A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge regarding Lifestyle Intervention as a Management for Obesity among Adolescents in Selected Schools of District. Kangra H. P.

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Abstract: *Obesity is an increasingly problem that is likely to endure and to have long term adverse influence on the health of individual and populations unless action is taken to reverse the trend. An evaluator approach, pre-experimental one group pre-test post-test design, 60 randomly selected (lottery method) students from three conveniently selected schools of district Kangra, Himachal Pradesh. Structured teaching programme with the help of interactive lecture methods was administered after the assessment of pre-test knowledge regarding lifestyle intervention as a management for obesity. Post-test knowledge was assessed on the 7th day of the administration of structured teaching programme through the same structured knowledge programme through the same self structured knowledge questionnaire to assess knowledge regarding lifestyle intervention as a management for obesity. The result of this study general showed, the significant difference between the mean post-test knowledge score (25.08) was higher than mean pre-test knowledge score (12.45) and obtained 't' value has been found statistically very highly significant 29.484 at p< 0.001 level. Hence it can be concluded that structured teaching programme effective in improving knowledge regarding lifestyle intervention as a management for obesity among adolescent students, which was evident in post-test knowledge score.*

Keywords: Effectiveness, Structured Teaching Programme, Knowledge, Obesity, Adolescents.

1. Introduction

Adolescent is the age of transition. The healthy adult hood has its origin from their adolescent period. Healthy youth is more productive and contribute much to the development of the nation. Especially during the last few decades the prevalence rate of childhood over weight and obesity has reached epidemic proportions worldwide. Obese children face difficulties in their social life and run a substantially increased risk of becoming our future generation of obese, chronically diseased adolescents and adults.

Obesity now considered as a "killer lifestyle disease" an important cause of preventable death worldwide. According to the world health organization 1.2 billion people worldwide are officially classified as overweight. Obesity has so many affects on children and it can mess their lives up dramatically.

WHO states (2016) 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.

A study conducted to assess the prevalence of overweight and obesity among 1061 (610 boys and 451 girls) children and adolescent in Kolkata India. Participants were divided in to three ages, Group I (8-11), Group II (12-15) and Group III (16-18). The prevalence of overweight was 13.3%, 19.8% and 18.5% and obesity was 4.1%, 7.6% and 5.4%. Respectively higher prevalence of overweight and obesity was observed for girls in the age group 12-15 years and 16-18 years. Remesh Ambili (2012) conducted a descriptive cross-sectional study Prevalence of adolescent obesity among high school students of Kerala, South India. A study questionnaire was administered among the participants and their parents to understand the relationship of food intake, parental obesity, and physical activity to obesity. The result show Of the 560 students enrolled, 49 (8.75%) were overweight and 27 (4.82%) were obese. With this, the prevalence of obese is computed as 4.8%. The parental obesity posed a significant risk factor among the study population.

2. Need for Study

"Prevention is better than cure". Therefore as a nurse, the researcher has a pivotal role in creating awareness among adolescent about the modification of lifestyle and prevention of future complications, which can help to improve the quality of life by providing education and support.

As an Investigator, I found adolescent are spending more time on mobile phone, playing video games, watching

television and work on computers without doing any activity. Adolescent have lack of knowledge regarding obesity and were neglecting to take care of their health according to their age group. Hence Investigator felt a strong need to conduct a study in a local setting. It is better to prevent obesity and its complications in adolescent period by conducting health awareness programme regarding lifestyle modification. The massive health education programme were urgently needed both in urban & rural areas in India. The awareness and knowledge regarding obesity is grossly inadequate among adolescents in India. Adolescent period may be the best time to mount primary and secondary prevention programme against obesity, because this the age of which individuals become more independent in their food choices and also when many cases of chronic overeating begin.

3. Objectives

- To assess the pre-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents.
- To assess the post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents.
- To compare the pre-test and post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents
- To find out the association of post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents with their selected socio demographic variables.

4. Methods
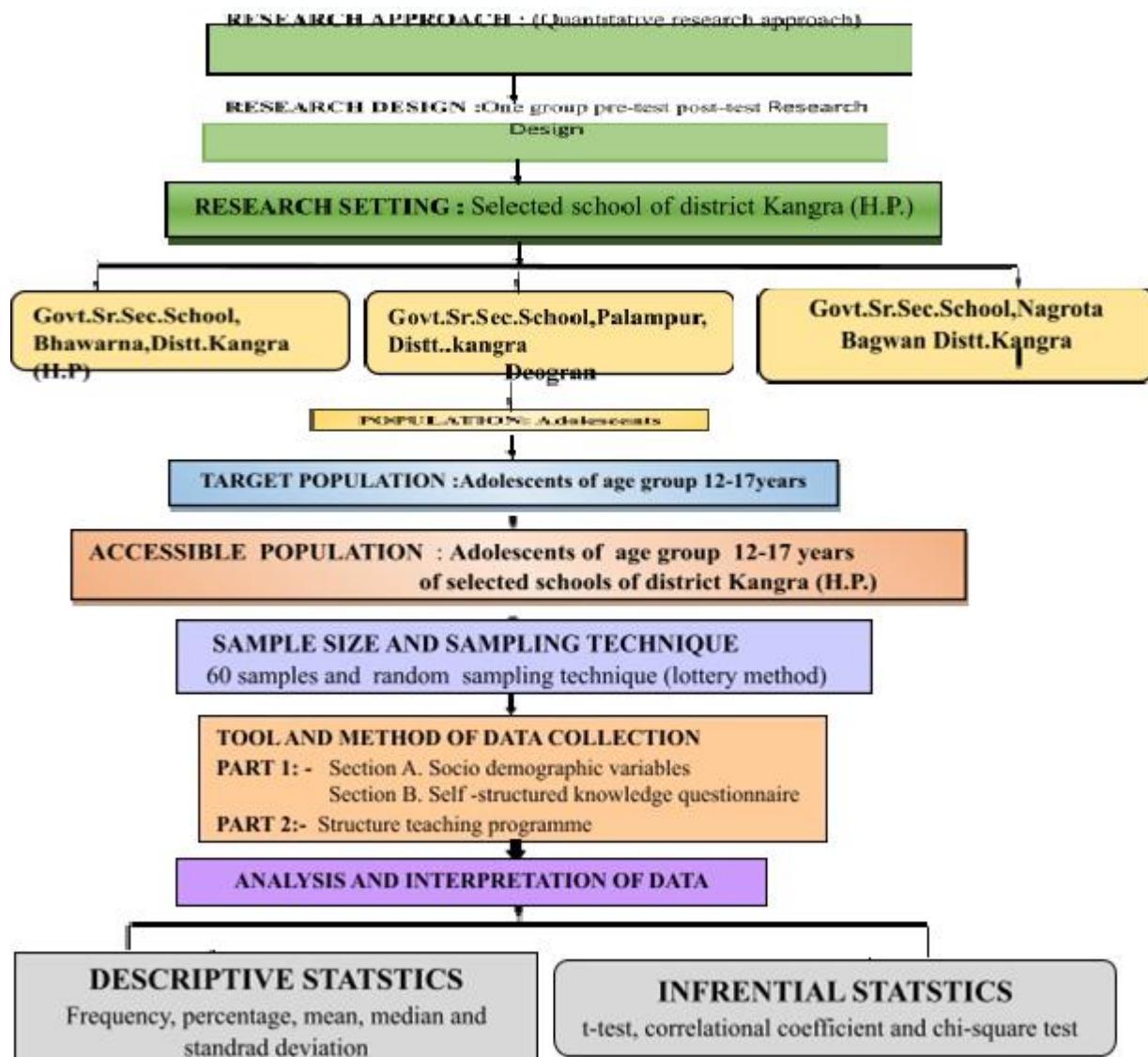
Research design: the study aims to assess the effectiveness of structured teaching programme on knowledge regarding lifestyle intervention as a management for obesity among adolescents in selected schools of District. Kangra. So, a quantitative research approach was used in the study and under the one group pre-test and post test research design was used.

Population: The population of the present study was Adolescents.

Target population: The target population of the study was adolescents of age group of 12-17 years.

Accessible population: The accessible population of the study was adolescents of age group of 12-17 years of

selected schools of District Kangra (H. P.).
- Govt. Sr. Sec. School, Palampur District Kangra, (H. P)
- Govt. Sr. Sec. School (boy), Nagrota Bagwan, District Kangra (H. P)
- Govt. Sr. Sec. School, Bhawarna, District Kangra, (H. P)

Sample and Sampling Technique
Sample: The sample of present study consisted of 60 adolescents of age group of 12-17 years of selected schools of district Kangra (H. P).

Sampling Techniques: Probability purposive technique was used in the present study to select the samples.

Criteria for Sample Collection
A. Inclusion Criteria: This study includes adolescents:
- Who were in the age group of 12-17 years of selected schools of district kangra.
- Who understand and speak in Hindi and English language.
- Who were willing to participate in the study.
- Who were present on the day of data collection.

B. Exclusion Criteria: This study excludes adolescents:
- Who were not willing to give consent.
- Who were not present on the day of data collection.

Description of the tool: The tool consisted of following 4 sections.

Section A: It consisted of some items for obtaining an information about the selected background factor such as age, gender, religion, education of father, education of mother, occupation of father, occupation of mother, type of family, leisure time activity, dietary habits, junk food practices, frequency of consumption, previous and source of knowledge.

Section B: Self-structured questionnaire is to assess the previous knowledge and effectiveness of structured teaching program on knowledge regarding lifestyle intervention as a management for obesity among adolescents. It consists of 30 items of multiple-choice questions where total score is 30.

Scoring key: The self-structured knowledge questionnaire consisted of 30 questions. In which right answer was documented as correct one mark and wrong were documented were as zero marks. The complete range was 0-30.

Knowledge score % Score

Inadequate knowledge	≤ 33%	0-10
Moderately adequate knowledge	34-66%	11-20
Adequate knowledge	≥67 %	21-30

To ensure content validity of the tool regarding the relevance of item, the tool was submitted to 10 experts of different fields of nursing. Experts are requested to judge the items of tool for clarity, relevance, appropriateness, relatedness and meaningfulness for the purpose of the study and give their opinion and suggestion on the content, its coverage, organization. There was almost 100% agreement of the items in the questionnaire; however, there were few suggestions to modifying some of the questions, and they were incorporated in final draft. The developed tool was given to an English and Hindi language expert for the corrections. As per the suggestions, the modifications were implemented.

The reliability of the tool was established by test-retest by administering the tool for 6 adolescents from Government Senior Secondary School, Rajapur Distt. Kangra, Himachal Pradesh. Karl Pearson's correlation coefficient formula was used. The reliability for the tool was found to be 0.85 for knowledge which showed that the tool was reliable. Data was collected and was tabulated according to objectives of the study using descriptive and inferential statistics.

Written permission was obtained from the concerned authorities before the data collection and the investigator familiarized herself with her subjects and explained the purpose of the study to them. After giving necessary instructions to the subjects, the baseline information was collected along with knowledge questionnaire. Pre-test knowledge level were assessed by structured knowledge questionnaire. Time taken for the pre-test was 30 minutes. Immediately after the pre-test, structured teaching programme regarding lifestyle intervention as a management for obesity was administered to the subjects. Post-test was conducted on the 7th day using the same structured knowledge questionnaire.

5. Results

Section I: Pre-test and post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents

Table 2: Frequency and percentage distribution of pre-test and post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents. N= 60

Level of knowledge	Pre-test score			Post-test score		
	Range of score	F	%	Range of score	F	%
Inadequate knowledge	0-10	24	40	0-10	00	00
Moderate knowledge	11-20	36	60	11-20	13	21.7
Adequate knowledge	21-30	00	00	21-30	47	78.3
	Mean± S. D = 12.45 2.795			Mean± S. D = 25.08 3.038		

Pre-test KNOWLEDGE SCORE)

POST-TEST KNOWLEDGE SCORE
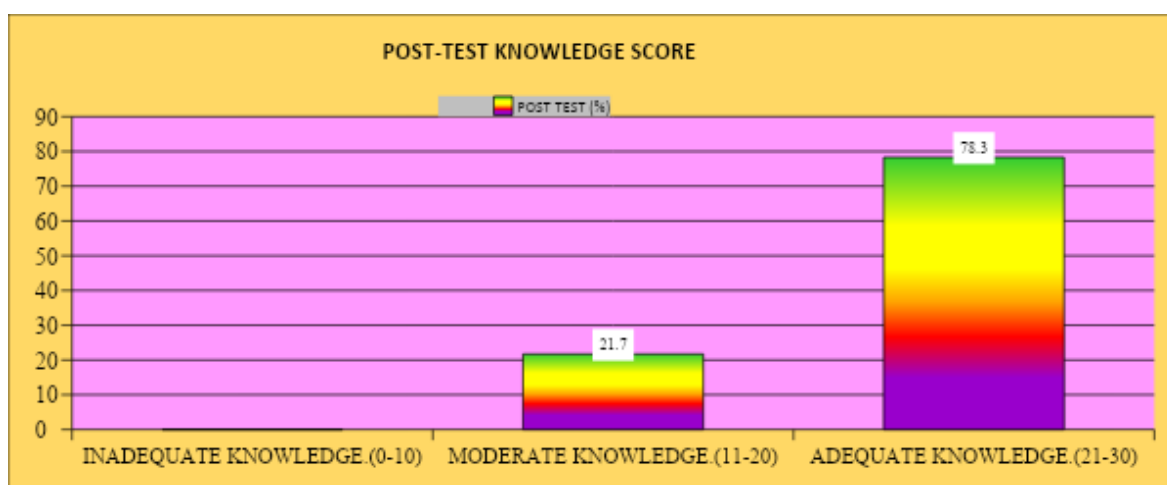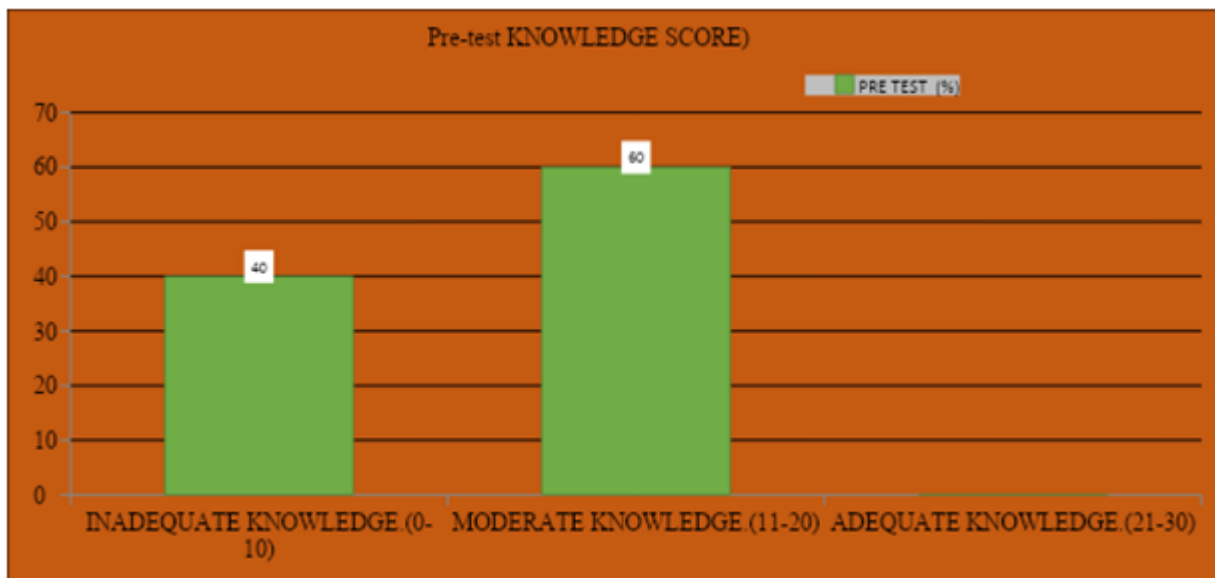
Knowledge score	Mean	S. D	Mean difference	Paired t test	Df	P value	Table value 0.05
Pre-test knowledge	12.45	2.795	12.630	29.484	59	<0.001	2.00
Post-test knowledge	25.08	3.038					

Section II: Comparison between pre-test and post-test knowledge regarding lifestyle intervention as a management for obesity among adolescents.

P value <0.05= significant, < 0.01 = highly significant; <0.001 = very highly significant

Table-6 show the finding related comparison between pre-test and post-test knowledge scores regarding lifestyle intervention as a management for obesity among adolescents.

Section III: Association of post test knowledge score among adolescents with their selected socio demographic variables.

Table 7: Chi Square Showing association of post test knowledge score among adolescents with their selected socio demographic variables

Socio-demographic variable	Adequate knowledge	Moderate knowledge	Inadequate knowledge	Df	χ2	P value
AGE (in year)						
12-13 year	9	O1	0	2	1.052NS	0.591
14-15year	27	8	0			
16-17	11	4	0			
Gender						
Male	25	8	0	1	0.287NS	0.592
Female	22	5	0			
Education status of father						
No formal education	5	0	0			
Primary education	4	1	0	3	5.090NS	0.165
Higher secondary	14	8	0			
Graduate/equivalent	24	4	0			

Education Status of mother						
No formal education	13	6	0			
Primary education	18	3	0	3	1.880NS	0.598
Higher secondary	13	3	0			
Graduate/equivalent	3	1	0			
Father's occupation						
Government Employee	6	1	0			
Private Employee	19	4	0	3	1.356NS	0.716
Self Employed	17	7	0			
Un Employed	5	1	0			
Mother's occupation						
Government Employee	1	2	0			
Private Employee	3	3	0	3	8.030NS	0.045
Self Employed	23	3	0			
Un Employed	20	5	0			
Type of family						
Nuclear family	39	10	0	1	0.249NS	0.617
Joint family	8	3	0			
Leisure time activity						
Outdoor Games	11	3	0			
Watching TV	20	3	0	3	3.760NS	0.289
Indoor Games	11	3	0			
Exercise	5	4	0			
Dietary habits						
Vegetarian	24	6	0	1	0.098NS	0.754
Non-vegetarian	23	7	0			
Junk food practice						
Yes	45	12	0	1	0.253NS	0.615
No	2	1	0			
Frequency of consumption of junk food						
Daily	10	2	0	2	3.118NS	0.21
Once in a week	24	10	0			
Once in month	13	1	0			
Pervious knowledge						
Yes	47	13	0			
No	0	0	0			
Sources of knowledge						
Health professional / social worker	18	1	0			
T. V and radio	16	3	0	3	11.332*	0.01
Newspaper / magazine	7	2	0			
Friends / Relative	6	7	0			

*= Significant NS = Not Significant

Data given in table 7 shows association of level of knowledge with selected demographic variable which calculated by using chi test. It concluded that, there was non-significant association of level of knowledge with socio-demographic variable.

6. Discussion

The purpose of study was to assess the effectiveness of structure teaching programme on knowledge regarding lifestyle intervention as a management for obesity among adolescents. . This study finding revealed that the structure teaching programme is one of the effective strategies to improve the knowledge of adolescents. The similar study was conducted by Sherin John, Prof. Sheela Williams et al (2018) the finding show that the mean post-test knowledge score 26.08 of the subject was higher than the mean pre-test knowledge score 17.07 and was significant t=22.54, P <0.05, which shows that planned teaching programme was effective in improving knowledge. The present study shows mean pre-test knowledge score (12.45) to post-test mean knowledge score (25.08). These findings were consistent with the finding of 't' value obtained was (29.484) at P < 0.001 level of significance which was very highly significant. The post-test score was high as compare to pre-test score, which show the effectiveness of structure teaching programme. Hence, the research hypothesis H1 was accepted and H01 was rejected.

Similar finding had been found by Thresiamma antony (2019) that there was no significant association between knowledge score of student and the selected demographic variables.

Study finding of the present study revealed that chi-square value show non-significant association of post-test knowledge score with their selected demographic variables.

7. Conclusion

The result from this study reveals that implementation of structure teaching programme to assess the knowledge

regarding lifestyle intervention as a management for obesity was adequate. And chi-square value had non-significant association between knowledge score of students regarding lifestyle intervention as a management for obesity with selected demographic variable. In the light of the above findings and personal experience of the investigator the following recommendations are offered.

1) The study can be replicated on all population samples with different demographic variables; thereby findings can be generalized for a larger population.
2) A similar study may be conducted to assess the knowledge, attitudes of mothers regarding obesity of their children.
3) A planned teaching programme can be conducted for adults regarding obesity and its health consequences.
4) A similar study can be replicated in community area.
5) A similar study can be conducted to compare the knowledge and attitude among adolescents of urban and rural communities.
6) A comparative study can be conducted to find the prevalence of childhood obesity between urban and rural school children

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