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"A Study to Assess the Existing Dietary Pattern Among School Going Adolescence at Selective Schools in Nashik"

Ms. Kajal Shivdas Ghegadmal[1], Ms. Priyanka Madhukar Dhanrao[2], Ms. Sukanya Ashok Gaikwad[3]

M.Sc. Nursing (Obstetrics and Gynecological Nursing), Assistance Professor SMBT ION Nashik
M.Sc. Nursing (Child Health Nursing), Assistance Professor SMBT ION Nashik
M.Sc. Nursing (Community Health Nursing), Assistance Professor SMBT ION Nashik

Abstract

Background: Adolescence is a critical period of growth and development, and dietary patterns during this phase can have a lasting impact on health. Understanding existing dietary patterns among school-going adolescents is essential for promoting healthy eating habits and preventing chronic diseases. **Objectives:** This study aimed to assess the existing dietary patterns among school-going adolescents, evaluate their anthropometric measurements, and correlate dietary patterns with demographic variables. **Methodology:** A descriptive research approach was adopted, and 30 adolescents were selected using non-probability purposive sampling from selected schools in Nashik. A 3-point scale checklist was used to collect data on dietary patterns, and anthropometric measurements (height and weight) were taken. **Results:** The study found that: Dietary Patterns: Majority of adolescents (83.34%) were non-vegetarian. Existing dietary patterns showed variations in breakfast, lunch, and dinner habits. Anthropometric Measurements: 86.67% of adolescents were underweight, 10% were normal weight, and 3.33% were overweight. Correlation: A positive correlation was found between age and dietary patterns. **Conclusion:** The study highlights the need for promoting healthy eating habits and nutrition education among adolescents to prevent chronic diseases and improve overall health. The findings suggest that adolescents require guidance on healthy dietary patterns and lifestyle choices to ensure optimal growth and development.

Keywords: Adolescents, Dietary Patterns, Anthropometric Measurements, Nutritional Status.

INTRODUCTION

Adolescence is derived from adolescere (Latin verb), which means 'grow to maturity.' This is a stage of life between childhood and adulthood during which the individual experiences rapid growth and development in the form of physical and mental, behavioral, emotional, and social changes and challenges [1,2]. During adolescence, individuals develop the reproductive system, changes in the body in the form of secondary sexual character, and gender identity [3]. WHO defines the adolescence as stage of life between the age of 10 and 19 years [4]. In India, adolescents constitute 21.4% that is one-fifth of the total population [5] and world adolescents' (10–19 years) population is more than 1.2 billion [6]. The trend of consumption of fast food increases worldwide, and in India, fast food production and consumption is very high [7].

Dietary habits of adolescents are considered as an important risk factor for several diet- related diseases like obesity, diabetes, cardiovascular diseases etc. It affects their future health. They are more influenced by peers and media. [8] Studies have showed that they tend to skip breakfast, eat more meal outside house and eat more snacks which again affect their nutritional status. [9] Urban adolescents tend to enjoy soft drinks, potato chips, ready to eat meal, processed food. [10,11] There is also a decreased intake of fruits and vegetables and one of the increasing popularities of eating out. [12] Children tend to consume food high in fat and low in fiber when they eat outside. In rural area, people eat the same type of dishes based on traditional staple food. This nutrition transition has brought rapid change in the structure of Indian diet. In India, significant epidemiological transformation has occurred over the past two to three decades, which has resulted an increase in the intake of fast food, carbonated beverages. [13] Most of the published literature focuses on dietary pattern among adolescents, while there is a paucity of information on dietary pattern of adolescents.

BACKGROUND OF THE STUDY:

Childhood is the best time to determine the nutritional status and take action accordingly because this is the most effective period of child's life when introducing proper dietary habits and nutritional advices will help them throughout their life and will also improve the total health of a child as well as the future adult population of our country.[1] Early childhood

period is now Childhood is the best time to determine the nutritional status and take action accordingly because this is the most effective period of child's life when introducing proper dietary habits and nutritional advices will help them throughout their life and will also improve the total health of a child as well as the future adult population of our country.[1] Early childhood period is nowChildhood is the best time to determine the nutritional status and take action accordingly because this is the most effective period of child's life when introducing proper dietary habits and nutritional advices will help them throughout their life and will also improve the total health of a child as well as the future adult population of our country.[14] Early childhood period is now recognized as a key target for the prevention of underweight, overweight, and obesity, and the habits that children acquire at this time about food, proper eating behaviour, and its health benefits can influence their dietary choices and preferences in later life.[15] Previous studies had suggested that the variations in weight of children can, to some extent, be explained by their individual differences in eating behavior.[16,17] Some recent studies also support the interesting fact.[18] T19here are different types of eating behaviours that adversely affect somatic and mental health (including leading to a change in BMI).[20]Eating behavior of a child develops in infancy, and the various in□uencers are genetic predispositions of the child, natural food responses and taste preferences in□uenced by the exposure to foods and variable parental feeding practices.[8] Obesity is associated with specific eating behaviors like under-responsiveness to internal satiety cues (low satiety responsiveness, high speed of eating) and over-responsiveness to external food cues such as taste, smell, availability, and emotions (high enjoyment of food, food responsiveness and emotional overeating).[3,9] Eating behaviour of a child develops in infancy, and the various influencers are genetic predispositions of the child, natural food responses and taste preferences influenced by the exposure to foods and variable parental feeding practices.[21] Obesity is associated with specific eating behaviours like under-responsiveness to internal satiety cues (low satiety responsiveness, high speed of eating) and over-responsiveness to external food cues such as taste, smell, availability, and emotions (high enjoyment of food, food responsiveness and emotional overeating).[22]

NEED OF THE STUDY

Adolescence is a critical period of growth and development, and dietary patterns during this phase can have a lasting impact on health. This study aims to assess the existing dietary patterns among school-going adolescents.

Prevalence of malnutrition: Adolescents are vulnerable to malnutrition, which can affect physical and cognitive development (WHO, 2019).

Dietary habits: Adolescents' dietary habits are influenced by various factors, including peer pressure, media, and family (Story et al., 2002).

Long-term health implications: Poor dietary patterns during adolescence can increase the risk of chronic diseases, such as obesity, diabetes, and cardiovascular disease (Berenson et al., 1998).

This study will contribute to understanding dietary patterns among adolescents and informing evidence-based interventions to promote healthy eating habits and prevent chronic diseases.

STATEMENT OF RESEARCH PROBLEM:

A study to assess the existing dietary pattern among school going adolescence at selective school in Nashik.

OBJECTIVES OF THE STUDY

1. To assess the existing dietary pattern among school going adolescence.
2. To assess the anthropometric measurement of school going adolescence.
3. To correlate the anthropometric measurement and existing pattern of school going adolescence.
4. To correlate dietary pattern and selected demographic variables.

PRIMARY RESEARCH QUESTION:

What are the existing dietary patterns among school-going adolescents?

RESEARCH METHODOLOGY:

- **Research approach:** The researcher has adopted the descriptive research approach.
- **Research design:** The researcher has an adopted explorative descriptive research design
- **Setting of study:** the setting for the study was selected schools in Nashik
- **Identification or target & accessible population:** in this study the population comprised of school going adolescence students.
- **Sample technique:** the non-probability purposive sampling technique was used to selecting 30 school going Adolescence of selected schools.
- **Sample size:** the sample size selected for study was 30.
- **Tool and techniques**

A tool prepared for the study in 3 point scale check list. The tool consist of two sections

- **Section –A:** It includes 2 sections
- **Section-I:** demographic data which contains 8 items seeking information about age, sex, Class, religion, Dietary pattern, Type of family, dietary pattern, occupation of father, occupation of mother.
- **Section-II:** includes the anthropometric measurement i.e. Height and weight of the Adolescence.
- **Section-B:** It includes 3 item and 31 check list questions related diet.

- **Validity and reliability of the tool**

The validity was established by the experts. They were requested to give their opinion on the appropriateness and the relevance of the items in the tools. As a whole, the suggestions and comments of experts including in the content corrections. They was found to be valid. The necessary modifications has been done as per expert's advices.

The tool tried out to obtain information on the performance of each item. The purpose was to determine the clarity of items; difficulty in understanding the items and to ensure the reliability and Feasibility of the tool.

- **Data collection method**

The researcher surveyed the existing dietary pattern of school going Adolescence. An informed consent has been taken from the school going Adolescence. Data collection and the tool were constructed according to the objectives of the study. A 3 items scale check list was prepared and data was collected by interview schedule.

- **Plan for data analysis**

Karl Pearson's Correlation coefficient test was used to correlate dietary pattern and selected demographic variables. In this study only sometimes values are calculated and always and never are rejected. By using following formula calculate the correlation coefficient,

$$R = \sum(x-\bar{x})(y-\bar{y})/\sqrt{\sum(x-\bar{x})^2\sum(y-\bar{y})^2}$$

RESULT:

Section 1

Table no.1: Distribution of demographic data

Sr. no	Percentage related to distribution of demographic data	Percentage
1.	Age	
i)	8-9 yrs	0%
ii)	10-11 yrs	10%
iii)	11-12 yrs	30%
iv)	12-13 yrs	60%
2.	Sex	
i)	Male	50%
ii)	Female	50%
3.	Class	
i)	5^{th}std	0%
ii)	6^{th}std	0%
iii)	7^{th}std	100%
iv)	8^{th}std	0%
4.	Religion	
i)	Hindu	96.66%
ii)	Muslim	0%
iii)	Christian	3.34%
iv)	Other	0%
5.	Dietary pattern	
i)	Vegetarian	10%
ii)	Non-vegetarian	83.34%
iii)	Vegetarian with egg calor	6.66%
6.	Type of family	
i)	Nuclear	93.33%
ii)	Joint	6.66%
7.	Occupation of father	
i)	Government servant	10%
ii)	Worker	63.33%
iii)	Private servant	3.33%
iv)	Other	23.33%
8.	Occupation of mother	
i)	Government servant	3.33%
ii)	Worker	53.33%
iii)	Private servant	0%
iv)	Housewife	43.33%

Table 1 shows that the age group of Adolescence 0% were from 8-9 years ,10% were from10-11 years, and 30% were from 12-13 years, the sex of child 50% males and 50% are females, the class of child 0% were from 5thstd ,0% were from 6thstd, 100% were form 7thstd and 0% were from 8thstd, the religion of child is 96% were from Hindu, 0% were from Muslim, 3.34% were from Christian, 0% were from other,the dietary pattern of child 10% were vegetarian, 83.34% were non vegetarian, and 6.66% were egg calor, the type of family of child is 93.33% were from nuclear family, 6.66% were from join family, the occupation of the father of child 10% were government servant ,63.33% were worker,3.33% were private servant,23.33% were other, the occupation of mother of child is 3.33% were government servant,53.33% were worker.0% were private servant,43.33% were house wife.

Section 2: Existing dietary pattern of Adolescence

FIG 1. EXISTING BREAKFAST OF ADOLESCENCE

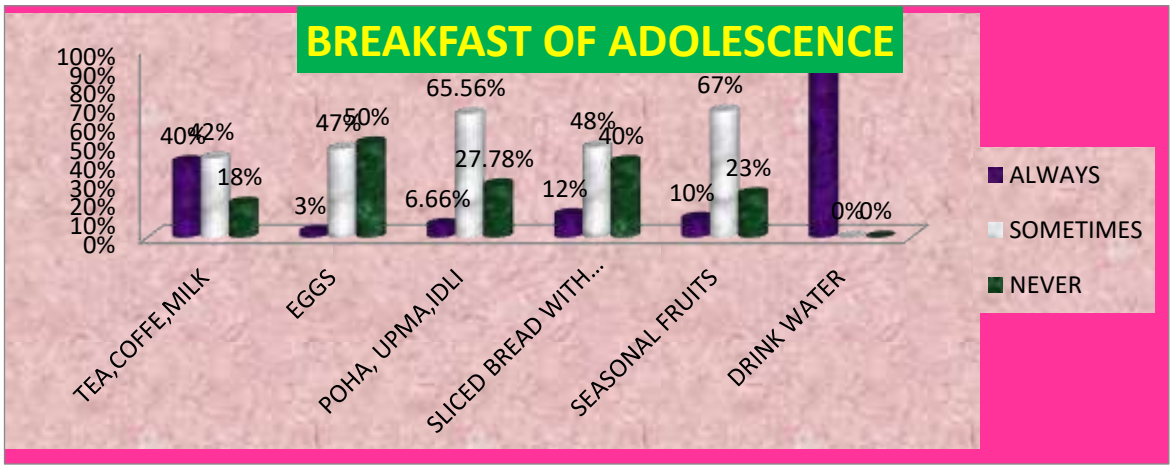

FIG 1. shows the dietary pattern of Adolescence in that breakfast of children were tea/coffee, milk are taking 40%,sometimes 42%, and never 18%, eggs are eating 3% always,47% sometimes,50% never, poha / upma, idli are taking 6.66% always, 65.56% sometimes,27.78% never ,sliced bread with butter, cheese, omlet are eating 12% always,48% sometimes,40% never ,seasonal fruits are eating 10% always,67% sometimes,40% never, water are drink 100% always,0% sometimes ,and 0% never.

FIG 2. EXISTING LUNCH OF ADOLESCENCE

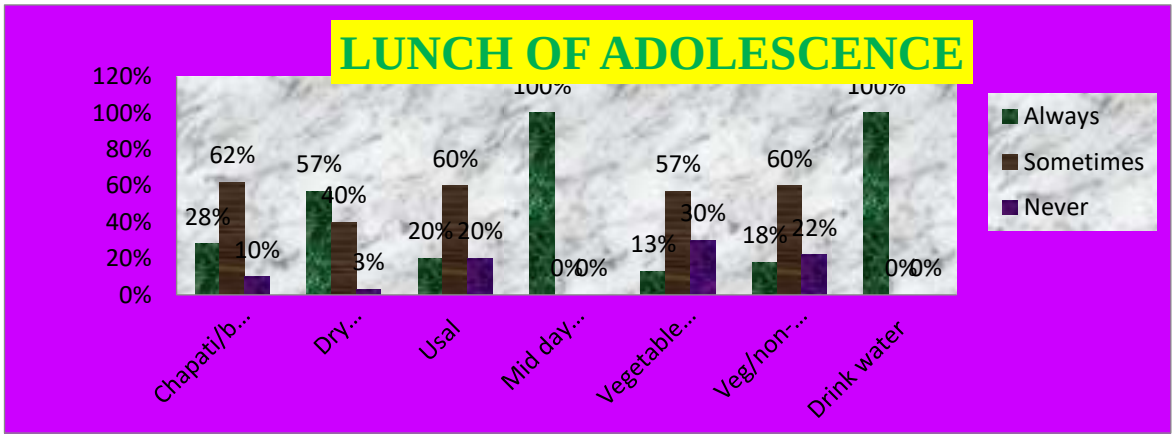

FIG 2. Shows the lunch of the Adolescence in that study they were eat chapati/ puri/ bhakri/paratha 28% always, 62% sometimes ,and 10% never, Dry vegetables are eat 57% always, 40% sometimes, 3% never, usal they eat 20% always, 60% sometimes, 20% never, mid days meal they take 100% always,0% sometimes ,and 0% never, vegetable curry and non vegetable curry they are eating 18% always, 60 % sometimes, 22% never, water they drink 100% always,0% sometimes ,and 0 % never.

FIG 3.EXISTING DINNER OF ADOLESCENCE

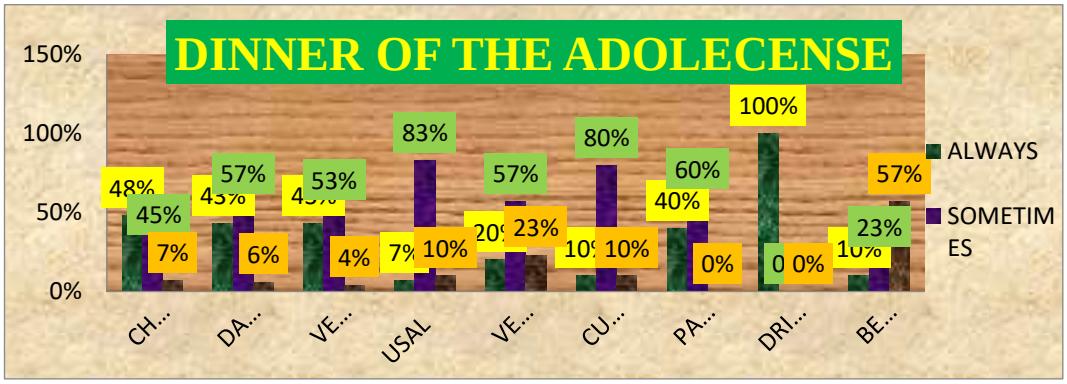

FIG 3. shows the dinner of the Adolescence in that child eats chapati/puri/bhakri 48% always, 45% sometimes,7% never, al and rice were 43% always,57% sometimes, 6% never, vegetable and on vegetable curry 43% always, 53% sometimes, 4% never, usal were 7% always, 83% sometimes, and 105 never, vegetable salad were 20% always, 57% sometime, 23% never, curd were 10% always, 80% sometimes, 10% never, papad /pickle were 40% always, 60% sometimes,0% never, water were drink 100% always, 0% sometimes, 0% never, bedtime milk 10% always, 33% sometimes,57% never.

FIG 4.ANTHROPMETRIC MEASUREMENT OF FEMALE

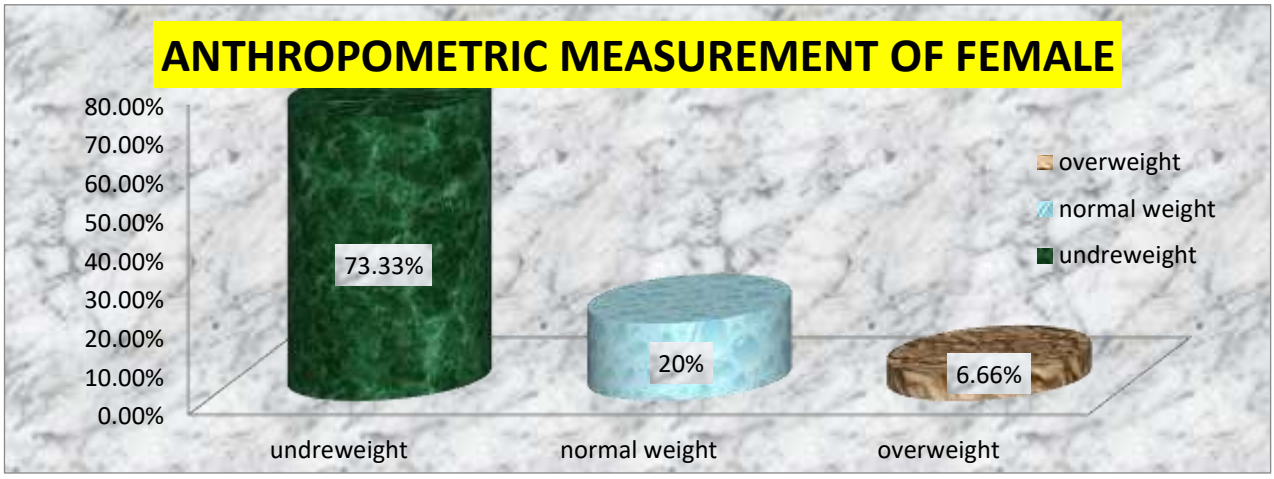

FIG 4.shows that the anthropometric measurement of the female children 73.33% were underweight, 20% were normal weight,6.66% were overweight.

FIG 5. ANTHROPMETRIC MEASUREMENT OF MALE

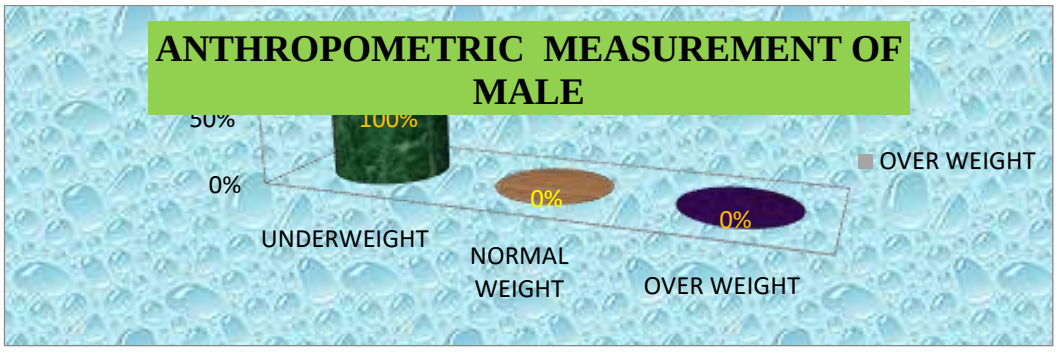

Fig 5.shows the anthropometric measurement of male in that study underweight were 100%, normal weight were 0%,over weight were o%.

FIG 6.ANTHROPMETRIC MEASUREMENT OF CHILDRENS.

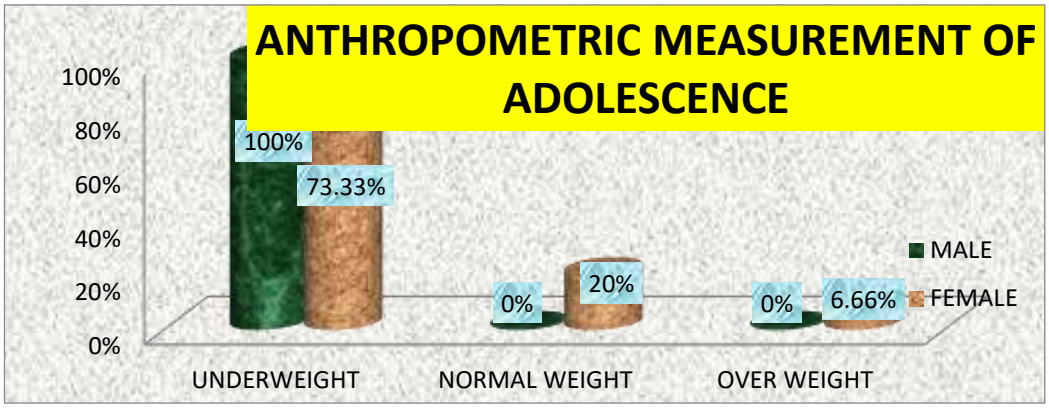

FIG 6. shows the anthropometric measurement of the male children's were 100% and in females 73.33% are underweight, the male children's were 0% and female children's 20% are normal weight, the male children's 0% and 6.66% were overweight.

Section C: Corelation between age & dietary pattern of childrens

FIG 7. CORELATION BETWEEN AGE & DIETARY PATTERN OF ADOLESCENCE

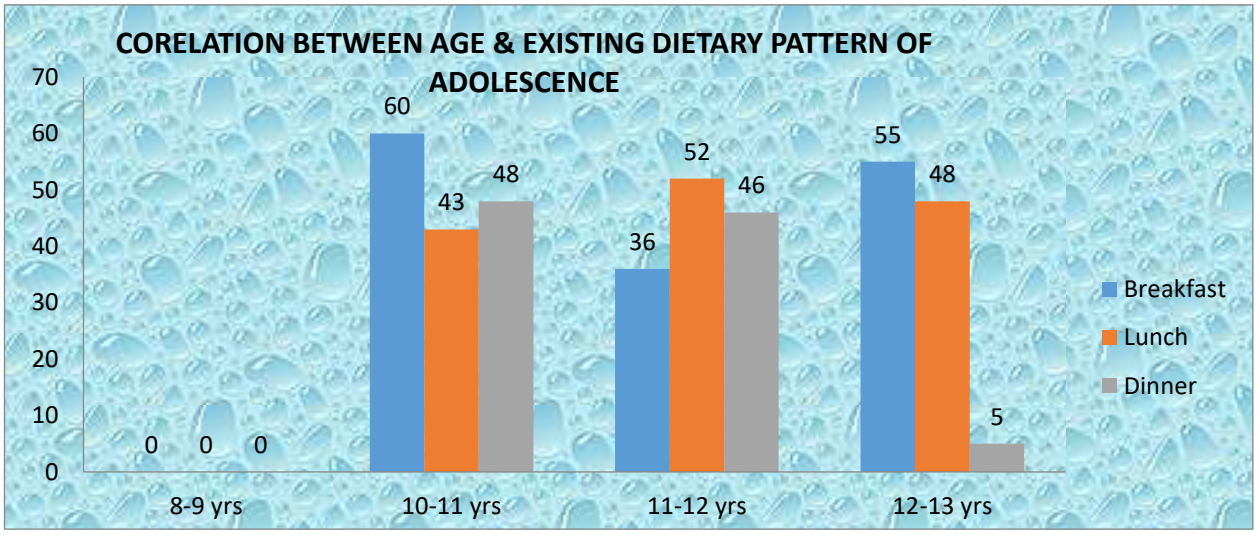

FIG 7 shows the corelation between age & existing dietary pattern that the 8-9 yrs childrens taking breakfast 0%, lunch 0%, dinner 0%, 10-11 yrs childrens taking breakfast 60%, lunch 43%, dinner 48%,11-12 yrs childrens taking breakfast 36%, lunch 52%, dinner 46%. 12-13 yrs childrens taking breakfast 55%, lunch 48%, dinner 058%.

In breakfast, r = 0.91. The correlation between age of the Adolescence & existing breakfast of Adolescence are positive correlation.

It lunch, r=0.95. The correlation between age of the Adolescence & existing lunch of Adolescence are positive correlation.

In dinner, r =9.70. The correlation between age of the Adolescence & existing dinner of Adolescence are positive correlation.

The study highlights the need for promoting healthy eating habits and nutrition education among adolescents to prevent chronic diseases and improve overall health. The findings suggest that adolescents require guidance on healthy dietary patterns and lifestyle choices to ensure optimal growth and development.

Conclusion:

The existing dietary pattern of the Adolescence is -9 years children were taking breakfast 0% always ,0% sometimes,0% never,10-11 years children were 27% always,60% sometimes,13% never, 11-12 years children were 29% always,36% sometimes,35% never.12-13 years children were 19% always,55% sometimes,26% never. The study that the 8-9 years children were taking lunch 0% always ,0% sometimes,0% never,10-11 years children were 57% always,43% sometimes,0% never, 11-12 years children were 37% always,52% sometimes,11% never. 12-13 years children were 38% always,48% sometimes,14% never. SThe major finding of the study that the 8-9 years children were taking dinner 0% always ,0% sometimes,0% never,10-11 years children were 48% always,48% sometimes,4% never, 11-12 years children were 40% always,46% sometimes,14% never. 12-13 years children were 38% always,58% sometimes,12% never. The study that male children were taking breakfast 26% always ,41% sometimes,33% never, lunch were 38% always,44% sometimes,18% never, dinner were 35% always,52% sometimes,13% never. The dietary pattern of the school going children is the female child anthropometric measurement in that the 73.34% underweight, 20% normal weight, 6.66% are overweight. SThe male child anthropometric measurement in that the 100% underweight, 0% normal weight, 0% are overweight. The anthropometric measurement of the children is in that the 86.67% underweight, 10% normal weight, 3.33% are overweight.

Implications:

The study's findings have implications for policymakers, educators, and healthcare professionals working with adolescents. Nutrition education programs and interventions can be developed to promote healthy eating habits and improve nutritional status among adolescents.

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