

# A Descriptive Study to Assess the Knowledge Regarding Rainbow Diet Among Adolescents in Government Higher Secondary School, Mowa, Raipur (C.G.)

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**Abstract:** Good nutrition is very important for the development of children both mentally and physically. Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19 years. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth. These age groups face rapid development mentally and physically, thus good nutrition is very important at this phase of life. The rainbow diet is comprehensive holistic health guide that helps us to understand the physical and energetic properties of food through their colours. Rainbow diet includes foods of different colours by adding different kinds of fruits and vegetables into our diet. A descriptive study to assess the knowledge regarding rainbow diet among adolescents in Govt. Higher Secondary School, Mowa, Raipur (C.G.). **Aim of study:** The aim of study information booklet so that they can aware and gain knowledge regarding rainbow diet. The sample size was 60 students studying in 11th and 12th class of govt. higher secondary school, Mowa, Raipur (C.G.). The tool used for the data collection was self-structured knowledge questionnaire. The probability convenience sampling technique was used to select the subjects. It can be seen from the result that the overall mean knowledge score 16.12, mean (%) 53.73, SD 4.29, CV (%) 26.61. **Recommendations of the study:** Recommendation of the study were a Similar study can be undertaken with larger sample size to create awareness among adolescents regarding rainbow diet.

**Keywords:** knowledge, rainbow diet, adolescents.

## 1. Introduction

*“Good Nutrition Creates Health in All Areas of Our Existence. All Parts Are Inter Connected”.*

Good nutrition is very important for the development of children both mentally and physically. Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19 years. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth [1].

The rainbow diet is comprehensive holistic health guide that helps us to understand the physical and energetic properties of food through their colours. Rainbow diet includes foods of different colours by adding different kinds of fruits and vegetables into our diet [2].

Eating the rainbow diet is about eating many fruits and vegetables of many different color every day. Rainbow diet decreases inflammation in the body and helps prevent cancer. Keeps our immune system strong and our skin healthy. Good for our vision helps as see at night time. Keeps our bones, teeth and nails strong and also prevents hyper coagulability [3].

Red foods such as tomatoes contain lycopene, a fat-soluble nutrient that supports healthy cholesterol levels and has anticancer benefits, particularly researched in prostate cancer. Orange and yellow foods contain beta-carotene which the body converts to vitamin A. This is important for eye health (hence the claim that “carrots help you see in the dark”). A diet high in beta-carotene has been found to be protective against breast and ovarian cancer and against breast cancer recurrence.

Green vegetables contain vitamin K which supports blood clotting, magnesium to relax muscles and blood vessels, folate to support the health of red blood cells, potassium to control blood pressure, and they often taste bitter, which stimulates digestion. Blue and purple foods, such as berries, aubergine and purple sweet potatoes, contain anthocyanins. These polyphenols are cardio-protective, anticancer and have anti-diabetic actions. White/brown foods (the vegetable kind, not beige processed foods)! Garlic is an antiviral superfood, mushrooms are superstars when it comes to immune support, and cinnamon has blood sugar balancing properties [4].

### A. Need for the Study

The rainbow diet is not a new idea, but it's newly popular. The idea behind it is that colourful vegetables and fruit contain specific micronutrients that support our health and combat

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biological stress with antioxidants and anti-inflammatory molecules. This type of biological stress affects our body at a cellular level probably know it as “oxidative stress”, which is caused by free radicals. Fortunately, the antioxidants in rainbow diet foods help the body to neutralise free radicals and stop them from damaging your cells. Free radicals are generated by our metabolism (the sum of life-giving chemical reactions inside your cells) and our environment. Here are some common sources of free radicals in everyday life.

### B. Purpose of the Study

The purpose of the study was to assess the knowledge regarding rainbow diet among adolescents and provide them information booklet, so that they get motivated regarding rainbow diet.

### C. Objectives

1. To assess the socio-demographic variables of adolescents in Govt. higher secondary school Mowa, Raipur (C.G).
2. To assess the knowledge regarding rainbow diet among adolescents in Govt. higher secondary school Mowa, Raipur (C.G).
3. To find out association between selected socio-demographic variables and knowledge regarding rainbow diet among adolescents in Govt. higher secondary school Mowa, Raipur (C.G).
4. To develop an information booklet with a view to create awareness among adolescents in Govt. higher secondary school Mowa, Raipur (C.G).

### D. Hypothesis

H<sub>1</sub>: There will be significant association between socio-demographic variables with knowledge score regarding rainbow diet among adolescents in Govt. higher secondary school Mowa Raipur (C.G.). Level of knowledge and practice after “eat the rainbow nutrition education intervention.

A Pilot study conducted at govt. higher secondary school Ruabandha Bhilai, District Durg (C.G). self –structured questionnaire includes all aspects of rainbow diet. The study conducted that student had a lack of knowledge regarding rainbow diet.

## 2. Material and Methods

The research design adopted for this study was descriptive research design. This study was conducted on 60 students studying in 11th and 12th class of govt. higher secondary school, Mowa, Raipur (C.G.). Selected by Non-probability convenience sampling technique. The self -structured questionnaire were prepared.

*Part 1:* Socio-demographic data 9 items.

*Part 2:* Multiple choice questioner to assess the knowledge regarding rainbow diet among adolescents = 30 items.

Reliability of the tool was established by using split half technique.

The reliability of the split half test was found by using karl pearson correlation by deviation method formula.

Coefficient of correlation of the knowledge was found to be 0.95. Hence the tool was found reliable.

## 3. Analysis

Classification of subjects according to age, gender, religion, class, type of family, father’s education, occupation, family income, dietary pattern is given in Table 1. The findings regarding age depicts that majority of subjects i.e. 34 (56.67%) belong to age group 14-16 years and 26 (43.33%) were 17-19 years .43 (71.67%) were female, 17 (28.33%) were male. 59 (98.33%) were Hindus, only 1(1.67%) was Mushlim. 35 (58.33%) were from 11<sup>th</sup> class, 25 (41.67%) were from 12th class. 42 (70%) were from joint families, 18 (30%) were from nuclear families. 25(41.67%) had secondary education, 18 (30%) had primary education ,15 (25%) had higher secondary education and only 2 (3.33%) were illiterate. 37 (61.67%) were in private jobs, 16 (26.67%) were businessmen, 7 (11.67) had govt. jobs. 48 (80%) were having family income between Rs 5000-10000, 12 (20%) were having family income between Rs15000- 20000. 44 (73.33%) were non-vegetarian, 16 (26.67%) were vegetarian.

Table 1  
Frequency and percentage distribution of adolescents according to the level of knowledge regarding rainbow diet

S No.	Criteria	Frequency (F)	Percentage (%)
1	Poor (0-10)	15	25
2	Average (11-20)	35	58.33
3	Good (21-30)	10	16.67

Table-1 Show that overall knowledge score of the adolescents i.e., 35 (58.33%) had average knowledge, 15 (25%) had poor knowledge, 10 (16.67%) had good knowledge regarding rainbow diet.

*According of knowledge of adolescents regarding rainbow diet with selected socio-demographic variables.*

Mean score of knowledge found to be 16.12, mean (%) 53.73, SD 4.29, CV(%) 26.61. revealed that there was significant association of knowledge score regarding rainbow diet among adolescents with socio-demographic variable i.e., type of family as the chi-square value 6.64 was greater than table value 5.99 at 0.05 level of significance. Hence hypothesis (H<sub>1</sub>) was accepted with regards to variable i.e., type of family. However, hypothesis (H<sub>1</sub>) was rejected regarding socio-demographic variables i.e., age, gender, religion, class, father’s education, father’s occupation, family income and dietary pattern as the chi-square values 0.25, 1.37, 3.05, 1.91, 5.87, 4.86, 2.46 and 0.65 were less than table values 9.49, 5.99, 5.99, 5.99, 12.59, 9.49, 5.99 and 5.99 at 0.05 level of significance respectively.

### A. Limitations

- The sample size was limited to 60 and was from only one city and therefore generalization of the study findings cannot be done.
- The adolescents (10-19 years) studying in Govt. Higher Secondary School, Mowa Raipur (C.G) only were included in the study.

#### 4. Conclusion

The findings of the study revealed that out of 60 samples 35 (58.33%) had average knowledge, 15 (25%) had poor knowledge, 10 (16.67%) had good knowledge regarding rainbow diet.

##### A. Implications

The study findings have certain very important implications for nursing profession.

Since the study reveals that there was lack of knowledge regarding rainbow diet, it is there for necessary to take prompt action regarding creating awareness among adolescents regarding rainbow diet. The findings of the present study have implications in nursing practice, nursing administration, nursing education and nursing research.

##### B. Recommendations

*In the light of the study, the investigator proposes the following recommendations for future research.*

- A similar study can be undertaken with larger sample size to create awareness among adolescents regarding rainbow diet.
- A study can be conducted on benefits and importance of rainbow diet.

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