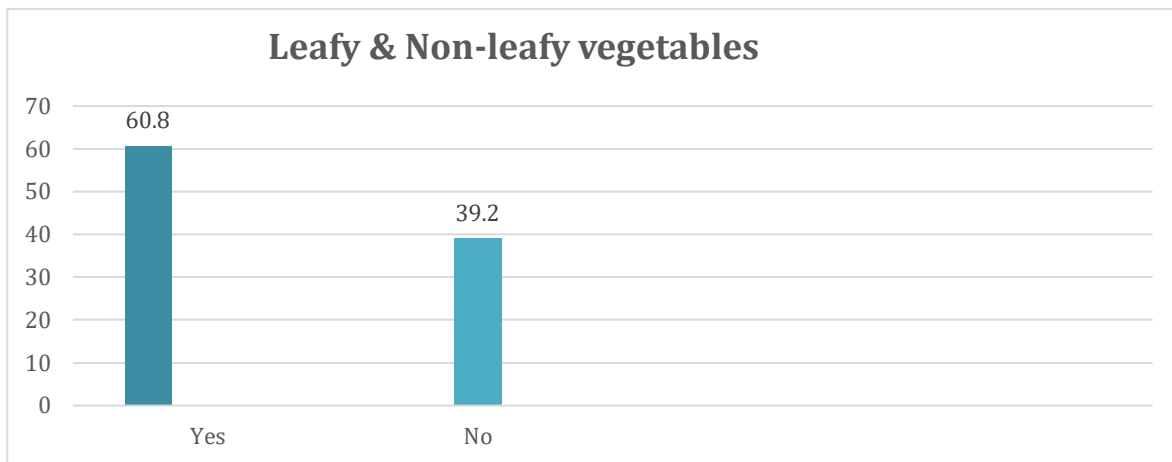


Figure 4.1.17: Eat sufficient leafy and non-leafy vegetable

Figure 4.1.18 demonstrates the sources from which participants obtained the abovementioned knowledge with the uppermost % of individuals 80.8% reporting others sources. Additionally, 6.6% of participants acquired knowledge from news portals, while 12.6% gained information from the internet.

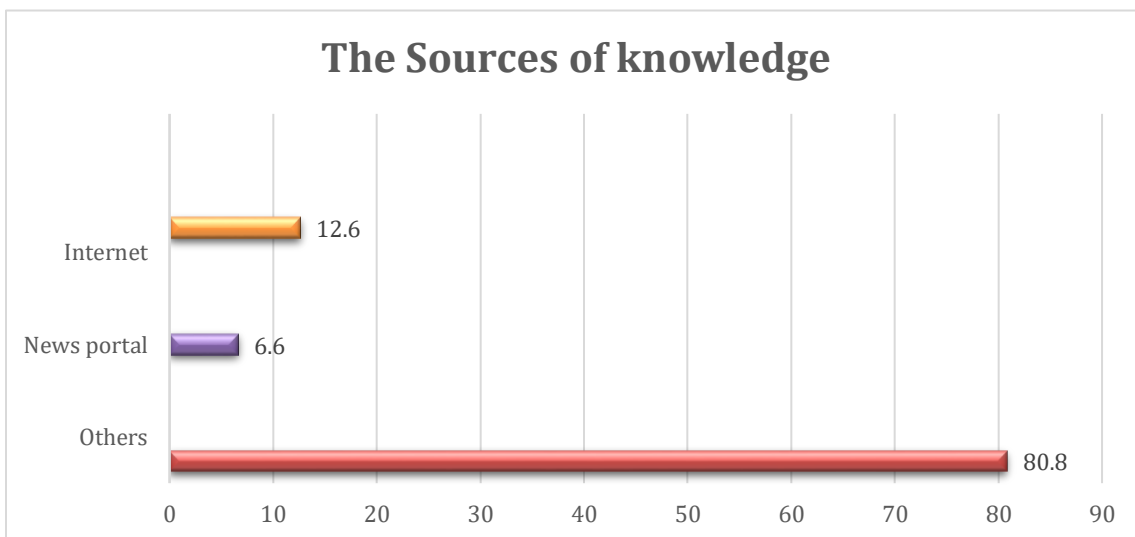


Figure- 4.1.18: The sources of knowledge

E. Information about dietary knowledge

This figure 4.1.19 displays the % of data point out that the majority of respondents 63.8 % selected fruits and vegetables as their primary source. Subsequently, 20.6% chose meat, fish, egg and poultry, while 8.8% chose Pulses and legumes and 6.8% chose others.

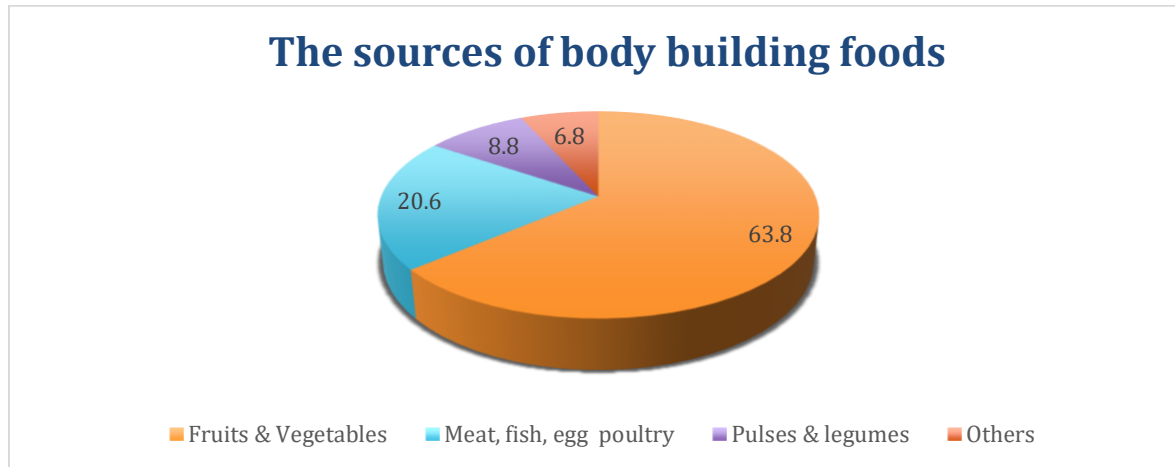


Figure- 4.1.19: The Sources of Body building foods

This figure 4.1.20 displays, the percentage circulation of iron rich foods. The data point out that the majority of respondents (67.4%) chose fruits & vegetables. Subsequently, (20.6%) chose meat, fish, egg & poultry, while (8.8%) chose pulses and legumes and (3.2%) chose others.

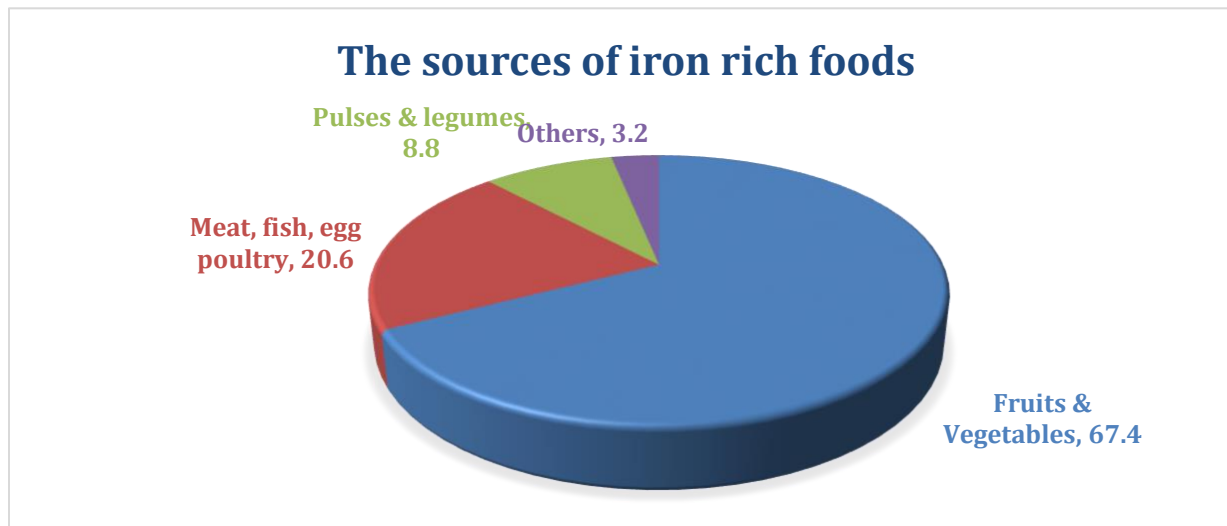


Figure- 4.1.20: The Sources of Iron rich foods

This figure 4.1.21 displays the primary suppliers of foods rich in vitamins. The data point out that the majority of respondents 80.2 % selected fruits and vegetables as their primary source. Subsequently, 6.6% took meat, fish, egg and poultry, while 8.2% chose Pulses and legumes and 5% took others.

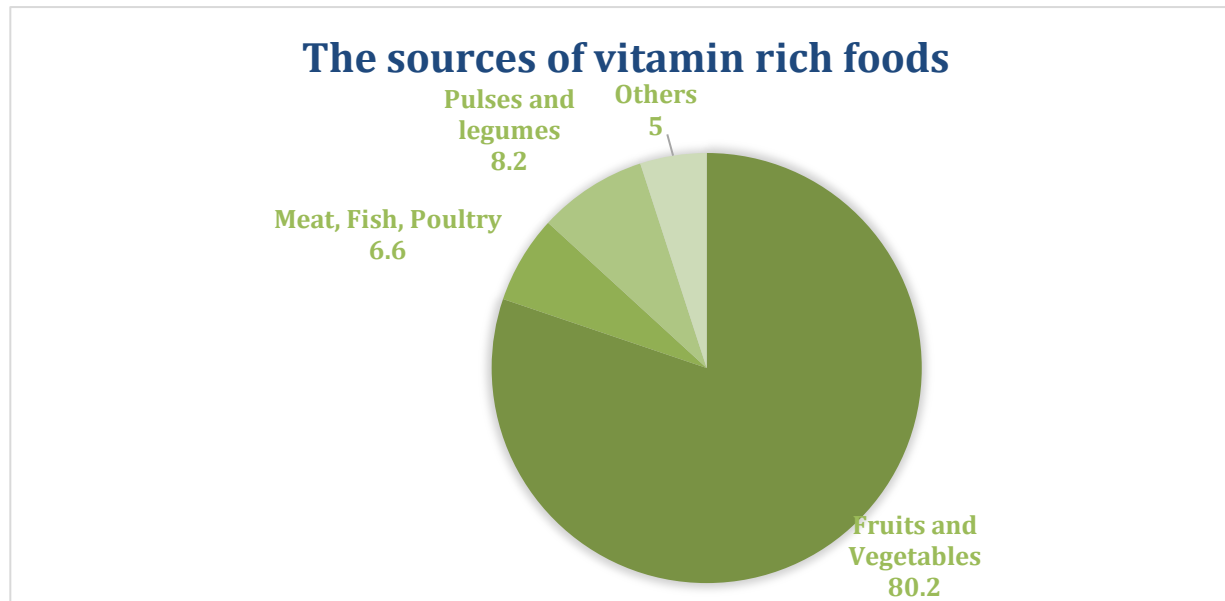


Figure- 4.1.21: The Sources of Vitamin rich foods

4.2 Discussion

According to the study, the gender distribution of participants shows a clear majority of 87% being male and 13% being female (Figure 4.1.1). The respondents age brackets are 20 to 45, with the generality falling into the 20 to 30 ages 15.6% and between ages 30 to 45 ages 84.4% (Figure 4.1.2). About 94.8% percent of them had a primary education, 3.2% of them secondary and less of them were graduated 2.1% in figure 4.1.3. Distribution of such respondents' family type 96.8% were from a single family and 3.2% were joint. Being a largely Muslim country, the majority of respondents identified as Muslim. Almost 97.8% of the participants identified as Muslims, and 2.2% remained others. Figure 4.1.6 presents the monthly income percentage. Income distribution, as reflected in the study's findings, indicates a predominantly low-to-middle-income population, with 89.6% of households earning 10,000+ and 10.4% earning 20,000+. Economic factors can profoundly impact access to nutritious foods and healthcare services, highlighting the need for interventions that address socioeconomic disparities in nutrition and health outcomes. Figure 4.1.8 presents Body Mass Index (BMI) percentage. Here, the percentage of the normal BMI was 32.3%, underweight 58%, overweight 6.7% and obese 3%. Figure 4.1.9 shows that (8.4%) people had knowledge about micronutrient deficiency disease and (91.6%) people didn't have knowledge about micronutrient deficiency disease. Figure 4.1.10 presented those respondents who are knowing about iodine deficiency where 9.7% had knowledge about it but 90.7% prefer not to say. Figure 4.1.11 shows the percentage of people who

took vitamin A capsules two times per year. 12.6% of respondents answered yes, they took vitamin A capsules twice annually but 87.4% of respondents answered no, children aren't given vitamin A capsules two times per year. Based on the responders, (5%) people know about the cause of VADD, (7%) people know about the cause of IDD and (6.4%) people know about the cause of IDA but (95%), (93%) and (93.6%) of accused conveyed no knowledge regarding the factors contributing to VADD, IDD and IDA. In terms of the percentage dispersion of the regular intake of vitamin enriched foods, (6.4%) of defendants specified they had knowledge about regularly consuming such foods. Figure 4.1.15 was showing the percentage of a rich source of vitamin. The highest number was 90.4% of small fish and 9.6% of others. Figure 4.1.17 displays almost (60.8%) participants, favor abundant leafy and non-leafy vegetable. While (39.2%) do not favor such consumption. Figure 4.1.18 demonstrates the sources from which participants obtained the abovementioned knowledge with the uppermost % of individuals 80.8% reporting others sources. Additionally, 6.6% of participants acquired knowledge from news portals, while 12.6% gained information from the internet. The study's findings regarding knowledge and awareness of micronutrient deficiency diseases, iodine deficiency, and vitamin A supplementation reveal gaps in participants' understanding of essential health-related information. These findings underscore the importance of targeted health education interventions to improve awareness and knowledge levels among the study population, ultimately contributing to better health outcomes.

Information about dietary knowledge, Figure 4.1.19 displays, the primary suppliers of foods rich in iron. The data point out that the majority of respondents 63.8 % selected fruits and vegetables as their primary source. Subsequently, 20.6% chose meat, fish, egg and poultry, while 8.8% chose Pulses and legumes and 6.8% chose others. Figure 4.1.20 displays, the percentage circulation of iron rich foods. The data point out that the majority of respondents (67.4%) chose fruits & vegetables. Subsequently, (20.6%) chose meat, fish, egg & poultry, while (8.8%) chose pulses and legumes and (3.2%) chose others. Figure 4.1.21 displays the primary suppliers of foods rich in vitamins. The data point out that the majority of respondents 80.2 % selected fruits and vegetables as their primary source. Subsequently, 6.6% took meat, fish, egg and poultry, while 8.2% chose Pulses and legumes and 5% took others. The preferences for dietary sources of nutrients, such as body-building foods, vitamin-rich foods, and iron-rich foods, provide valuable insights into participants' dietary preferences and food choices. Understanding these preferences can inform the development of culturally appropriate dietary interventions that promote the consumption of nutrient-rich foods within the study population.

Overall, the study's discussion of demographic characteristics and dietary knowledge and practices highlights the complex interplay of socio-cultural, economic, and individual factors that influence nutritional health outcomes within the study population. This study focuses solely on the respondents' knowledge and practices related to nutrition. To improve community nutrition, future actions should use these findings to develop comprehensive interventions that address both knowledge gaps and dietary practices. By doing so, we can enhance the overall nutritional status and well-being of the community. While the study provides valuable insights into the respondents' understanding, it's

essential to recognize that further research and interventions are needed to fill information gaps and promote healthy eating habits. This will contribute to better nutritional outcomes and overall well-being in the study region.

CHAPTER 5

CONCLUSION & RECOMMENDATION

This study, conducted in Mirpur 10, Dhaka, provides a thorough examination of nutritional knowledge, attitudes, practices, and the prevalence of micronutrient deficiency diseases within households. The Knowledge, Attitudes, and Practices (KAP) regarding micronutrient deficiencies among the preferred households were moderate, although there existed gaps between awareness and behavior in certain instances. This feature seems to require further focus to develop community Knowledge, Attitudes, and Practices (KAP). Addressing the complex situation dictates a range of interventions. Collaboration among national governments is essential to effectively struggle Micronutrient Deficiency Diseases; otherwise, they may not receive the necessary attention. Numerous non- governmental organizations operating in the healthcare sector deserve more support and attention in this area. In order to promote nutrition and healthy eating habits within the slum community, a multifaceted approach is necessary. This involves organizing regular workshops and seminars covering topics such as balanced diets, food groups, portion sizes, and the importance of micronutrients. Additionally, conducting cooking demonstrations using locally available ingredients can help residents learn practical tips for budget-friendly and healthy cooking, encouraging active participation. To ensure widespread dissemination of information, it's important to develop and distribute educational materials like pamphlets, posters, and brochures in local languages with culturally sensitive and easy-to-understand content. Training motivated individuals from the community to serve as peer educators on nutrition is another effective strategy, enabling them to disseminate information, answer questions, and provide support to their fellow residents. Finally, regular follow-up with residents is crucial to assess their understanding of nutritional concepts and track changes in dietary behaviors. Monitoring progress and adjusting interventions as needed ensures sustained impact and continued improvement in community health and well-being.

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APPENDICES

“Nutritional Knowledge, Attitude and Practices about Micronutrient Deficiency Diseases among selected households in Mirpur 10, Dhaka”

A) Background information (পটভূমির তথ্য)

1. Name of the respondent (উত্তরদাতার নাম):
2. Respondent's sex (উত্তরদাতার লিঙ্গ): Male / Female
3. Respondent's age (উত্তরদাতার বয়স):
4. Educational of the respondent (উত্তরদাতার শিক্ষাগত যোগ্যতা):
5. Name of the household head (পরিবারের প্রধানের নাম):

B) Socio economic information of respondent's family (উত্তরদাতার পরিবারের আর্থ-সামাজিক তথ্য)

6. Family type: Nuclear / Joint (পরিবারের ধরন: নিউক্লিয়ার/জয়েন্ট):
7. Number of family members (পরিবারের সংখ্যার সংখ্যা):
8. Religion (ধর্ম):
9. Respondent's occupation (উত্তরদাতার পেশা):
10. Household head's occupation (পরিবারের প্রধানের পেশা):
11. Monthly income of the family (পরিবারের মাসিক আয়):
12. Monthly expenditure of the family (পরিবারের মাসিক খরচ):
 - a) education cost (শিক্ষা খরচ)
 - b) food cost (খাবার খরচ)
 - c) total cost (মোট খরচ)

C) Anthropometric information of the Respondents (উত্তরদাতাদের নৃতাত্ত্বিক তথ্য)

13. Weight in Kg (কেজিতে ওজন):
14. Height in cm (সেমি উচ্চতা):
15. BMI:

D) KAP about micronutrient deficiency diseases (মাইক্রোনিউট্রিয়েন্টের অভাবজনিত রোগ সম্পর্কে কেএপি)

16. Do you have knowledge of what kind kinds of disorders are caused by micronutrient deficiency diseases? আপনি কি মাইক্রোনিউট্রিয়েন্টের অভাবজনিত রোগের ধরন জানেন?
Yes/ No
17. Are you aware of iodine deficiency? আপনি কি আয়োডিনের অভাব সম্পর্কে জানেন?
Yes / No
18. Are you take vitamin A capsules twice a year? আপনি কি বছরে দুইবার ভিটামিন এ ক্যাপসুল খেয়েছেন?
Yes/ No
19. Are aware of the primary causes of VADD are? আপনি কি জানেন VADD এর প্রধান কারণ কি?
Yes/ No
20. Are aware of the primary causes of IDD are? আপনি কি জানেন IDD এর প্রধান কারণ কি?
Yes/ No
21. Are aware of the primary causes of IDA are? আপনি কি জানেন IDA এর প্রধান কারণ কি?
Yes/ No
22. Are you repeatedly intake of Vitamins enriched foods? আপনি কি নিয়মিত ভিটামিন সমৃদ্ধ খাবার খান?
Yes/ No
23. Which foods do you consume as rich source of vitamin A? ভিটামিন এ এর সমৃদ্ধ উৎস হিসেবে আপনি কোন খাবার খান?
Ans:
24. Are you consuming sufficient leafy & non-leafy vegetables? আপনি কি পর্যাপ্ত শাক এবং অ-শাক সবজি খান?
Yes/ No
25. Where did you get the information above knowledge? ----- কোন উৎস থেকে আপনি উপরের জ্ঞান জানেন?

1. News portal 2. Google 3. Facebook 4. Others

E) Information about dietary knowledge of the respondents (উত্তরদাতাদের খাদ্যতালিকাগত জ্ঞান সম্পর্কে তথ্য)

26. Which are the sources of body building foods? শরীর গঠনের খাবারের উৎস কি?
- 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
27. Which are the primary suppliers of foods rich in iron? আয়রন সমৃদ্ধ খাবারের উৎস কি?
- a) Meat, fish, egg and poultry b) Fruits and vegetables
c) Pulses and legumes d) Others
28. Which are the primary suppliers of foods rich in vitamins? ভিটামিন সমৃদ্ধ খাবারের প্রধান উৎস কি?
- 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

NUTRITIONAL KNOWLEDGE, ATTITUDE, AND PRACTICES ABOUT MICRONUTRIENT DEFICIENCY DISEASES AMONG SELECTED HOUSEHOLDS IN MIRPUR 10, DHAKA

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