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Nutritional Awareness Among Children Living in Anganwadi and with Family

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Nutritional Awareness Among Children living in Anganwadi and with Family

Purpose: Nutrition is a very latest and emerging field of study. In the early years it was not a very popular topic of Interest, but the covid situation diverted our attentions towards nutrition and its powerful Impact on health.

Study design: The nutritional status of a person starts developing from the day the child is in the mother's womb. The major part of the nutrition begins from the day the child is born and the breast- feeding is the first source of the food and Nutrients. This research is going to help us understand the different patterns of nutritional upbringing of a child living with the family and the foster child. We will also look at different factors related to food and their sources and education that are affecting the Psychology of a child when it comes to food.

Findings: This is going to be a comparative study and the comparison will show the core effect of knowledge and education a child must have come across during his learning and adapting era. Some other sources must have bought major changes. We will come across the awareness of food and its impact on the children. The targeted age group is 8-15years

Research implications: After the evaluation of the data, we will come to know the importance of educational awareness required in the field of nutrition and the factors affecting on daily basis.

Social implications: We will be able to conduct awareness program in schools, colleges, NGO's, societies and respective areas once a year with a proper sop and informative data related to nutrition and its importance in day-to day life.

Keywords: Nutrition, awareness, NGO's, Anganwadis, Nutritional upbringing

INTRODUCTION

Nutrition is a major environmental influence on physical, mental growth and development in early life **(nicklas ta1973-1988) (resnicow 1998).** Our relation with food has been a long journey and is a continuous process. Nutrition contains many constituents like macro and micro minerals, proteins, carbohydrates, fats, vitamins that are required for the vital metabolic activities of life.

Food is like a medicine before any illness. Controlled diet can bring a lot many changes in an individual's life. It is very important for a person to understand what is good for him and in what quantity.

Nutrition plays a very important role in the entire growth of a child. There are many factors that might affect the nutritional status. Dietary and physical activity behaviors, that affect health is influenced by a wide variety of forces.

When we were kids, our mothers or our grandmothers used to feed us, they knew exactly what, when and how much to feed. As soon as we grew up the controls were in our hands and we started controlling our diets. Many times, it used to happen that the child comes home and the domestic workers feed the child. In many educational institutes the schools provide the lunch. There were times that the child used to get influenced with the food by sharing tiffin box with friends, or at times they use to chat and just get influenced, come back home and ask their parents to feed the same. Now here is a chance that a parent may take the kid out and expose them to junk foods or they may try and make them understand that the same type of food can be prepared at home with a better hygiene and ingredients. Sometimes outings are good but making them an excuse for not cooking and just going out and

having food makes it sound like both the foods are same the home cooked as well as the outsourced ones.

Agricultural progress in the last decade has made india self-sufficient in major food grains, yet under nutrition continues to be major nutritional problem especially in rural population.

Malnutrition is the most threatening, widely discussed as well as counted topic in children. Due to malnutrition or prior illness children who reach adolescence are frequently compromised in health and development. Low-income adults are at increased risk of occupational injury or diseases. Childhood and adolescence are critical periods for promoting social and emotional development **(nihcm, 2005).**

Parental death in childhood affects the child's well-being in various ways. The loss of economically active adult lessons the domestic income in a family and makes the child vulnerable immediately **(crampin et al., 2003).**

Urban malnutrition is an increasing global problem **(kimani 2010, fotso 2007)** being more severe among children living in orphanages. Nutritional reduction leads to immune compromise, resulting in recurrent and increasingly rigorous infections which further compromise nutritional intake ultimately may threaten the child's survival **(flank 1996)**.

Identifying perceived needs and barriers to healthy dietary behavior contributes to adequate program development **(nicklas ta)**. Identification of students as well as teacher's attitudes towards perception of food and nutrition, including motivation, is an important element in the early stages of program development. Schools

provide the most effective and efficient way to reach a large segment of the population including young people, school staff, families, and community members **(roe l 1997, who, european network 1993)**.

SCHOOL BASED NUTRITION EDUCATION SHOULD:

- Address the needs and interest of students, the teachers, and the school **(who, dixey r 1999).**

- Extra-curricular activities are challenging but should be included in the academic as a course i.e. school gardening, developing cooking skills and other workshops and seminars **(dixeym r, 1999) (perez – rodrigo c 1997) (nickals ta, 1997).** In corporation of self-evaluation and feedback can be effective in interventions for older children **(lytle la, 1995).**

Implementation is a complex and usually a slow process. Outcomes of the intervention depend on the degree of implementation and fidelity to the intended plan. Teachers often complaint about the lack of explicit curriculum, suitable materials or training experience. **(dixey r, 1999) (urbic b, 1999) (valentine s, 1999)** Teacher training conceptualized as a behavior change process with explicit teacher motivation components can promote effective implementation of behavior change curriculum in the class **(kealey ka, 2000).**

As described by – Baranowski and colleagues, school organizational characteristics can moderate effect on outcomes of school health promotion programs **(baronwski t, 1995) (weber cullen, 1999)**. School meals and breakfast programs **(gordon ar, 1995)** show their contribution to total daily intake at the potential for intervention. This includes a pleasant room, healthy atmosphere and plenty of time to enjoy healthy food in the school, either provided by the school or brought from home **(ada. Position of the american dietetic association,2000) (collins patman b, 1995).** Training of food service staff, school policies that enhance this framework and training of adults who have dining room supervision responsibilities are important elements in this content.

Low-income adults are at increased risk of occupational injury or diseases. Childhood and adolescence are critical periods for promoting social and emotional development **(nihcm, 2005).** Development during the first two years of life is crucial and has a lasting impact on child's health **(yue et al., 2016)**.

Modern societies have evolved into complex environments that appear to support unhealthful patterns of eating and physical activity. These environments have developed over decades and even centuries, and we are just beginning to understand their negative effects on health **(sarah l).**

To talk about the government provided food in the NGO's, Anganwadi and government schools needs a special attention in terms of food related education and application. Where in the children who are not depended on the government for everyday meal, should be given proper knowledge of what, how and when the meal

is consumed. These children are always the privileged ones and certain times do not value and respect the food they get. If we see, in both the cases the parameters and factors that affects the children's nutrition and wellbeing are different and leads to malnutrition and obesity respectively. The problem is not discussed socially and should be given the importance.

The initiatives like:

- The infants in the school should be introduced with a special topic of nutrition and its effects on the body.
- The parents in the house should not make the children lose the respect for the food.
- The certified youngsters should invest a little time in providing the awareness related to nutrition and food amongst the children who cannot afford the private education.

The initiatives to bridge this gap between education and nutrition is developing inside every young blood which needs a step and support to bring this in society. To understand this gap, the research on "Awareness of Nutrition" is performed which will help us to understand the loop holes that needs to be filled and developed according to the needs and problems faced by the individuals which are still not in the public talk.

REVIEW OF LITERATURE

Societal variables are seen as the context or background within which all the other variables interact. These variables are not likely to be changed in short term. Overarching societal influences include competition for time, trade-offs between multiple goals, economic rather than health motivation, and extreme demographic diversity. Societal assumptions that appear to characterize most of the cultures include the higher value placed on individual rights verses the common good and the concept that "More is Better". A better understanding of such variables may help us predict which environmental policy interventions are most likely to be accepted or resisted by the population.

Children are "… Disproportionately affected by many of the environmental challenges in poor urban settlements…", due to youngsters' physiological vulnerability and urged to play even amid hazardous conditions (Bartlett, 1999) (Alice Sverdlik, 2011). Profound risks to children often stem from informal settlements inadequate sanitizations, water and housing, minimal access to healthcare and they may be link to "…A high prevalence of extreme poverty, insecurity and violence" (Garenne, 2010) (Alice Sverdlik, 2011).

As reviewed, it states in the city of Vellore in India, nearly 400 babies in three informal settlements were followed for their first year of life, by which time all accept one had fallen in. (Glad stone, et Al. 2008) (Alice Sverdlik, 2011).

Leading causes of under-five mortality included Pneumonia (18%), Diarrhea (15%), Malaria (8%) and AIDS (Alice Sverdlik, 2011). These figures do not include

deaths due to under nutrition, another major concerns in slums. Although often preventable or easily treated, these conditions are wide spread among most urban children living in informal settlements – but the range of illness and relative importance of hazards still vary widely between settlements. (Alice Sverdlik, 2011)

The respondents were ill for one fifth of their infancy, usually with respiratory and gastrointestinal conditions. Infants average 43 days per year with respiratory illness, far exceeding the median of 8 days of gastro intestinal illness. (Glas stone, et Al. 2008)

Pojda and Kelly, 2000 States that one third of babies born in India are of Low birth rate (LBW) (<2.5 kg). In addition to short term consequences, such as high infant mortality and growth failure amongst survivors LBW carries long term risk in the form of high rates of adult coronary heart disease and type 2 diabetes (Barker, 1998). In India poor fetal growth has been attributed to wide spread maternal under nutrition (Gopalan, 1994). It is also stated by (Kramer 1993) protein and energy supplementation have produced variable results. Therefore, understanding maternal nutrition and fetal growth relationship is critical. Dietary intake of energy and protein of rural Indian mothers are known to be low (Bhatia et al 1981; Grover 1982; Hutter, 1996; Rawatani and Varma 1989; Vijayalaxmi and Laxmi 1985; Vijayalaxmi et al 1988) and they are often engaged in high level of physical activity. They also conducted a prospective study on rural mothers (n = 633, full term singleton pregnancies from 6 villages near Pune), to investigate the role of micro nutrients in determining birth size. Rural mothers were thin (41.7 ± 5.1 kg), short (151.9 ± 5.1 cm) and many were chronically energy deficient. [31.3% below

17kg per m/sq. body mass index (BMI)] before conception. Maternal intakes of energy and proteins were also low (7.40 ± 2.1 MJ, 45.4 ± 14.1 gram at 18 wk ; 7.0 ± 2.0 MJ, 43.5 ± 13.5 g at 28 wk) and were only 70 to 75% of the recommended intakes throughout gestation. It was interesting to see that maternal intakes of these macro nutrients were not related with birth size (Rao et al 2001).

Similar findings were reported in India as reported by Shukla and Shukla 2011, were more than half of the children living in orphanages were malnourished irrespective of their age and gender. This study observed that boys were more likely to be malnourished than girls in the orphanage. The result for this research were like another study documented in Uganda (Wamani et al., 2004) which found that males were more vulnerable to poorer nutritional outcomes and were more vulnerable to food insecurity in the orphanage. In this study, Adolescence aged 15 to 18 were more affected. It must be noted however that good nutrition during adolescence is critical to cover the deficits suffered during childhood. The findings of this study were significantly different from another study by Mashkoor and Ganesan (2016) which showed that, the nutritional and health status of institutionalized orphan children of the age group 13 to 18 years was not far down compared with different nutritional health standards. The study also reported that the orphans suffered most from malnutrition up to their first four years of staying in the orphanage. With increasing duration of stay at the orphanage, malnutrition gradually declined, but peaked again in the preadult age of 5 to 18 years as the orphanage could not afford the nutritional requirements of adolescence children. About 200 million children worldwide failed to attain their cognitive and socio-

emotional potential because of malnutrition, micro nutrient insufficiency and lack of motivation during early childhood (Mwaniki & Makokha, 2013). In this case study it also reflected that orphans having no parents alive experienced significantly higher malnutrition compare to those who had at least one parent alive ($P<0.05$). (**Shobha Rao 2001**)

A Longitudinal Research was conducted by the biometry and nutrition group on maternal nutrition and fetal growth, nutritional status of adolescent and pre-school children in rural populations around Pune.

Early life Nutrition in India, calculated that one third of babies are of low birth weight (LBW) (< 2.5 kg). After adjusting for major confounding, regression analysis showed that birth size was strongly related to consumption of green leafy vegetables and fruits at the 28th week and milk at 18th week of gestation. When the researchers did a parallel study on the urban mothers, they had low intakes of proteins and energy in the 18th week of gestation due to nausea but were able to increase at the 28th week, unlike rural women. In their study, energy and protein intakes were not related to birth size but the fat consumption was related to birth length, birth weight and triceps and skinfold.

The comparison of both the studies on rural under-nourished women and affluent urban mothers highlight two important issues, that consumption of fruits with birth size was significant throughout gestation when maternal where low in rural mothers as well as in early gestation of urban mothers despite large difference in pregnant nutritional status. There is a clear need for Nutritional Intervention Programs in

India. For pregnant women, the fetus birth weight will improve by improving the supplementation quality and is likely to reduce the risk of adult diseases (**Shobha Rao 2001)**

A longitudinal growth study on preschool children marked negative value ever and observed that the age class of 18 to 24 months which then stabilized beyond 3.5-year age for both the sexes. In the rural preschool children, it was observed that, at 10+ year and 15+year age subsequently in another growth study on adolescents, the heights attained by children of these ages are given by their nutrition status in early life. The difference attained heights at 10+ year for normal and stunted children, if stunting occurs in the first two years of life and increased to 8cm , and if beyond 3 years of life the deficits were similar even at 15+ year which is spurt age for rural children this indicants that initial 3 years of life are critical and the rural children may miss the second opportunity for the catch up growth during adolescence in early life due to stunting beyond 3 years of age .The observation indicated that the supplementation may not be beneficial and there is a need to concentrate on the existing intervention programs on covering children below 3 years of age thus appropriate feeling weaning practices in infants and toddlers are the critical window of the first 3 years and it can be achieved better by creating nutritious awareness among rural mothers then by distributing food supplements(**paper2. Shobha Rao**).

(Joshi et al 1998: Rao et al 1998 a, b, 2000b; Kanade et al 1999) stated that Majority of rural children enter Adolescence with poor nutritional status and which is known to be, “Second opportunity” for growth of children experiencing nutritional deficits as it facilitates catch up growth in their early life. (**Shobha Rao**

2001) made a study, carried out during 1992-1998 related to Adolescence which compared their normal counter-part, the differences at the start of height (8cm) and weight (4kgs) for 11 years age which almost increased 10cm and 12kgs by adulthood. Hence, it states that Adolescence entering with poor nutritional status affects final adult size and hamper the capacity for catch up growth.

Further the above Author also states that the data on growth helped us to investigate the velocity curves for under nourished and normal boys. The observed differences in the maximum velocity for height or weight were not prominent but significant for ages at which maximum velocity occurs. Thus, more than growth rates, the timing of peak weight/height velocity was more sensitive to under nutrition.

I(Agarwal et al 1992; Dasgupta and Das 1997 and British Data (Eleventh and Tanner 1996) shows that the rural boys have significantly smaller leg length compared to British children. When compared the difference in final adult size, for leg length of rural boys was only 3cm but was 8.4 cm in case of sitting height. It appeared that growth in leg length is influenced by postnatal environment. The hypothesis by them that sitting height is influenced by prenatal nutritional environment while leg height is influenced by postnatal nutritional.

The retrospective nature of observation based with which the theory of fetal origins is proposed, overlooks the confounding effect of lifestyle an environment factors for determining the adult diseases risk. **(Shobha et al 2001)** have discussed the results clearly which indicated that most rural children continue to grow on a lower growth trajectory with low attained height and weights when as compared to their

normal counterpart, and end up as small adults. They may be some amongst who may have the opportunity for catch up growth in postnatal life and may end up as tall or even fat adults. The theory also says that the short-term perturbations such as changes in diet or illness may temporarily disturb homeostasis. Her research highlighted the re-examined need for the existing programs, ensuring logistics, feasibility and identifying there limitations rather than proposing new programs.

According to, **Laili Rahayuwati et al: 2019**, the problem of malnutrition specially on children remains overlooked, caused by various factors. A descripted quantitative with cross-sectional approach, research was conducted that support family planning. The quantitative analysis of univariates using percentage and frequency distribution. The result of the research showed that nearly all toddlers have good nutrition status as much as 87.9% and toddlers with malnutrition as much as 10.6%. The analysis factors shows that there is a relationship between the mothers age (P=0.048; or = 1.583), family income (P = 0.010; or = 1.803), delivery complications (P = 0.008; or = 2.091), provision of exclusive breast feed milk (ASI) at the age of 0-6 years old (P= 0.000; or = 2.321), provision of exclusive breast milk and complimentary feeding given to babies before six months old (MPASI) at the age of 6 months to 2 years old (P = 0.002; or = 2.037), and the child's history of hospitalization. (P = 0.008; or = 2.055), with other factors that are considered irrelevant. This research suggests that the healthcare staff collaborate in providing knowledge to mothers on the provision of exclusive breast milk and complimentary feeding as well as the prevention of illness on their children (paper 9).

As per the google record the data states that, in 2019, India had 6.2 crore more people living with food insecurity, which increased by 3.8% between 2014 and 2019. In 2020, India is home to nearly 200 million undernourished people. The COVID-19 pandemic and subsequent lockdown has made food insecurity worse by disrupting the food distribution system across large parts of India.

In 2019, NITI Aayog's 'Strategy for New India @ 75' report found that India's main nutrition program platform, Integrated Child Development Services (ICDS) has inadequate focus on the first 1000 days of the child's life. This report argued that the program mainly delivers services to children aged 3 to 6 years old, whereas children under 2 to 3 years of age should be given the highest priority to ensure optimum growth and development among young children.

Several studies have identified poor access of food and vegetables among major determinants for low consumption. This has led in recent years to develop programs aimed to increase intake of fruits and vegetables, which base their intervention strategies in the distribution of fruits and vegetables in schools. The strategy has proved to be effective (Eriksen et al, 2003).

School based nutrition, education should focus not only on nutrition information, but also develop skills and behaviors related to areas such as food preparation, food preservation and storage; social and cultural aspects of food and eating; enhance self-esteem and positive body image and consumer aspects (Dixy et al, 1999). In these studies, teachers were responsible for curriculum

implementations and were supported by qualified programme staff (Perez-Rodrigo and Aranceta, 1997; story et al 2000).

An initiative taken by Triali Shah, Anup Mishra et al 2010) where the aim was to evaluate the impact of school-based health and nutritional education program on knowledge and behavior of urban nation Indian school children. Around 40196 children (aged 8-18 years), 25000 parents and 1500 teachers were educated about health, nutrition, physical activity, non-communicable diseases, and healthy cooking practices. They used a pre-test questionnaire to assess randomly selected 3128 children, 2241 parents and 841 teachers before intervention and 2329 children after intervention. Low baseline knowledge and behaviour scores reported in 75-94 government and 48-78% private school children across all age groups.

The present case study is selected based on reviews on the related topic integrated childhood development services (ICDS) program implementation in an urban slum of Delhi, India. According to the review on original research article made by Jitendra Kumar Meena, 2017 on evaluation of Integrated childhood services (ICDS) Program implementation in an urban slum of Delhi, India states that the unveil poor infrastructure coverage and community participation for ICDS Services. It was found that the AWW's workers were unskilled, underpaid and overburdened which affected the effectiveness of the scheme.

Also, it says that the inadequacy in the training of AWW's and irregular monitoring has led to mis-utilization of existing resources. The conclusion of the ICDS research

says that regular trainings, finance alternative and securing improved community participation (Jitendra Kumar Meena et.al 2017) .

From the above reviews it is observed that different parameters were studied but the aim and objective of the authors were in relation to the effects that occur due to improper nutrition. A small attempt has been made to include a review of recent literature relevant to the present work that includes an initiative focusing on the core cause of Nutritional and Medicinal properties of the Growth and Development of the Children from the private and government schools, government organizations and orphanages from the present study area.

MATERIAL AND METHODOLOGY

STUDY DESIGN

The data collected was as a part of dissertation for the MSc in Nutritional Sciences and dietetics. The present study titled "Nutritional Awareness Among Children (residing in orphanages and children residing with the family), Aurangabad (M.S), India., is based on the nutritional habits of children of age group 8-17 years (n 40 from each group) i.e., Infants and adolescence from private schools and sectors and from Anganwadi's, NGO's, Orphanages. This research, conducted is to understand the current nutritional status and to some extent understand the knowledge and understandings related to the Nutritional Awareness amongst the children. This research will also comply on the education that they are getting from there respective place of education (i.e., schools, NGO's, Anganwadi's, Social media

Handles). It will help understand that what all things that are basic in terms of nutrition (like proteins, carbohydrates, fats, energy) are they majorly aware of.

SAMPLING DESIGN

Initially, a common questionnaire was prepared for both the divided groups. This was a detailed questionnaire and all the information recorded, on google forms. The schools, NGO's, Anganwadi's and Orphanages were very cooperative. They were very helpful and coordinated well in terms of their Official work timings and the timings for the Data collection. The private team and owners managed the Private Schools. Not all the school's catered to the Children. The food service was optional for the Children studying and can choose according to their preference's wherein the Government sectors provided them the food like if we consider the Orphanages and Anganwadi's they had many people connected with them who donated food on daily basis and for the meals which they had to prepare they get funds. They prepared foods that were low in cost and purchased in bulk as the dependent people on that meal were many. Also, the people who donated food do not think wisely and go with budget related options which detorieates the quality of food and hampers the nutritional status and health of the children. This happens because there are no age criteria considered for the preparation of food as every age group demands different type of nutrition in terms of energy, protein, carbohydrates, fats.

ASSESSMENT QUESTIONNAIRE

The questionnaire was prepared for both the groups, and the questions were selected considering the availability to both the groups on the daily basis. It was divided in

segments where the questions asked were related to their biological, psychological, and emotional behavior. The questionnaire also asks for their normal routine-based behavior like nails, skin texture and hair quality and count of their meals per day. All the questioned asked to be answered were mainly multiple-choice questions and the one-line answer questions were asked to be answered only to understand their knowledge related to Nutrition.

REGION OF THE CONDUCTED RESEARCH

Population of Aurangabad: Located on a hilly upland terrain in the Deccan Traps, Aurangabad is the fifth-most populous urban area in Maharashtra with a population of **1,175,116** ,(fig 1,fig 2).

Millets the staple food of Aurangabad has taken over the market, as it is largely cultivated in the farms,(fig 3). Staple vegetables include Onion, Brinjal, Ladies finger, tomatoes. There is wide availability of wild edible leafy vegetables called as “Ran Bhaji”. Because of lack of information people do not know the benefits of consuming these leafy vegetables. This is creating a slow impact on the health of people and they are getting exchanged with the latest trend of available exotic international fruits and vegetables.

Milk is the major source of calcium. As per google, the status of dairying in Aurangabad district of Maharashtra, was studied. Dairying have had greater stake to the human health by supplying almost all essential nutrients and micronutrients available in milk & milk products.

There was 14.66% increase in population of cow and buffaloes from 2003 to 2007. The productivity of dairy animals is very low.

Only 129 ml milk is available daily for adult person in Aurangabad district. The projected milk production in the year 2011-12 is 477000 liters. There is the deficiency of 539380 liters liquid milk daily in Aurangabad district for the nutritional security of an adult person by considering recommended 275 ml daily average milk consumption. The urban and rural divide in milk consumption pattern was studied. The liquid milk consumption in Aurangabad city ranged from 200-500ml, while it is 50 to 100 ml in village people. The consumption of liquid milk in urban and rural population found inequitable. There was 34.59% reduction in area under the agricultural crop since 1960-61. This has a strong dependence on availability of fodder for the milch animals as most of the agricultural crop residues are used as an animal fodder. Due to an increase in demand supply gap, the incidences of adulteration in milk are also on rise. The urgent policy attention is needed to increase the production of milk.

PRE-INTERVENTION KNOWLEDGE AND BEHAVIOUR ASSESSMENT

The information served as a baseline data was that amongst the Anganwadi and the Private school kids. The data was 40 each for both the age groups.

MATERIAL AND METHOD

The present area of work is Aurangabad city (M.S) India. The Author selected this region is due to the average literacy rate which is 87.49% and lack of nutritional information in Schools, Orphanages and Anganwadi's and among the public.

A detailed and systematic study is required to create a Nutritional Awareness Program which will be a guide for the people to understand about the local available nutritious fruits and vegetables that are essential for the growth and development during early and cognitive development among the selected age group of children. Keeping this in view the present study was conducted as a small attempt from the region to identify the loop holes and overcome them by getting the right information which will bring to light some interesting data on nutritional and medicinal vegetable and fruits.

During the study periodic visits, the trips were conducted in different schools, Orphanage's, Anganwadi's, NGO's and interacted with the authorized person, (fig4,5). The information was collected from three Private school, 1 Anganwadi and 1 NGO run by private owners and government respectively.

In private schools the author visited personally to the study area where the age group was similar and the seminar was conducted through presentation in the classroom where the information was collected through the google forms filled in the form of personal interaction. Also, in the end of the data collection the students were informed through presentation about the importance of food and nutrition.

For Anganwadi's and Orphanages the author visited the place, but the criteria for the age group was varying so the collective children of age (8-17 years) were grouped together and the seminar through presentation was conducted and the google forms were filled through personal interaction.

Also, in the end of the data collection the students were informed through presentation about the importance of food and nutrition.

RESULT

The chapter is mainly concerned with the result obtained during the study of Nutritional Awareness among the children of age group 8-17 years from private and Government sectors. The main objective of this study is to create the Nutritional Awareness of locally available fruits and vegetables essential for the overall growth and cognitive development of children.

Nutrition is a basic human need and a pre-requisite for healthy life. It is the science that deals with all the various factors of which food is composed and the way in which proper nourishment is brought about. A proper diet is essential for very early age of life for growth, development, and metabolic activities. Green leafy vegetables occupy an important place among the food crops as these provide adequate amounts of vitamins and mineral for human

During the survey it has been observed that the study area is rich in wild leafy vegetables (Raan bhaji) and crops mostly all types of millets rich in fibers. For agricultural practices the yield of land does not meet the demand of edible all around the year. The water of the city is hard water which makes the water suitable for the preparation of alcoholic beverages and makes it the city of brewers which is the reason that makes the city water scarce and decreases the agriculture practices. Also, there are some natural sources of water like lakes, ponds, and groundwater but they have been declared un-fit for domestic use.

The locally available fruits and vegetables which are brinjal, onion, tomatoes, wild edible green leafy vegetables, millets are available to the local people of the city. The people with low economic status consume the locally available food on daily basis but still the nutritional status has not turned out up to mark. They consume the healthy food but forget about the other factors like hygiene, sanitization, use of proper oil, cooking at proper temperatures, storage methods, fermented food storage methods which makes them vulnerable for hampered immune system.

The people with high economic status have the excess to things which the low-income people cannot afford. The use of modern techniques in cooking has increased the risk of diseases and early life complications in the people. These people consume expensive fruit juices and syrups, packed and processed foods, easy to cook foods, instant preserved foods, factory fermented foods, use of vegetables and foods without washing them, improper practices of cooking and not using the local available foods in the diet thinking that they might not be healthy, or they are very low cost and available in large quantities making them cheaply available and also at times the social presentation which makes them choose unhealthy options.

Comparatively it has been observed during the survey is that in both the sectors, the economically rich and economically challenged people there is lack of Nutritional Awareness which is the root cause of malnutrition, obesity and challenged immunity in children of selected age groups.

Due to lack of proper nutrition children suffer from diseases like Iron Deficient Anemia, diseases of gastrointestinal track, Gout, Liver, cirrhosis, fatigue etc., due to illiteracy they do not visit doctors and are superstitious having blind faith.

As per the reviews it has been observed that many National and International studies have been done by various research workers by selecting different villages and cities. Our research has been focused on Nutritional Awareness among children and the data is collected through google forms which has been represented graphically.

DISCUSSION AND CONCLUSION

The present deals with the discussion and conclusion in relation to the survey area and the selected parameters of Aurangabad (M.S), India. This is a small effort made by the author to record the valuable information of selected nutritional diet among the children.

In the present survey the information collected through questionnaire for the Private and the Government sectors. They have given us some common areas of Nutrition where awareness and development are required.

Science is a basic subject that is taught in the schools from childhood where the basic knowledge of human body, functions, metabolic activities, study of animals and plants, is given in relation to nutritional habits. But in the present survey it is noted that there is a lack of information among the students in-spite of science being the important subject. From the early childhood the children are taught about the basic needs of life amongst which food is the one. All the basic constituents of

foods which are Proteins, Fats and Carbohydrates and their obtained sources are highlighted for generating energy and immune body system.

According to the survey report, most of the children suffer from constipation and the obtained percentage is 43.3%. The common problem of this age group is constipation that is directly or indirectly related to less water intake, diet and food habits. The frequency of the disease was yearly or half yearly. This can be due to change in Nutrition in relation to environmental condition or the seasonal changes.

Frequency of diet in these states have hampered the dietary choices by different means of culture, religion and superstition which classify them as vegetarians and non-vegetarians. This could also be a choice of result due to the economic conditions and availability which has a support of unproved myths and facts running in the society.

56.7% of the surveyed children stated that they consumed 2-3 full meals in 1 day which may vary. In this group of children, there was consumption of only 1 glass milk which links us to the question which states the present allergies or intolerances in the children. 43.3% of the children disagreed to any present allergies but the remaining percentage states that apart from allergies there were few intolerances and bloating after consumption of milk and wheat breads.

On daily basis the meals in the house prepared are 36.3% by the mothers no matter she is a housewife or a working professional. In the recent days, majorly both the parents are working. In a month 10% samples go on dinners at least once in a month. These outings and introduction of outside food to the children is from their families

as they go out with them which covers 46.7% of the record. These outing can be for the reasons like quality time, entertainment, stress relief, get together and an option for not cooking food at home after being tired from the daily routine. These factors can somewhere introduce children to easily available packaged foods for consumption when the parents are at work, or the children wants to prepare instant ready to eat foods like Instant noodles, 1minute Maggie etc. These foods are very flavorful, tasty, hassle free but have adverse effects on health if the quantity is not controlled. The children are influenced from the advertisements on the social media handles which bring them temptations. 6.7% respectively Meccans and Maggie have gathered highest votes for the favorites choice of food which creates an impact that advertisement, social media handles, cartoons also have influence on diet.

As per the survey records in the government organizations the following data has been collected based on questionnaires which states that 28.1% of the students are unaware about the information on Nutrition as they do not access to subjects like good teaching faculties in the government schools, they themselves do not have access to the schools, the staffs are not trained and there might not be a developed interest to this subject from the beginning of the curriculum. 43.8% children of this data are dependent for food preparation on NGO's, Anganwadi's and their mothers. 75% of the children are vegetarian due to which the source of Vitamin B12, iron,

Proteins are limited. The improper diet practices make 43.8% of the children vulnerable for suffering from constipation and diarrhea.31.3% of the girl from this age group has also complained about unbearable pain during the menstrual cycle. Their hampered Nutritional status has created an imbalance in their body due to

which 3.1% suffer from headache, acidity, stomach pain, and has affected their biological cycle at a very young age.

The complications mentioned above, makes them vulnerable for malnutrition and deficiencies like Vitamin D, Vitamin C, Vitamin A, Vitamin E, Vitamin K, Vitamin B which in some children is the reason for Androgenetic Alopecia, Cysts, Anemia, Genetic Disorders etc., which makes their living difficult. It also affects their skin and hair making them extremely dry.

The nail color defines the hemoglobin levels in the body and the record stated that 71.9% children had white colored nails stating their hemoglobin count affected. The nails also showed a brittle texture which may be a reason of no milk in the diet as 78.1% of children did not prefer drinking milk due to reasons like unavailability, economic condition, sources etc.

CONCLUSION

The study survey reveals the Nutritional importance of the nutrients in the diet of children of the mentioned age group of Government and Private Organizations. The overall conclusion states that there are various factors that affect the diet which are related to the Environmental conditions of the city. Hence, there is a need to emphasize on the sustainable Nutritional practices. Attempts should be made to Organize seminars, workshops, and educational events accessible to the AWW workers, teaching faculties of government schools, Anganwadi Caretakers for which the trainers having the proper knowledge of nutrition and its importance should be appointed. Therefore, the steps are needed to undertake extensive education about the importance of nutrition and balanced diet.

On a smaller scale the schools should conduct group sessions, informative presentations, making of study charts for signs and symptoms of diseases, discussion on foods and its health benefits, awareness about good cooking practices and temperatures.

Major changes can be bought after teaching the children to read the packaging, ingredients and expiry dates of the packages or tinned foods.

On a broad Scale each school that provide meals should appoint a Nutritionist to work on the diet of children and mark their diet cards filled by the nutritionist every week. The allergies and sensitivity of the children in the schools should be taken care as it may further lead to major diseases and complications. The counseling

sessions and seminars should be conducted with the mothers to create awareness about health and health benefits from foods prepared at home. The activities in the school for mothers and their kids should be conducted to teach them about kitchen gardening of herbs and veggies which has higher nutritional benefits.

The results of the survey are shocking as day by day we can see new hospitals coming up.

There should be special seminars conducted for the girls regarding the menstrual cycle and its correlation with the hormones. As the structure of the hormones and chemicals used in packaged foods as preservatives are same which may put our body in trauma and utilize both the preservative chemicals to work in the form of hormones creating severe changes in the body's metabolism. The diet plans should not be taken seriously only when a disease come across, it should be made a daily practice to live a healthy life and give birth to a healthy life.

In accordance to the same, small researches should be conducted for different ages groups, genders, areas, villages, cities so that data from different areas will be generated and can be bought to a common plan of development. There should be focus on more educational institutions coming up rather than upgrading the hospitals and clinics with the increasing number of diseased.

ADD QUESTIONNAIRE

MAHARASHTRA STATE

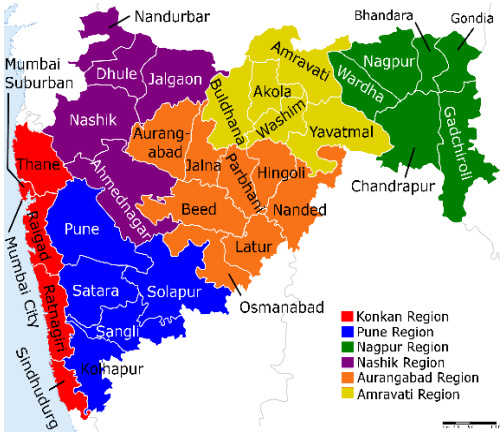


Figure: 1

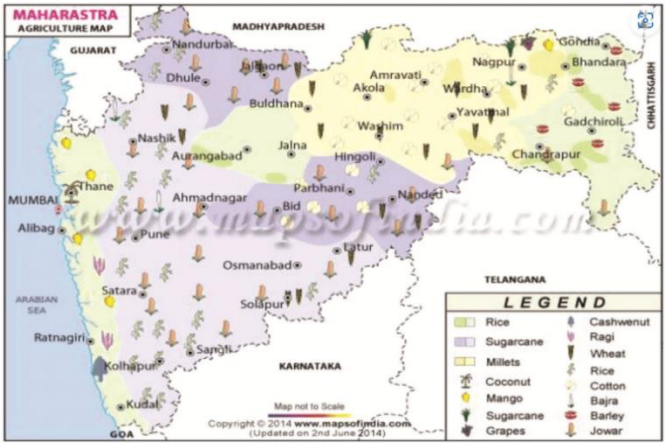


Figure:2

MILLET CROPS

Figure:3

SURVEY

Figure:4

Figure:5

ANGANWADI

PIE CHART AND GRAPHICAL REPRESENTATION OF PRIVATE SCHOOL SURVEY (FIGURE 6-20)

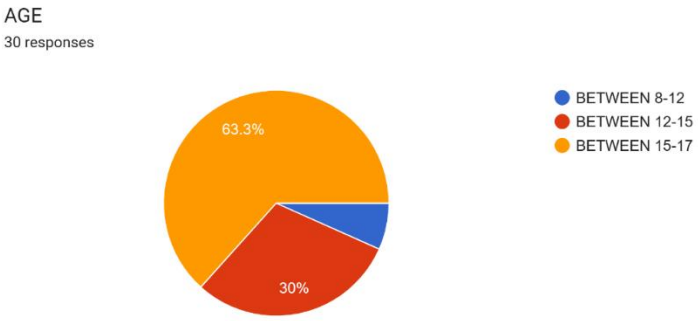


FIGURE: 6

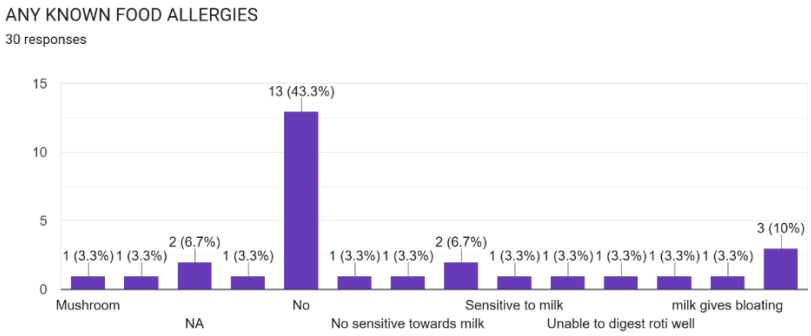


FIGURE:7

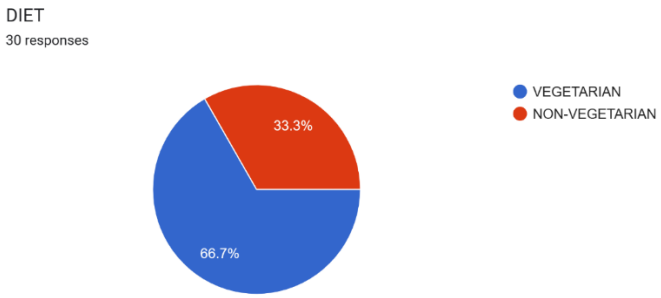
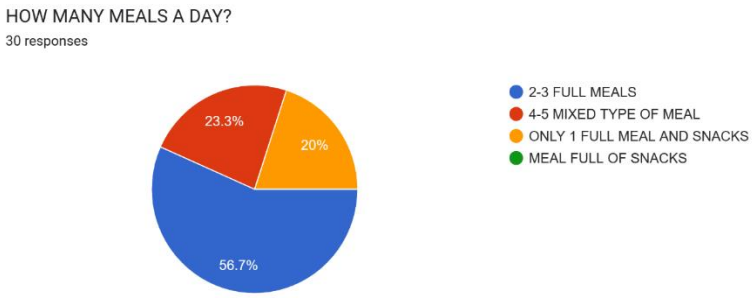


FIGURE:8



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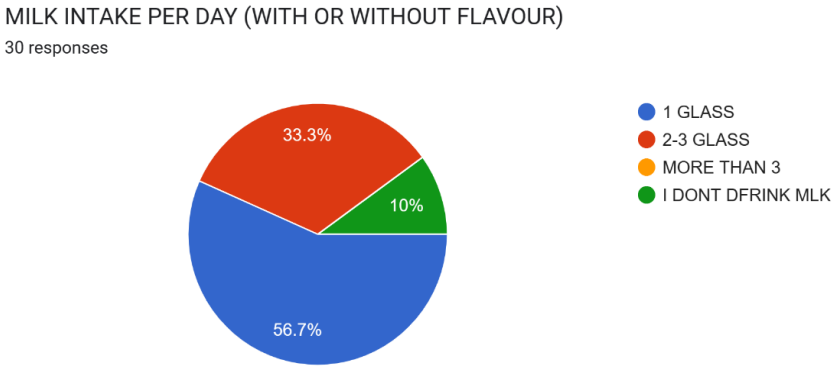

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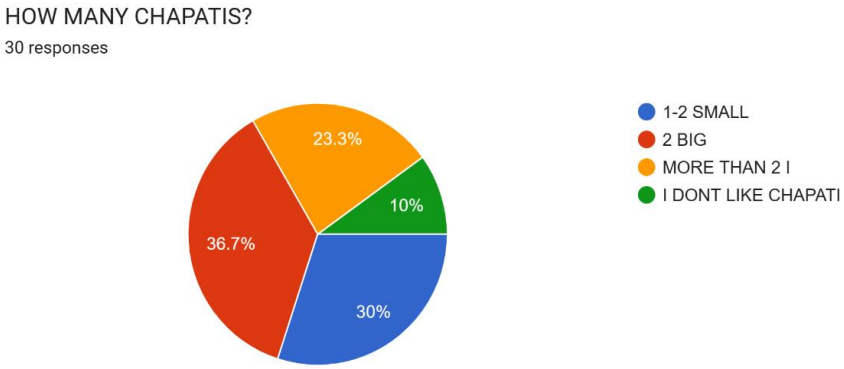

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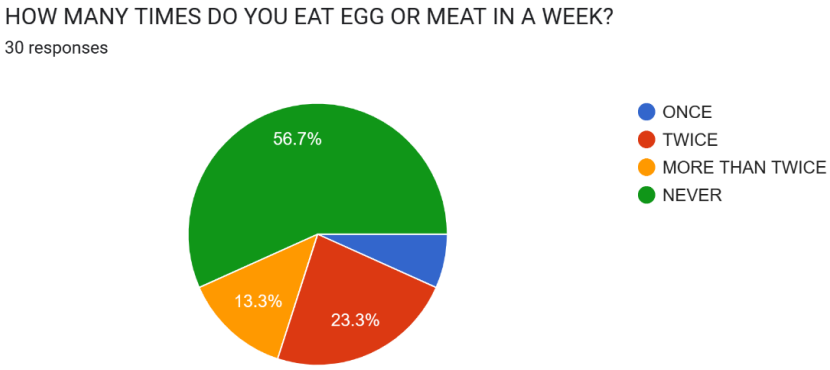


FIGURE:12

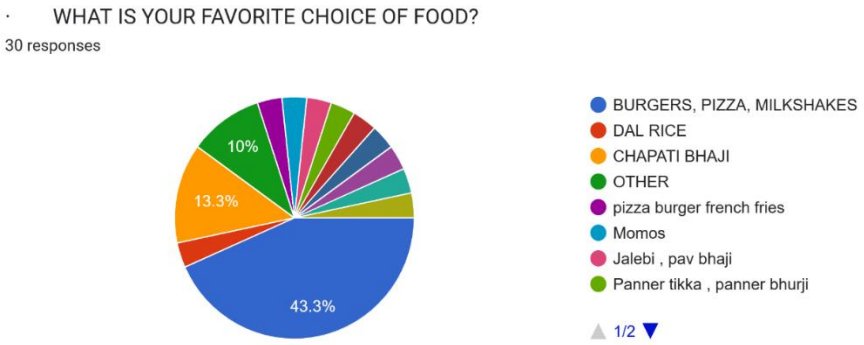
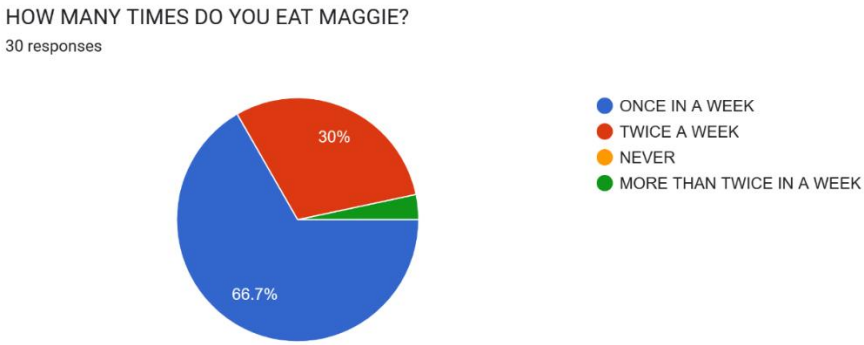


FIGURE: 13



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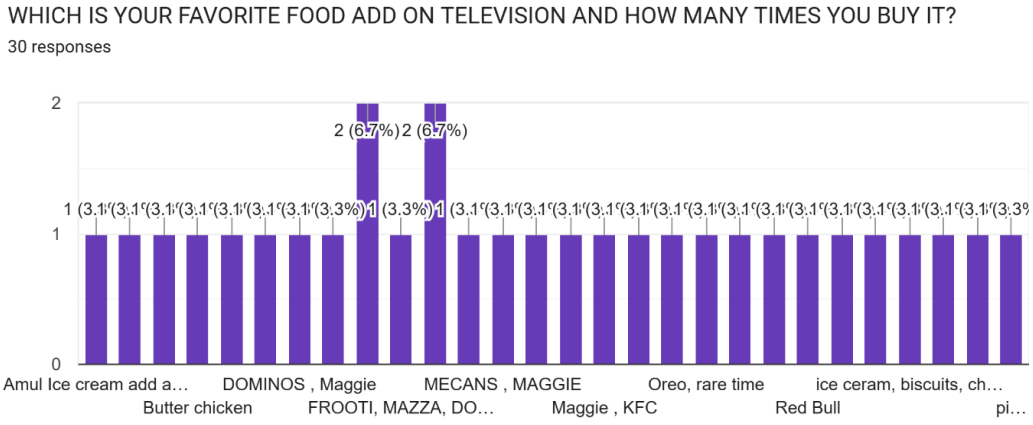

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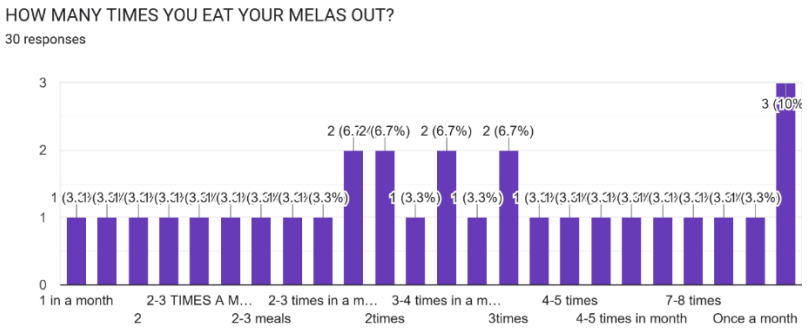

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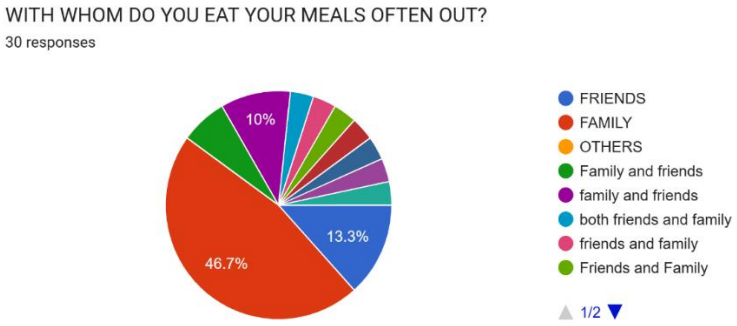

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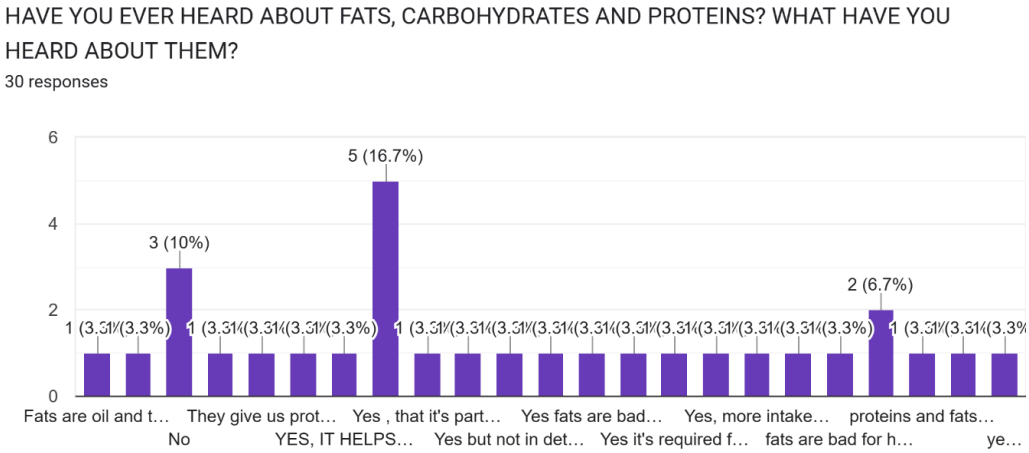

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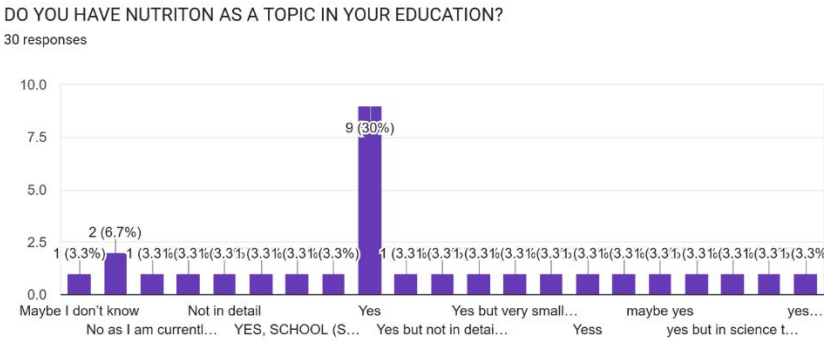

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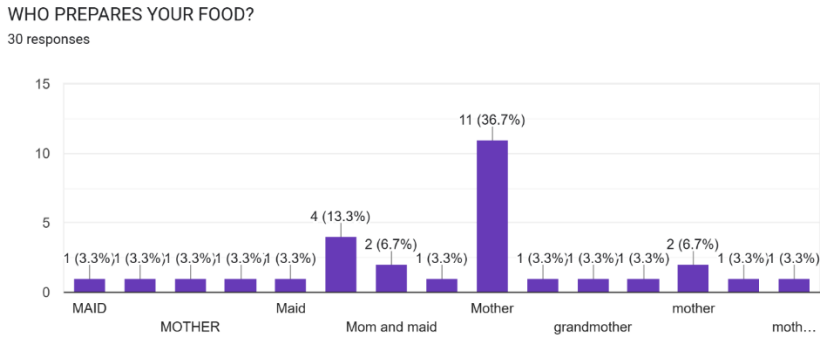
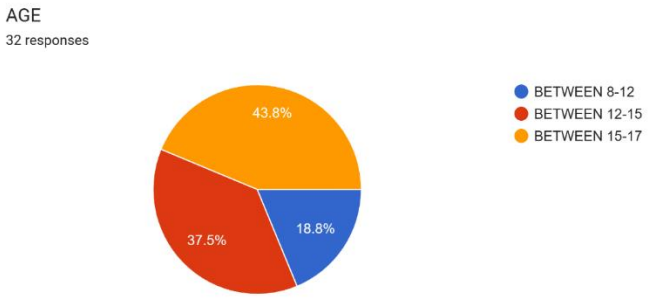


FIGURE:20

PIE CHART AND GRAPHICAL REPRESENTATION OF GOVERNMENT SECTORS SURVEY

(FIGURE 21-37)



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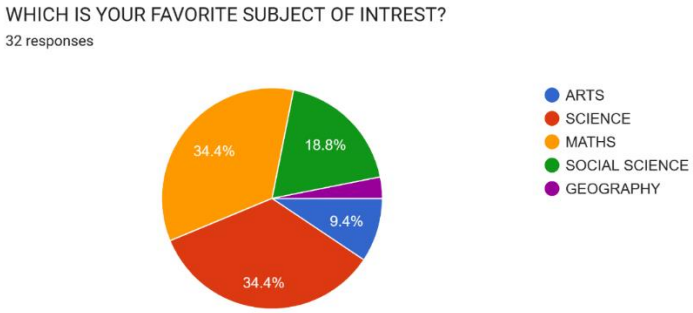

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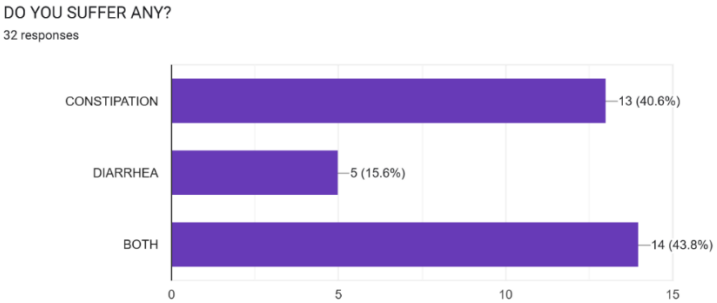

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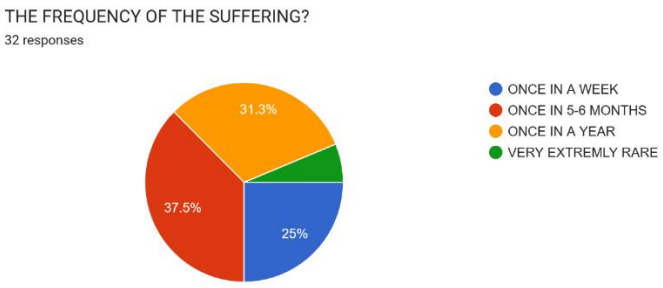

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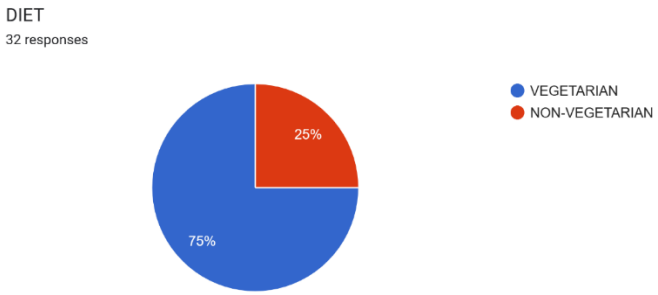

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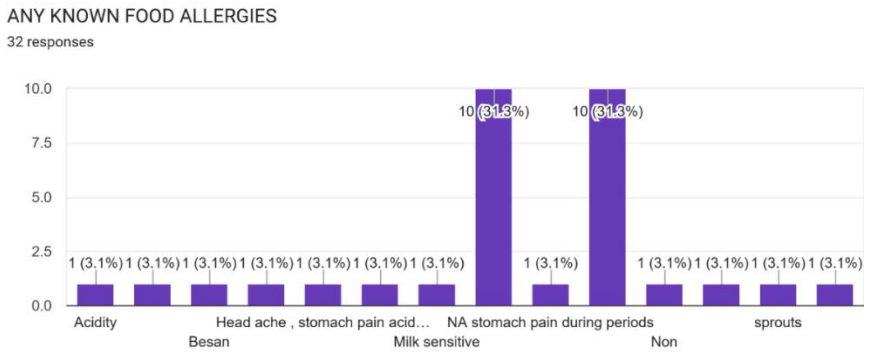

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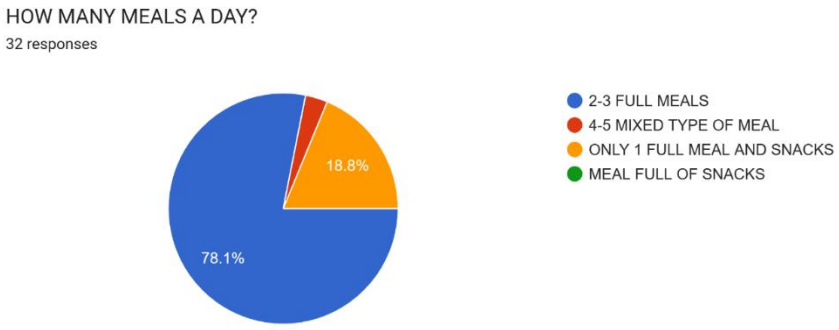

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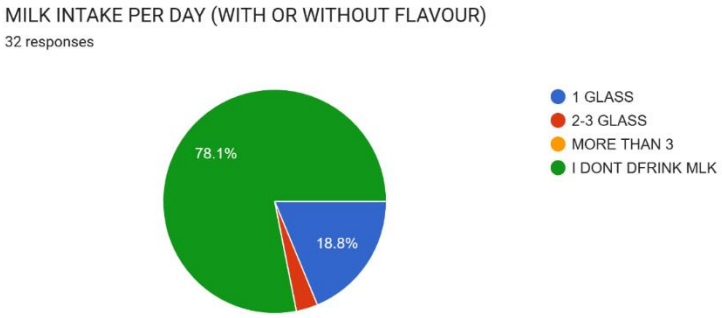

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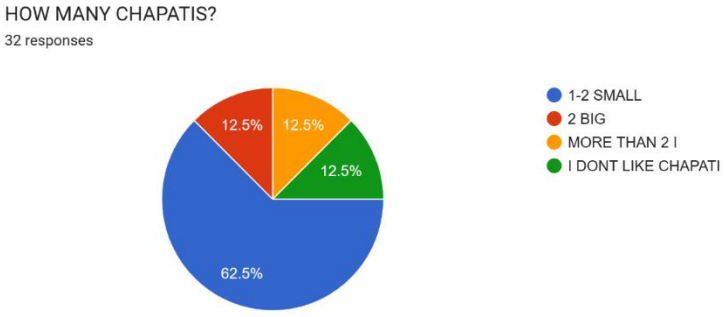
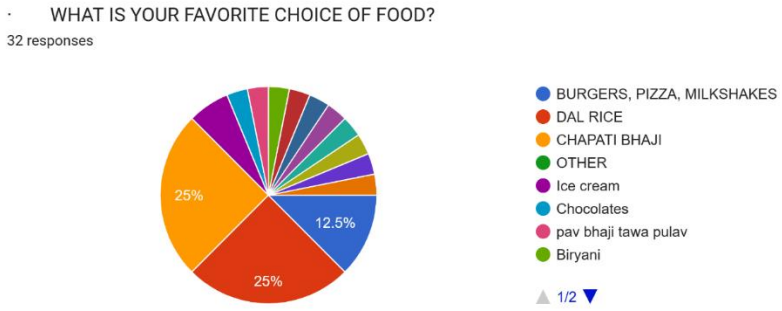


FIGURE:28

FIGURE:29



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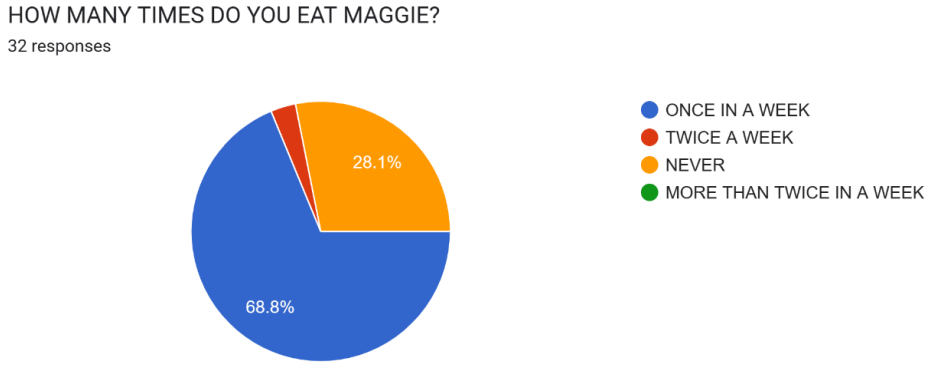

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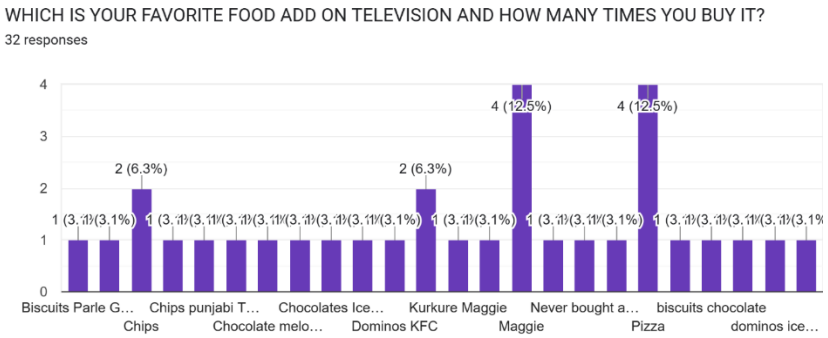
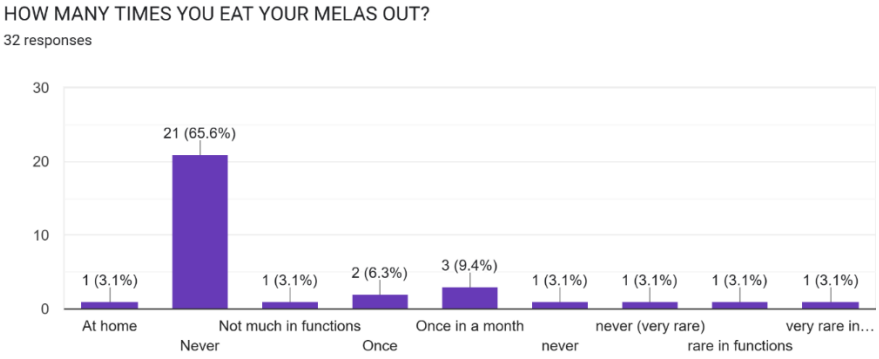


FIGURE: 32



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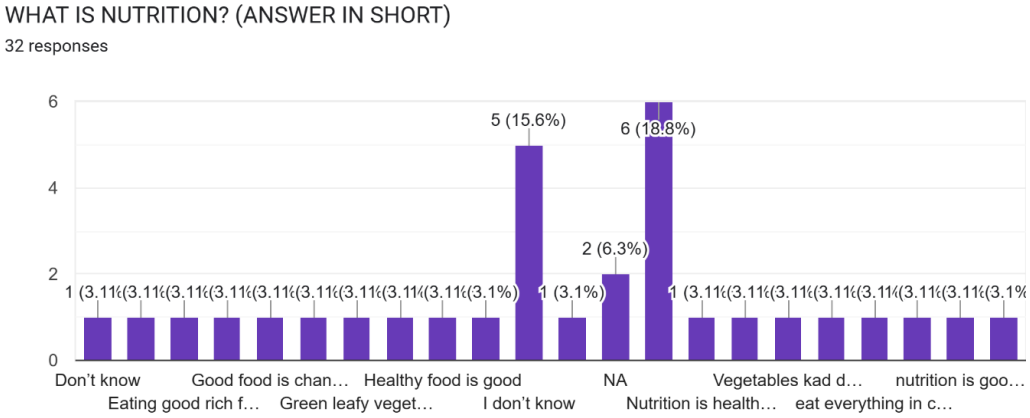

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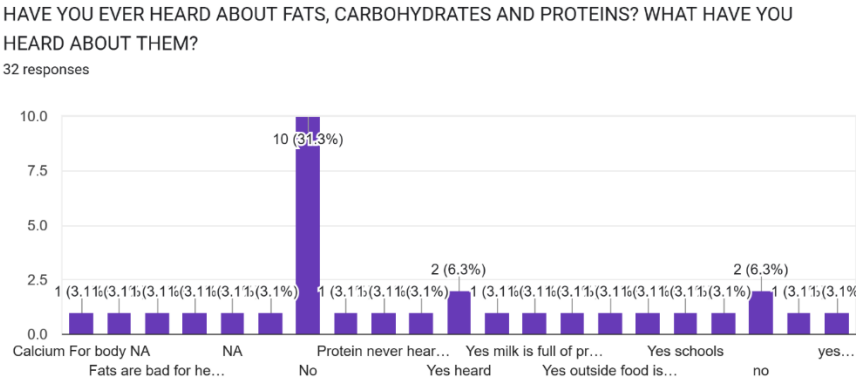

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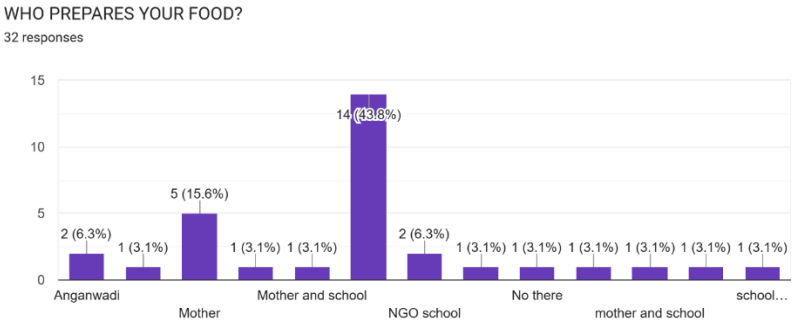

FIGURE:36

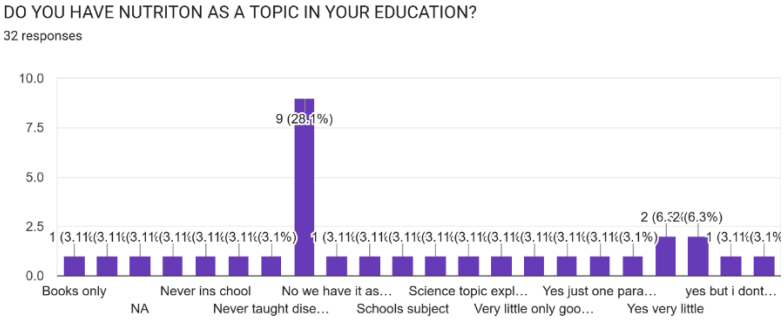

FIGURE:37

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