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"A study to assess the effectiveness of structured teaching programme on knowledge regarding obesity among adolescent students in a selected higher secondary school of Anantnag, Kashmir"

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ABSTRACT:

A study on **"EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING OBESITY AMONG ADOLESCENT STUDENTS IN A SELECTED HIGHER SECONDARY SCHOOL OF ANANTNAG, KASHMIR"** was undertaken by GROUP-E during the year 2022-2023 in partial fulfillment of the requirement for the degree of Bachelor of Science in Nursing at Institute of Nursing, University of Kashmir, South Campus, Anantnag.

OBJECTIVES:

1. To assess the pre-test knowledge of adolescent students regarding obesity
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding obesity among the adolescent students
3. To compare the pre-test and post-test level of knowledge regarding obesity among adolescent students
4. To find the association between the pre-test knowledge scores regarding obesity among adolescent students and selected demographic variables

METHOD: The study was based on Nola J Pender's Health Promotion model. Evaluatory approach was adopted for this study and pre-experimental one group pre-test post-test design was taken for this study. The study was conducted at Govt. Higher Secondary School Mattan, Anantnag. The sample size was 25 adolescent students**.** The non-probability convenient sampling technique was used. Data was collected from the adolescent students to assess the level of knowledge by using structured knowledge questionnaire before and after the implementation of structured teaching programme. The collected data were tabulated and analyzed by descriptive and inferential statistics.

RESULTS: The results showed that in pre-test, 19(76%) of the study subjects had inadequate knowledge, 6(24%) of the study subjects had moderate knowledge and 0(0.00%) of the study subjects had adequate knowledge regarding Obesity. After administration of structured teaching programme, the post-test knowledge score showed that majority of subjects i.e., 18(72%) of the study subjects had adequate knowledge, 7(28%) of the study subjects had moderate knowledge and 0(0.00%) of the study subjects had inadequate knowledge regarding Obesity.

CONCLUSION: The Structured Teaching Programme (STP) was effective ($p<0.05$) to improve the level of knowledge regarding obesity among adolescent students.

Key words: knowledge, Obesity, structured teaching programme, pre-test, Post-test.

INTRODUCTION

BACKGROUND OF THE STUDY:

Health: In 1984, W.H.O. revised the definition of health and defined it as "the extent to which an individual or group is able to realize aspirations and satisfy needs and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities." Thus, health is referred to the ability to maintain homeostasis and recover from adverse events. Mental, intellectual, emotional and social health referred to a person's ability to handle stress, to acquire skills, to maintain relationships, all of which form resources for resiliency and independent living.

Adolescence: Adolescence is the phase of life between childhood and adulthood, from age 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. This affects how they feel, think, make decisions, and interact with the world around them.

There are three primary developmental stages of adolescence:

I. **Early adolescence (10 to 14 years)**
- Puberty begins in this stage
- Children experience considerable physical growth and increased sexual interest

II. **Middle adolescence (15 to 17 years)**
- Puberty changes for both males and females continue
- Males may have a growth spurt and some voice cracking as their voices lower
- Physical growth for females slows and most have regular menstrual periods by this time

III. **Late adolescence/young adulthood (18 to 21 years)**
- This is the third stage and usually occurs from 18-21 years of age
- Late adolescents generally have completed physical development and grown to their full adult height

Obesity: It is a medical condition in which excess body fat accumulates to the extent that it may have negative effect on health, leading to reduced life expectancy and increased life problems.

The magnitude of overweight ranges from 9% to 27.5% and obesity ranges from 1% to 12.9% among Indian children. W.H.O. states that it is estimated about 155 million children of 10-15 years of age are overweight in world and 1228 children in India are obese according to Journal of Medical Nutrition.

Adolescence is a crucial stage of human life where most of the health risk behavior is seeded into the life like smoking, alcoholism, eating junk foods and physical inactivity.

Adolescent obesity is affecting all socio-economic groups, irrespective of age, sex or ethnicity worldwide. Etiopathogenesis of adolescent obesity is multi-factorial and includes genetic, neuroendocrine, metabolic, psychological, environmental and socio-cultural factors. Many co-morbid conditions like metabolic, cardiovascular, psychological, orthopedic, neurological, hepatic, pulmonary and renal disorders are seen in association with childhood obesity.

PROBLEM STATEMENT:

"A study to assess the effectiveness of structured teaching programme on knowledge regarding obesity among adolescent students in a selected higher secondary school of Anantnag, Kashmir"

OBJECTIVES OF THE STUDY:

1. To assess the pre-test knowledge of adolescentstudents regarding obesity
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding obesity among the adolescentstudents
3. To compare the pre-test and post-test level of knowledge regarding obesity among adolescent students
4. To find the association between the pre-test knowledge scores regarding obesity among adolescent students and selected demographic variables

HYPOTHESIS:

H_1: There is a significant difference between pre-test and post-test level of knowledge regarding obesity among adolescent students.

H_0: There is no significant difference between pre-test and post-test level of knowledge among adolescent students regarding obesity

H_2: There is significant association between the pre-test knowledge scores and the selected demographic variables

OPERATIONAL DEFINITIONS:

- **ASSESS:**
  - It refers to gathering information regarding knowledge of the adolescent students regarding obesity.
- **EFFECTIVENESS:**
  - It refers to significant increase in the level of knowledge of the adolescent students regarding obesity.
- **STRUCTURED TEACHING PROGRAMME:**
  - It refers to systematically planned education to provide adequate information regarding meaning of obesity, etiology, health effects, management and prevention of obesity among the adolescent students through PPT.
- **KNOWLEDGE:**
  - In this study it refers to the necessary information gained by structured teaching programme on obesity.
- **ADOLESCENTSTUDENTS:**
  - In this study adolescent students refer to those who are studying in a selected higher secondary school of Anantnag, Kashmir.
- **OBESITY:**
  - In this study obesity is defined as BMI (Body Mass Index) of the individual more than 30 to 39.9.

ASSUMPTIONS:

- Adolescent students may have some knowledge regarding obesity.
- Administration of Structure Teaching Programme may enhance the knowledge regarding obesity among the adolescent students.

LIMITATIONS:

Study is limited to;

- Adolescent students of age between 14-22 years in a selected higher secondary school of Anantnag, Kashmir
- Adolescent students who are willing to participate in this study.

The study is limited to teenage students who are available on the day of data collection.

REVIEW OF LITERATURE

Review of literature for the study was organized under following headings:

2.1.1. Literature related to prevalence of obesity

2.1.2. Literature related to causes and complication of obesity

2.1.3. Literature related to prevention of obesity

RESEARCH METHODOLOGY

This chapter explains the methodology in detail. It includes research design, setting of the study, sampling technique, tools, data collection process and plan for the data analysis. The study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding obesity among adolescent students in a higher secondary school of Anantnag, Kashmir.

3.1. RESEARCH APPROACH: The research approach adopted for this study is a quantitative approach

3.2. **RESEARCH DESIGN**: The research design adopted for the study is Pre experimental one group pre-test and post-test research design.

Group	Pre test	Intervention	Post test
Pre-Experimental group	0_1	X	0_2

0_1: Pre-test assessment of knowledge of group of study participants

X: Administration of structured teaching programme on knowledge regarding obesity.

0_2: Post-test assessment of knowledge of same group of study participants

3.3. SETTING OF THE STUDY: The study was conducted in Govt. Higher Secondary School Mattan, Anantnag, Kashmir.

3.4. **DURATION OF THE STUDY**: The duration of data collection was two weeks from 24-09-2022 to 03-10-2022.

3.5. STUDY POPULATION:

3.5.1 Target population: The target population of the present study includes adolescent students of age 14 years - 22 years who were studying in the higher secondary schools of Anantnag, Kashmir

3.5.2 Accessible population: The accessible population of the study includes adolescent students of age 14 years - 22 years studying in 11th and 12th standard of Govt. Higher Secondary School, Mattan, Anantnag.

3.6. SAMPLE: The sample includes adolescent students of age group between 14 years - 22 years studying in 11th and 12th standard students of Govt. Higher Secondary School, Mattan, Anantnag.

3.7. SAMPLE SIZE: The sample size was 25adolescent students studying in 11th and 12th standard in Govt. Higher Secondary School, Mattan, Anantnag, Kashmir.

3.8. CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:

The students:-

- ✓ who are in the age group of 14 years - 22 years.
- ✓ who are willing to participate.
- ✓ who are able to understand Urdu and English languages.
- ✓ who were available during data collection.

Exclusion criteria:

- ✓ Adolescent students who were not willing to participate in the study
- ✓ Adolescent students who were not available during the period of data collection
- ✓ Adolescent students who had already participated exclusively in obesity programmes such as conference and workshop.

3.9. SAMPLINGTECHNIQUE: In this study non-probability, convenient sampling technique was used to select the subjects.

3.10. RESEARCH VARIABLES:

Independent Variable – It refers to structured teaching programme on knowledge regarding obesity

Dependent Variable – It refers to knowledge regarding obesity among adolescent students.

Demographic variables – include age, gender, income, dietary habits.

3.11. DEVELOPMENT AND DESCRIPTION OF THE TOOL: Data collection tools are the procedures or instruments used by the researcher to observe the key variables in the research problem

Development of the tool:

Appropriate structured questionnaire has been developed after extensive review of literature and obtained expert opinion, content validity from nursing and statistical experts.

Description of the tool: The tool for data collection consists of 2 sections

Section – A: It contains demographic variables which comprises of the items such as age, gender, income, dietary habits.

Section – B: It comprised of a self-administered structured knowledge questionnaire regarding obesity. The questionnaire contains 16 multiple choice questions.

3.12 SCORE INTERPRETATION: A structured questionnaire was used to assess the knowledge regarding obesity. It contains 16 multiple choice questions. Each correct answer was given a score of one (1) and wrong answer was scored as zero (0). The total score was 16.

LEVEL OF KNOWLEDGE AND SCORE:
Level of Knowledge Score Percentage
Inadequate 0 –8 > 50%
Moderate 9 - 12 &51 – 75%
Adequate 13 - 16 < 75%

3.13 CONTENT VALIDITY: Content validity was determined by experts from Nursing. They Suggested certain modifications in tool. After the modifications they agreed this tool for assessing effectiveness of structured teaching programme on knowledge regarding obesity among adolescent students in a selected higher secondary school of Anantnag, Kashmir.

3.14 DATA COLLECTION PROCEDURE: The plan of data collection for the proposed study is as follows:

- The study was conducted at Govt. Higher Secondary School Mattan, Anantnag, Kashmir.
- Permission was obtained from the principal of Govt. Higher Secondary School Mattan, Anantnag, Kashmir. Samples were drawn using convenient sampling technique. During the 1st visit, the research group introduced themselves and explained the purpose of the study and confirmed the willingness of the school students to participate in the study by getting consent from them as per the inclusion criteria.
- Data collection procedure was done over a period of one week. Pre assessment was done using structured questionnaire. Subsequently, structured teaching programme was given on same day for 50 minutes.
- On the sixth day post assessment was conducted using same structured questionnaire.

RESULTS

SECTION 1:

Distribution of samples according to their demographic variables

Table 4.1: Distribution of samples according to their demographic variables (N=25)

S.No. Demographic Variables Frequency (f) Percentage (%)

S.No.	*Demographic Variables*	*Frequency (f)*	*Percentage (%)*
1.	*Age*		
	14-16 Years	*08*	*32*
	17-19 Years	*17*	*68*
	20-22 Years	*00*	*00*
2.	*Gender*		
	Male	*09*	*36*
	Female	*16*	*64*
	Other	*00*	*00*

3.	*Monthly Income*		
	Rs. 10,000-15,000	*08*	*32*
	Rs. 15,000-20,000	*07*	*28*
	Above Rs. 20,000	*10*	*40*
4.	*Dietary Habits*		
	Vegetarian	*10*	*40*
	Non-Vegetarian	*15*	*60*

Table 1summarizes the demographic characteristics of 25 adolescent students. With regards to age, 8(32%) adolescent students belonged to age group of 14-16 years, 17(68%) belonged to age group 17-19 years and none of them belonged to age group 20-22 years. Regarding gender, 9(36%) of adolescent students were male, 16(64%) were female and none of them was/were from other gender. With regards to monthly income, 8(32%) adolescent students belonged to families with monthly income in the range of Rs. 10,000-15,000, 7(28%) adolescent students belonged to families with monthly income in the range of Rs. 15,000-20,000 and 10(40%) adolescent students belonged to families with monthly income above Rs. 20,000. Regarding dietary habits, 10(40%) adolescent students were vegetarians and 15(60%) were non-vegetarians.

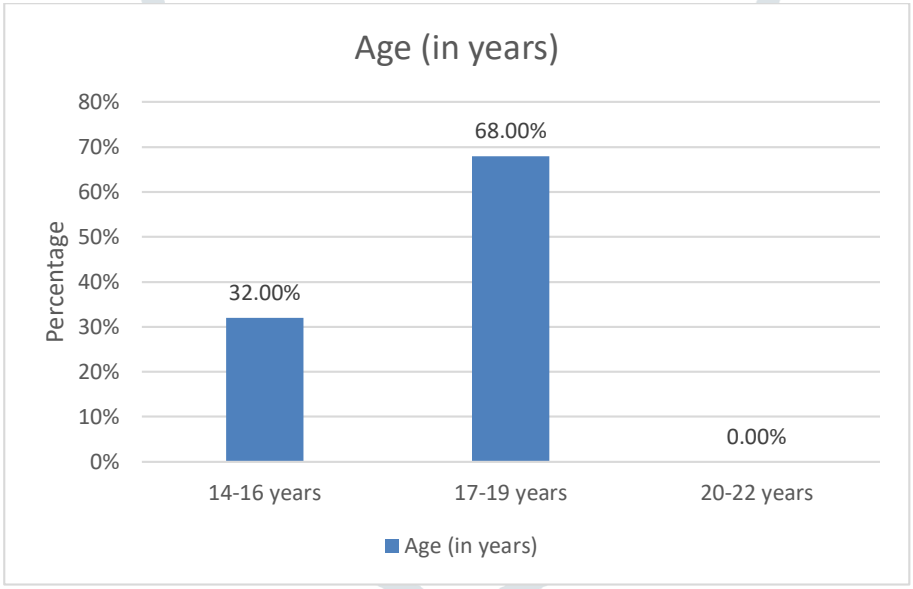

Figure 4.1: Distribution of samples according to their Age

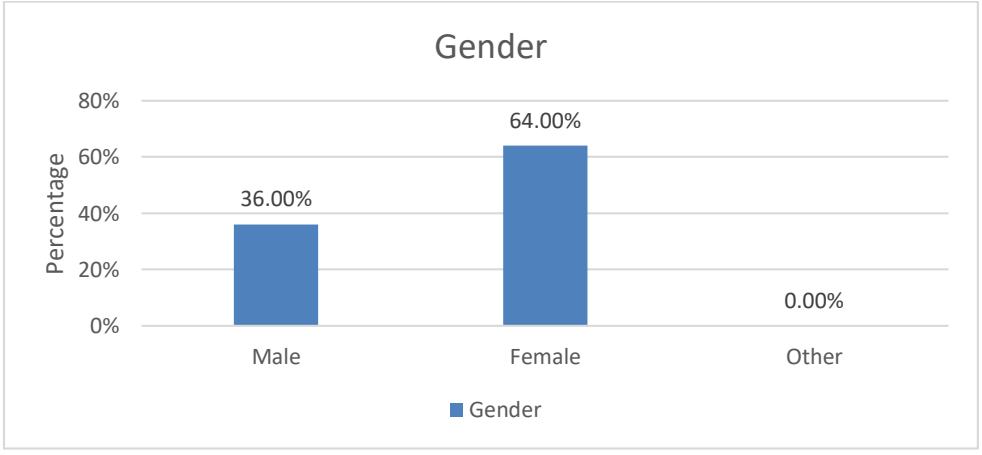

Figure 4.2: Distribution of samples according to their gender

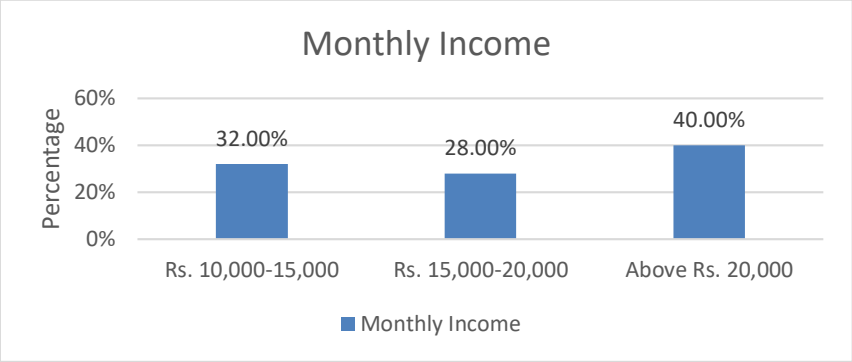

Figure 4.3: Distribution of samples according to monthly income of their family

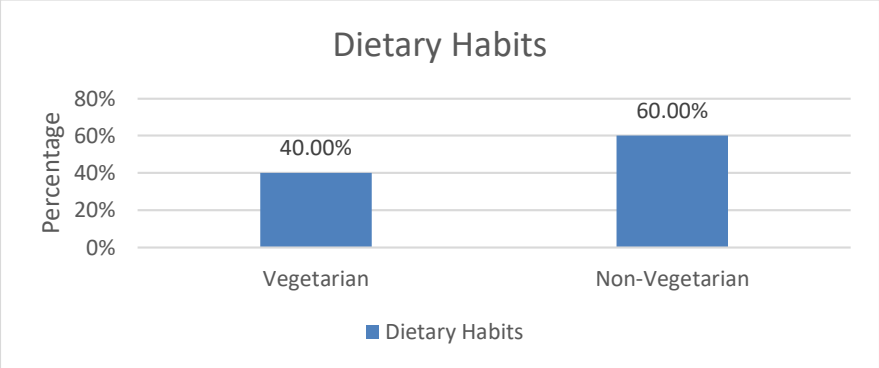

Figure 4.4: Distribution of samples according to their dietary habits

<u>SECTION 2.1:</u> Pre-test level of knowledge score of the study subjects

Table 4.2: Distribution of the study subjects according to the pre-test level of the knowledge score of the study subjects regarding of Obesity N=25

SCORE LEVEL	*PRE-TEST, F (%)*
Inadequate (0-8)	*19 (76%)*
Moderate (9-12)	*06 (24%)*
Adequate (13-16)	*0 (0.00%)*
Maximum = 11 *Minimum = 5*	

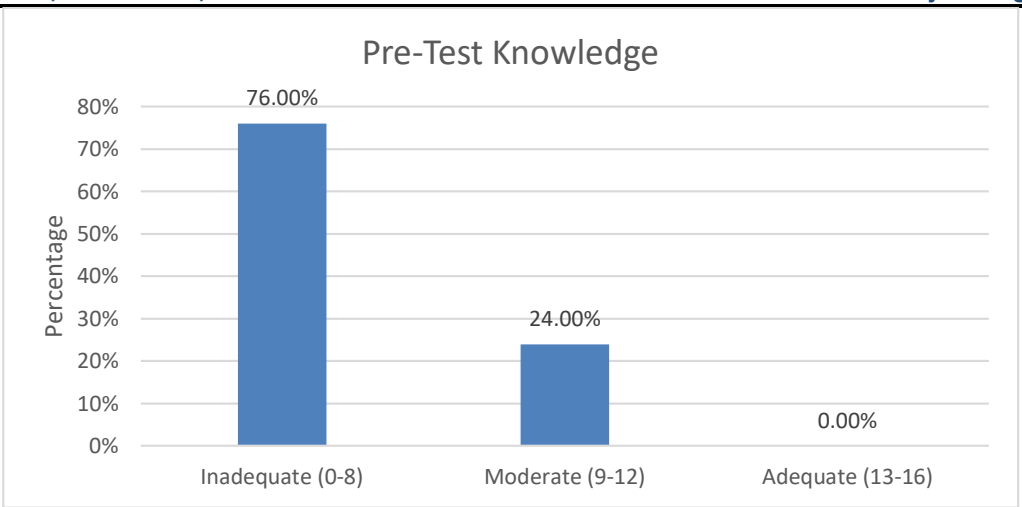

Figure 4.5: Showing percentage distribution of study subjects according to the pre-test level of knowledge

Inferences: *Data presented in the figure showed that 19(76%) of the study subjects have inadequate knowledge, 6(24%) of the study subjects have moderate knowledge and 0(0.00%) of the study subjects have adequate knowledge.*

Table 4.3: Pre-test mean, S.D., median, minimum knowledge scores, maximum knowledge scores, range and mean percentage of the study subjects

Descriptive Statistics	*Mean*	*S.D.*	*Median*	*Maximum*	*Minimum*	*Range*	*Mean Percentage*
PRE-TEST KNOWLEDGE	*7.52*	*1.5*	*7*	*11*	*5*	*6*	*30.08%*

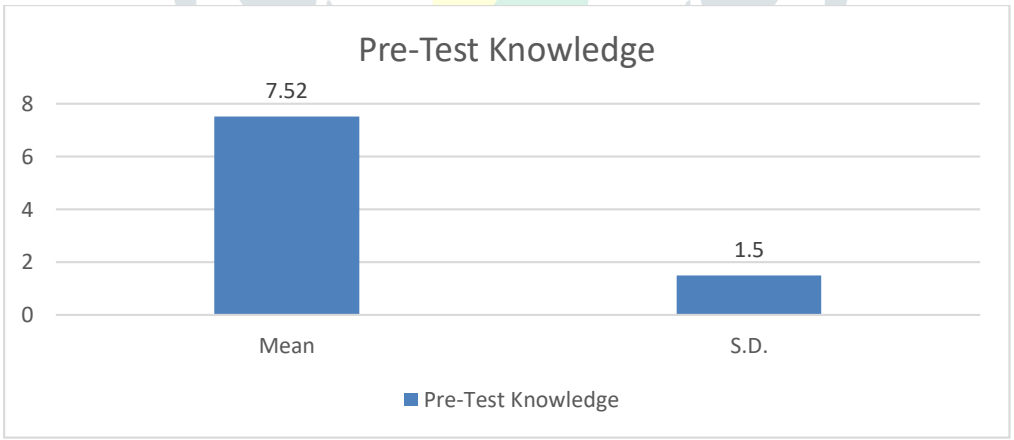

Figure 4.6: Showing pre-test mean and S.D. of the study subjects

Inferences: *Data presented in the figure showed the Pre-test mean and S.D. of the pre-test knowledge was 7.52 and 1.5 respectively.*

***SECTION 2.2:* Post-test level of knowledge score of study subjects**

Table 4.4: Distribution of study subjects according to post-test level of knowledge score of study subjects regarding Obesity

SCORE LEVEL	*PRE-TEST, F (%)*
Inadequate (0-8)	*0 (0.00%)*
Moderate (9-12)	*07 (28%)*
Adequate (13-16)	*18 (72%)*
Maximum = 15 *Minimum = 11*	

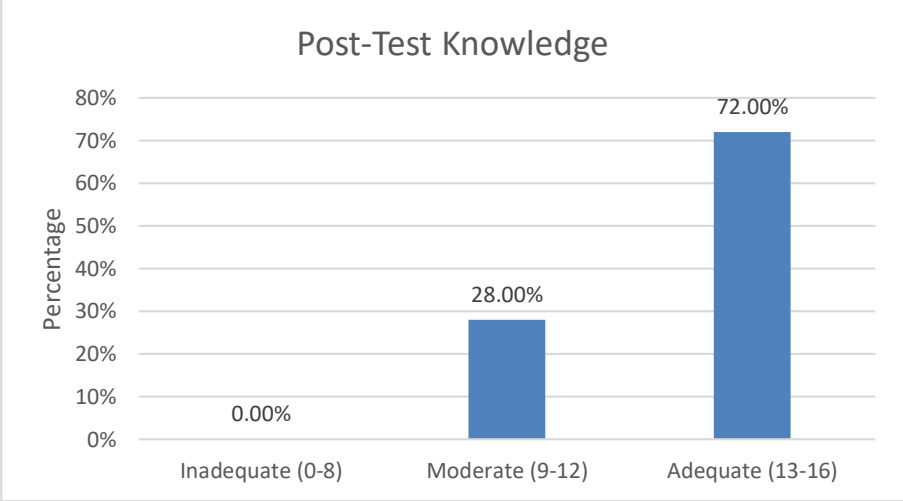

Figure 4.7: Showing percentage of study subjects according to post-test level knowledge score

Inferences: *Data presented in figure reveals that in post-test, 18(72%) of the study subjects had adequate knowledge, 7(28%) of the study subjects had moderate knowledge and 0(0.00%) of the study subjects had inadequate knowledge regarding Obesity.*

Table 4.5: Post-test mean, S.D., median, maximum knowledge scores, minimum knowledge scores, range and mean percentage of study subjects

Descriptive Statistics	*Mean*	*S.D.*	*Median*	*Maximum*	*Minimum*	*Range*	*Mean Percentage*
POST-TEST KNOWLEDGE	*13.28*	*1.2*	*13*	*15*	*11*	*4*	*53.12%*

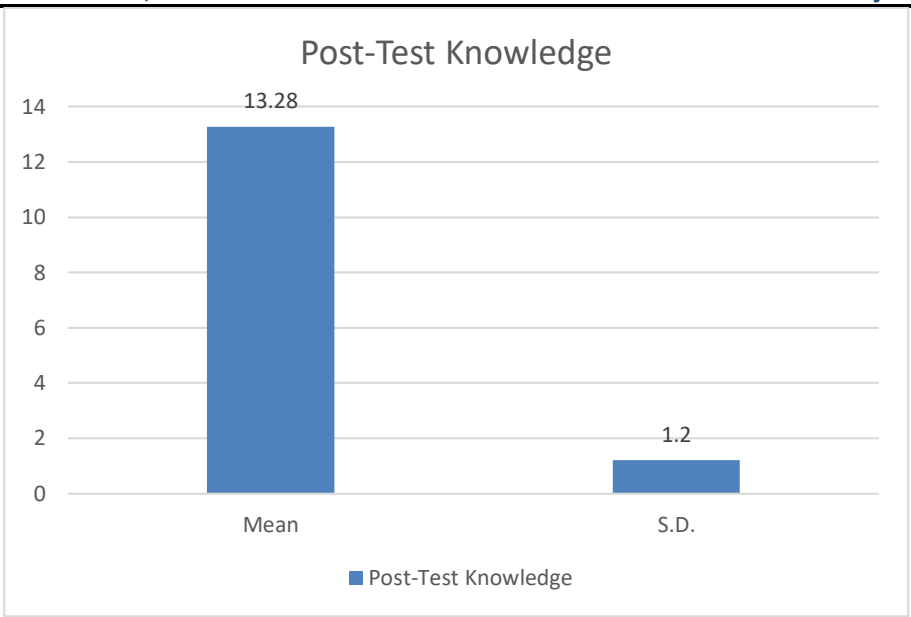

Figure 4.8: Showing post-test mean and S.D. of study subjects

Inferences: *Data presented in figure reveals that post interventional mean and S.D. knowledge score was 13.28 and 1.2 respectively*

SECTION 2.3: ***Comparison of pre-test and post-test level of knowledge score of study subjects regarding Obesity.***

Table 4.6: Showing frequency and percentage distribution of study subjects according to pre-test and post-test knowledge scores N=25

CRITERIA MEASURE OF KNOWLEDGE SCORES		
SCORE LEVEL	*PRE-TEST F (%)*	*POST-TEST F (%)*
Inadequate (0-8)	*19 (76%)*	*0 (0.00%)*
Moderate (9-12)	*06 (24%)*	*07 (28%)*
Adequate (13-16)	*0 (0.00%)*	*18 (72%)*

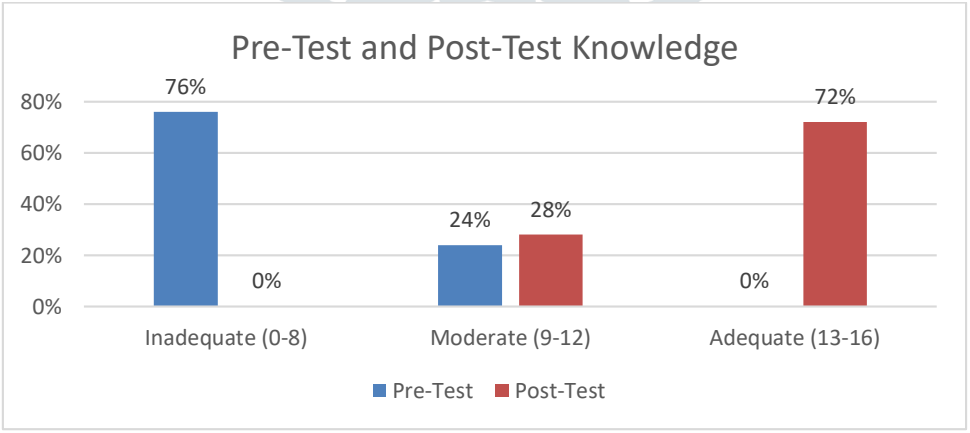

Figure 4.9: Showing comparison of percentage of pre-test and post-test knowledge scores

Inferences: *Data presented in Figure reveals that in pre-test, 76% of the study subjects had inadequate knowledge, 24%of the study subjects had moderate knowledge and 0% of the study subjects had adequate knowledge. Where as in the post test, 72% of the study subjects had adequate knowledge, 28% of the study subjects had moderate knowledge and 0% of the study subjects had inadequate knowledge regarding Obesity.*

Table 4.7: Comparison of pre-test and post-test mean and S.D. of study subjects

(N=25)

Mean	*Pre-Test Knowledge*	*Post-Test Knowledge*	*Difference*	*Pre-Test Knowledge %age*	*Post-Test Knowledge %age*	*Difference*	*t-value*
Average	*7.52*	*13.28*	*6.03*	*53.12%*	*30.08%*	*23.04%*	*13.80*

(Significant at 0.05 levels) (Table value = 2.06)

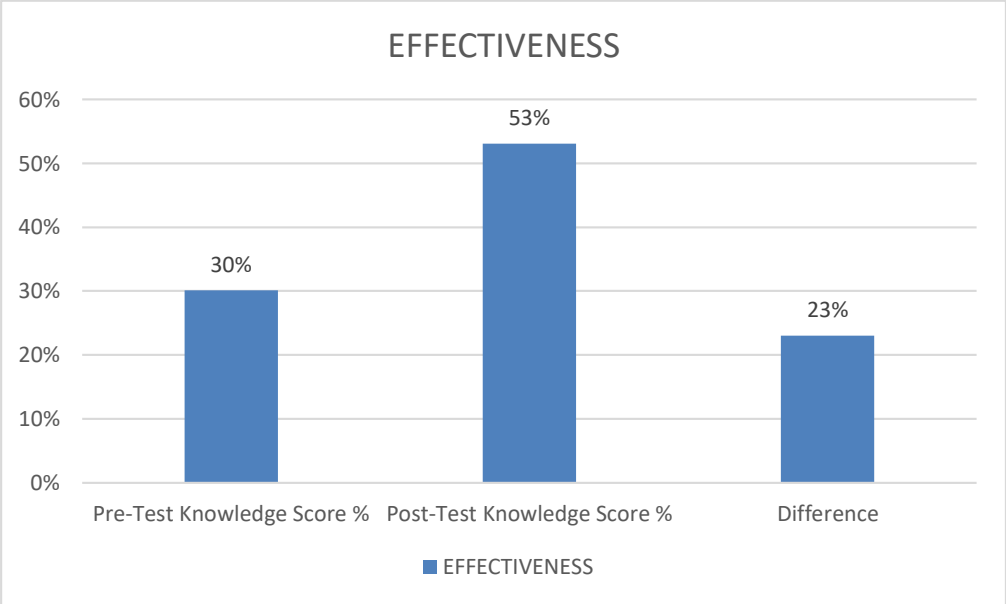

Figure 4.11: Showing difference between pre-test and post-test knowledge score

Inferences: *Data presented in figure shows the pre-testknowledge score (30%) and post-test knowledge score (53%) and associated difference between the two (23%)*

<u>SECTION3:</u>Association of pre-test level of knowledge scores with demographic variables

S.No.	*Demographic Variables*	*Frequency (f)*	*Adequate Knowledge*	*Moderate Knowledge*	*Inadequate Knowledge*	*Chi Value*	*df*	*Table Value*	*Result*
1.	*Age*								
	14-16 years	*08*	*0*	*02*	*06*				
	17-19 years	*17*	*0*	*04*	*13*	*0.0103*	*1*	*3.84*	*Not significant*
	20-22 years	*00*	*0*	*0*	*0*				

2.	*Gender* *Male* *Female* *Other*	 *09* *16* *00*	 *0* *0* *0*	 *02* *04* *0*	 *07* *12* *0*	*0.02424*	*1*	*3.84*	*Not significant*
3.	*Monthly Income* *Rs. 10,000-15,000* *Rs. 15,000-20,000* *Above Rs. 20,000*	 *08* *07* *10*	 *0* *0* *0*	 *0* *04* *07*	 *08* *03* *03*	*9.2072*	*2*	*5.99*	*Significant*
4.	*Dietary Habits* *Vegetarian* *Non-Vegetarian*	 *10* *15*	 *0* *0*	 *01* *05*	 *09* *10*	*1.73*	*1*	*3.84*	*Not significant*

(Significant at 0.05 levels)

Table 4.8: Association of pre-test knowledge level of adolescent students with their selected demographic variables

CONCLUSION

The following conclusion was drawn on the basis of the findings of the study:

• Pre-test score/findings showed that the adolescent students had inadequate and moderate knowledge regarding Obesity, so there was need to provide them knowledge and make them aware.

• The Structured teaching programme (STP) was found effective in improving the level of knowledge of adolescent students regarding Obesity as evident from their post-test knowledge score.

•There was significant association between pre-test knowledge score with the selected demographic variable i: e. (monthly income) and there was no significant association between pre-test knowledge score with demographic variables i; e. (age, gender and dietary habits).

• These findings reveal that an effective structured teaching program must be conducted in higher secondary schools with a view to make the adolescent students knowledgeable about Obesity

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***SECTION3:*Association of pre-test level of knowledge scores with demographic variables**

S.No.	*Demographic Variables*	*Frequency (f)*	*Adequate Knowledge*	*Moderate Knowledge*	*Inadequate Knowledge*	*Chi Value*	*df*	*Table Value*	*Result*
1.	*Age*								
	14-16 years	*08*	*0*	*02*	*06*				
	17-19 years	*17*	*0*	*04*	*13*	*0.0103*	*1*	*3.84*	*Not significant*
	20-22 years	*00*	*0*	*0*	*0*				
2.	*Gender*								
	Male	*09*	*0*	*02*	*07*				
	Female	*16*	*0*	*04*	*12*	*0.02424*	*1*	*3.84*	*Not significant*
	Other	*00*	*0*	*0*	*0*				
3.	*Monthly Income*								
	Rs. 10,000-15,000	*08*	*0*	*0*	*08*				
	Rs. 15,000-20,000	*07*	*0*	*04*	*03*	*9.2072*	*2*	*5.99*	*Significant*
	Above Rs. 20,000	*10*	*0*	*07*	*03*				

4.	*Dietary Habits*								
	Vegetarian	*10*	*0*	*01*	*09*	*1.73*	*1*	*3.84*	*Not significant*
	Non-Vegetarian	*15*	*0*	*05*	*10*				

(Significant at 0.05 levels)

Table 4.8: Association of pre-test knowledge level of adolescent students with their selected demographic variables