

A Study to Assess the Effectiveness of STP on Knowledge Regarding Health Hazards of Unhealthy Weight Control Behaviours among Adolescent Girls Studying in B.V.V.S. High School Bagalkot

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ABSTRACT

India is home to 253 million adolescents. India has the largest Adolescent population in the world, 253 million, and every fifth person is between 10 to 19 years. As per India's census 2011, Youth (15-24 years) in India constitutes one-fifth (19.1%) of India's total population. India is expected to have 34.33% share of youth in total population by 2020. As per the 2001 census; about 440 million individuals in India were below 18 years of age and constitute 42% of total population. Unhealthy weight control practices were reported by 37.9% of the females and by 15.9% of the males.

Reaching and maintaining a healthy weight is important for overall health and can help you prevent and control many diseases and conditions. If you are overweight or obese, you are at higher risk of developing serious health problems, including heart disease, high blood pressure, type 2 diabetes, Gallstones, breathing problems and certain cancers. That is why maintaining a healthy weight is so important. Teenagers adopt both healthy balanced diet and exercise, but those who are dissatisfied with their body and want to lose weight adopt smoking, use of laxatives, purging and fasting behaviours. So Raising awareness of the connection between obesity and unhealthy weight control in youth.

Unhealthy weight control behaviours are at risk for depression and development of unhealthy weight control behaviours including using diet pills, purging, or fasting, explications of pathways leading to UWCBS.

Adolescents who feel overweight are more likely to be actively trying to lose weight and may at risk for using harmful weight control behaviours will leads to further complications. The main focus of this study is to provide a positive force to enhance their full of energy and future productivity for the nation in a healthy manner.

Objective: To evaluate the effectiveness of structured teaching programme on health hazards of unhealthy weight control behaviours among adolescent girls.

Methods: The present study is a pre experimental: among 100 adolescent girls, using proportional stratified random technique. Here one experimental group of clients were selected with randomization and no control group is used. The data was collected by using the structured close ended knowledge questionnaire. The data was analyzed by using descriptive and inferential statistical in terms of mean, frequency distribution, percentage, paired t test and chi square test.

Results: Comparison of mean percentage of the knowledge scores of the pre test and post – test reveals an increase of 53.51% in the mean knowledge score of the adolescent girls after

STP .Comparison of area wise mean and SD of the knowledge scores in the area of knowledge related shows that the pretest mean percentage of knowledge score was 44.76% with mean and SD 9.40 ± 2.91 Where as post test mean percentage of knowledge score was 87.19% with mean and SD 18.31 ± 1.40 , Showing an effectiveness of 42.43%. Paired 't' test was used to find out the significance of the difference between the pre-test knowledge and post-test knowledge scores of adolescent girls regarding Health hazards of unhealthy weight control behaviour . As calculated "t" value (6.71) was much higher than table "t" value (1.96). Showing an effectiveness, The overall findings reveal that the percentage of post-test knowledge score was more when compared to the pre test knowledge score. Hence it indicates that the STP was effective in enhancing the knowledge of adolescent girls on Health hazards of unhealthy weight control behaviour.

Conclusion: The overall findings of the study clearly show that the structured teaching programme was significantly effective in improving the knowledge level of Adolescent girls regarding Health hazards of Unhealthy weight control behaviour.

Keywords: Assess, Effectiveness, Structured teaching programme, Knowledge, Health hazards, Unhealthy weight control behaviour, Adolescent girls.

INTRODUCTION

“Healthy adolescent girls of today are the healthy mothers of tomorrow”

Maintaining healthy weight control behaviours is very important to proper maintaining of healthy lifestyle. Families can help by conducting mealtimes, the regularity of mealtimes may improve nutrition habits and healthy weight in adolescents. To promote active lifestyles adolescents and families need access to safe spaces for physical activities, access to a variety of foods and opportunities for physical activity regardless of physical ability. Preschools, schools and the broader community must also be established to promote healthy and active lifestyles for children and youth. The psychologists can help ,psychology has an important role to play in promoting healthy and active

lifestyles in our youth .psychology can challenge the disproportionate emphasis on weight reduction and foster the adoption of healthier diets and greater physical activity .psychologist have the expertise to develop effective ,culturally cantered ,community based prevention efforts .The joint prevention of childhood obesity and unhealthy weight control behaviours has the potential to benefit the physical and mental well being of children ,teens and young adults .Psychologist can play a unique role in; Informing the public and setting research agendas to promote healthy eating strategies in the home ,promoting active family lifestyles ,Improving body satisfaction ,Reducing weight stigmatization ,Raising awareness of the connection between obesity and unhealthy weight control in youth.

Usually, an obese adolescents are following the unhealthy weight control behaviours. Low life satisfaction, high negative affect, and body size dissatisfaction were associated with unhealthy weight control behaviours. Among girls, healthy weight classification, coupled with low negative affect or body size satisfaction, was protective against unhealthy weight control behaviours. Improved self care may decrease obesity and unhealthy weight control behaviours'. Among females ,18.2% engaged in unhealthy weight control behaviours and an additional 19.7% used very unhealthy behaviours to control their weight. God created a human as a man and women and in that, a girl is a most beautiful creation in this world; they are the blessed angels of almighty, who after filling their own home with colors of happiness.

Objective: To assess the effectiveness of structured teaching programme on knowledge regarding health hazards of unhealthy weight control behaviour among adolescent girls.

Hypotheses:

H1: There is a significant difference between pre test and post test knowledge

score of adolescent girls regarding health hazards of unhealthy weight control behaviour.

. **H2:** There is a significant association between post test knowledge scores of Health hazards of unhealthy weight control behaviour among adolescent girls with their selected socio demographical variables.

METHODS

A pre-experimental design with one group pre-test, post-test without control group design was used to assess the effectiveness of Structured teaching programme on Health hazards of Unhealthy weight control behaviour among adolescent girls studying in B.V.V.s High school girls at Bagalkot. 100 high school girls studying 8th, 9th and 10th standard. A Knowledge structured questionnaire was administered and the data obtained was organized and analyzed by use of Descriptive and Inferential statistics.

Study design

The research design adopted for this study was pre-experimental one group pre - test –post –test without control group design. Here one experimental group of clients were selected with simple randomization and no control group is used. A pre-test was conducted among high school adolescent girls using structured questionnaire on unhealthy weight control behaviour. Intervention was given in the form of structured teaching programme on knowledge related to health hazards of unhealthy weight control behaviour among adolescent girls.

Setting of the study

Setting' is the Physical location and conditions in which data collection will occur. The present study was conducted in B.V.V.S. High school Bagalkot. The study setting was selected according to the availability of adolescent girls are studying in B.V.V.S High school Bagalkot.

Participants

A sample consists of subject of units that comprise the population for the present study. In this study sample size is (n=100)

adolescent girls 14-16 yrs, age group studying in B.V.V.S high school Bagalkot.

Criteria for selection of sample.

Inclusion criteria: This study will include adolescent girls who are:

1. Available at the time of data collection.
2. Willing to participate in the study.

Exclusion criteria: The study excludes adolescent girls who are.

3. Not able to cooperate during the time of data collection
4. 2. During the time of on leave and Sick

Sample Size estimation

The sample size calculation was done using G - Power 3.1.9.4. The parameters considered for the sample size calculation of Level of significance=0.05. The calculated sample size was 84 considering the attritions, the researcher enrolled 100 adolescent girls as sample for final study, hence the sample size was 100 Adolescent girls, studying in B.V.V.S high school Bagalkot

Description of data collection tool

In the present study self administered structured questionnaire were used to collect the data regarding knowledge respectively. After a thorough review of literature related to the topic and considering the suggestions of experts a structured questionnaire was developed. The structured questionnaire composed of two parts.

Part I: Consists of items seeking information regarding sociodemographic characteristics of adolescent girls such as Age, Religion, Type of family, student education status, parent's occupation, Monthly family income, source of information regarding unhealthy weight control behaviour, & Diet pattern of the student.

Part II: Consists of 35 items pertaining to knowledge regarding Health hazards of unhealthy weight control behaviour among adolescent girls.

It has 5 sections as mentioned here

Section A: Consists of 21 items on knowledge aspects of health hazards of unhealthy weight control behaviour.

Section B: Consists of 5 items on unhealthy weight control behaviour i.e. self induced vomiting.

Section C: Consists of 4 items on unhealthy weight control behaviour i.e. Breakfast skipping.

Section D: Consists of 3 items on unhealthy weight control behaviour i.e. Fasting

Section E: Consists of 2 items on unhealthy weight control behaviour i.e. using of diet pills.

Scoring of the Items

There were 35 items. Each item has four options with one accurate answer. The score for correct response to each item was “one” and for incorrect response was “Zero”.

Data Collection: The main study was conducted for a period of 4 weeks between 20/4/2021 to 05/05/2021 at B.V.V.S High school Bagalkot.

Variables of the study

Dependent variable: In this study, it refers to the knowledge regarding unhealthy weight control behaviour among adolescent girls.

Independent variable: structured teaching programme on knowledge regarding unhealthy weight control behaviour.

Statistical Analysis

The data was analyzed using SPSS 18 statistical package. Numerical data obtained from the sample, was organized

and summarized with the help of descriptive statistics like percentage mean, and standard deviation. Association between post test knowledge score of adolescent girls. Studying B.V.V.S high school Bagalkot and Chi square test were used to analyze association of malnutrition with socio demographic variables.

Ethical Consideration

Ethical clearance certificate was obtained from B.V.V.S Sajjalashree Institute of Nursing Sciences, institutional ethical committee. Written consent was obtained from each participant.

RESULTS

The total mean percentage of pre test knowledge score was 39.74% with mean and SD 13.91 ± 4.58 Where as post test mean percentage of knowledge score was 93.25% with mean and SD 32.64 ± 1.93 . This shows increase of 53.51% in the mean percentage of knowledge scores of the adolescent girls. The overall findings reveal that the percentage of post – test knowledge score was more when compared to the pre test knowledge score. Hence it indicates that the STP was effective in enhancing the knowledge of adolescent girls on Health hazards of unhealthy weight control behaviour. As the calculated t value (6.71) was much higher than ‘t’ value (1.96) for degree of freedom 99 and at 5% level of significance ,the hypothesis is accepted.

Findings revealing the presence of significant difference between pre test and post test knowledge scores; hence the structured teaching programme is proved to be effective.

Table No.1 Distribution of cases and controls according to their socio demographic characteristics

Sl. no	Socio-demo graphic factors	Character	Frequency (f)	Percentage (%)
1	Age	a)14	33	33%
		b)15	19	19%
		c)16	42	42%
		d)16 and above	16	06%
2	Religion	a)Hindu	91	91%
		b)Muslim	08	08%
		c)Christian	0	0%
		d)Others	1	1%
3	Type of family	a)Nuclear family	54	54%
		b)Joint family	46	46%

4	Education status of students	a)8 th class b)9 th class c)10 th class	34 20 46	34% 20% 46%
5	Parents job	Government job a)Private job b)Self employment c)Unemployment	11 19 67 03	11% 19% 67% 03%
6	Monthly family income	a)Between 10,000- 15000 b)Between 16,000-20000 c)Between 21,000-25,000 d)Above 26,000	76 12 04 08	76% 12% 04% 08%
7	Source of information	a)printed media b)Electronic media c)Friends/Relatives d)Health personnel	4 20 49 27	4% 20% 49% 27%
8	Diet pattern of the adolescent girls	a)Vegetarian b)Non vegetarian c)Mixed	55 02 43	55% 02% 43%

Table No 2. Percentage wise distribution of adolescent girls studying in B.V.V.S High school Bagalkot according to level of knowledge in pre-test N=100

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Excellent	29 – 35	0	0%
Good	22 – 28	4	4%
Average	15 – 21	41	41%
Poor	8 – 14	47	47%
Very poor	0 – 7	8	8%
Total	35	100	100%

Percentage wise distribution of adolescent girls in pre-test reveals that out of 100 adolescent girls, highest percentage (47%) of adolescent girls had poor knowledge, 41% of adolescent girls had average knowledge, 8% of adolescent girls

had very poor, followed by lowest percentage (4%) of adolescent girls with good knowledge. None of the adolescent girls had excellent knowledge regarding Health hazards of unhealthy weight control behaviour.

Table No 3. Percentage wise distribution of adolescent girls according to the levels of knowledge in post-test. N=100

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Excellent	29 – 35	95	95%
Good	22 – 28	5	5%
Average	15 – 21	0	0%
Poor	8 – 14	0	0%
Very poor	0 – 7	0	0%
Total	35	100	100%

Percentage wise distribution of adolescent girls in post-test reveals that out of 100 adolescent girls, highest percentage (95%) of adolescent girls had excellent knowledge; lowest percentage 5% of adolescent girls had Good knowledge. None of the adolescent girls had Average, poor and very poor knowledge regarding Health hazards of unhealthy weight control behaviour.

SECTION A: Assessment of knowledge level of adolescent girls in pre-test and post-test

Knowledge wise comparison of adolescent girls in pre-test reveals that the

following result. In pre-test, out of 100 adolescent girls, highest percentage (47%) of adolescent girls had poor knowledge, 41% of adolescent girls had average knowledge, 8% of adolescent girls had very poor, followed by lowest percentage (4%) of adolescent girls with good knowledge. None of the adolescent girls had excellent knowledge regarding Health hazards of unhealthy weight control behaviour. However, after structured Teaching Programme (STP) highest percentage (95%) of adolescent girls had excellent knowledge, and lowest percentage 5% of adolescent girls had Good knowledge. None of the adolescent girls had Average, poor and very

poor knowledge regarding Health hazards of Unhealthy weight control Behaviour.

Table 4: Area wise mean, standard deviation and mean percentage of the knowledge scores in pretest and post-test. N=100

Knowledge area	Max. Score	Pre-Test (O ₁)		Post-Test (O ₂)		Effectiveness (O ₂ - O ₁)	
		Mean ±SD	Mean %	Mean ±SD	Mean%	Mean ±SD	Mean%
Knowledge related	21	9.40 ± 2.91	44.76%	18.31± 1.40	87.19%	8.91 ± 1.51	42.43%
Self vomiting	5	1.39 ± 1.18	27.8%	4.88± 0.40	97.6%	3.49 ± 0.78	69.8%
Breakfast skipping	4	0.99±0.95	24.75%	4 ±0.00	100%	3.01±0.95	75.25%
Fasting	3	1.54 ± 0.94	51.33%	2.66± 1.54	88.66%	1.12 ± 0.6	37.33%
Diet pills	2	0.45± 1.52	22.5%	2 ±1.54	100%	1.55 ±0.02	77.5%
Total	35	13.91±4.58	39.74%	32.64±1.93	93.25%	18.73±2.65	53.51%

Comparison of mean percentage of the knowledge scores of the pre test and post – test reveals an increase of 53.51% in the mean knowledge score of the adolescent girls after STP .Comparison of area wise mean and SD of the knowledge scores in the area of knowledge related shows that the pretest mean percentage of knowledge score was 44.76% with mean and SD 9.40 ±2.91 Where as post test mean percentage of knowledge score was 87.19% with mean and SD 18.31±1.40,Showing an effectiveness of 42.43%.

In the area of knowledge on self induced vomiting ,the pre test mean percentage of knowledge score was 27.8% with mean and SD 1.39±1.18 where as post test mean percentage of knowledge score was 97.6% with mean and SD 4.88±0.40 ,Showing an effectiveness of 69.8% .

In the area of knowledge on Breakfast skipping ,the pre test mean percentage of knowledge score was 24.75% with mean and SD 0.99 ± 0.95 where as post test mean percentage of knowledge score was 100% with mean and SD 4± 0.00,showing an effectiveness of 75.25%.

In the area of Fasting, the pre test mean percentage of knowledge score was

51.33% with mean and SD 1.54±0.94 where as post test mean percentage of knowledge score was 88.66% with mean and SD 2.66±1.54, showing an effectiveness of 37.33%.

‘Diet pills shows that the pre test mean percentage of knowledge score was 22.5% with mean and SD 0.45 ± 1.52 where as post test mean percentage of knowledge score was 100% with mean percent with mean and SD 2 ± 1.54.This shows an increase of 77.5% in the mean percentage of knowledge scores of the adolescent girls

The total mean percentage of pre test knowledge score was 39.74% with mean and SD 13.91± 4.58 Where as post test mean percentage of knowledge score was 93.25% with mean and SD 32.64± 1.93.This shows increase of 53.51% in the mean percentage of knowledge scores of the adolescent girls.

The overall findings reveal that the percentage of post – test knowledge score was more when compared to the pre test knowledge score. Hence it indicates that the STP was effective in enhancing the knowledge of adolescent girls on Health hazards of unhealthy weight control behaviour.

Table 5: Significant difference between the pretest knowledge and post-test knowledge scores of adolescent girls studying in B V V s High school girls at Bagalkot. N=100

Test	Mean	Mean Diff	SD Diff	Paired t-value	Table value
Pre-test (O ₁)	13.91	18.73	2.65	6.71	1.96
Post-test (O ₂)	32.64				

Part-IV: Association between post-test knowledge scores of adolescent girls in BVVS High school at Bagalkot girls regarding Health hazards of unhealthy weight control behaviour with selected socio-demographic factors

Table 6- Association between post-test knowledge scores and selected sociodemographic factors N=100

Sl no	Sociodemographic	Calculated chi square value	DF	Chi-square table value	P value	Significance
1	Age	24	3	7.81	<0.001	Significant
2	Religion	2.768	2	5.99	0.251	NS
3	Type of family	0.510	1	3.84	0.475	NS
4	Education	29.214	2	5.99	<0.001	Significant
5	Occupation	2.961	3	7.81	0.398	NS
6	Family monthly income	0.561	3	7.81	0.905	NS
7	Source of information	8.579	3	7.81	0.035	Significant
8	Dietary pattern	0.673	2	5.99	0.714	NS

Table 6 illustrates testing of hypothesis H1; there is a significant association between post test knowledge scores and socio demographic factors of adolescent girls 0.05 level of significance.

DISCUSSION

The aim of the study was to assess the effectiveness of structured teaching programme on knowledge regarding health hazards of unhealthy weight control behaviour among adolescent girls studying in B.V.V.S. high school Bagalkot. Knowledge wise comparison of adolescent girls in pre-test reveals that the following result. In pre-test, out of 100 adolescent girls, highest percentage (47%) of adolescent girls had poor knowledge, 41% of adolescent girls had average knowledge, 8% of adolescent girls had very poor, followed by lowest percentage (4%) of adolescent girls with good knowledge. None of the adolescent girls had excellent knowledge regarding Health hazards of unhealthy weight control behaviour. However, after structured Teaching Programme (STP) highest percentage (95%) of adolescent girls had Excellent knowledge, and lowest percentage 5% of adolescent girls had Good knowledge. None of the adolescent girls had Average, poor and very poor knowledge regarding Health hazards of Unhealthy weight control Behaviour.

Results are supported with a study was conducted on synthesize the associations between skipping breakfast and the risk of overweight/obesity. Observational studies (cohort studies and cross-sectional studies) reporting adjusted odds ratio or risk ratio estimates for the

association between breakfast skipping and overweight/obesity (including abdominal obesity). Summary odds ratio (risk ratio) and 95% confidence intervals calculated with a random effects model. The result shows that 45 observational studies (36 cross sectional studies and 9 cohort studies) were included in this meta- analysis. In cross sectional studies, The odds of low frequency breakfast intake per week versus high frequency were 1.48(95% cl 1.40-1.57; $I^2=54.0\%$; $P=0.002$) for overweight /obesity, 1.31(95% cl 1.17- 1.47; $I^2=43,0\%$; $P=0.15$) for abdominal obesity. In cohort studies, the RR of low –frequency breakfast intake per week versus high frequency was 1.44 (95% cl 1.25-1.66; $I^2 =61\%$; $P=0.009$) for overweight /obesity. This meta-analysis confirmed that skipping breakfast is associated with overweight/obesity and skipping breakfast increases the risk of overweight/obesity. The results of these studies and cross sectional studies are consistent. There is no significant difference in these results among different ages, gender, regions, and economic conditions.

H1: There is a significance difference between pre-test and post-test knowledge scores among adolescent girls studying B.V.V.S High school Bagalkot is accepted. Finding revealed the presence of significance difference between pre-test and post-test knowledge score, hence the STP proved to be effective.

Result is supported with a study conducted to factors associated with unhealthy weight control behaviours among a Retrospective sample of U.S. high school students. Data using binary multiple logistic regression. Sample size was about 13,583. Among this 22.7% of girls and 10.1% of

boys engaged in UWCB. Among girls and boys separately, the common significant factors included suicidal behaviours, alcohol drinking, misused prescription drug, feeling depressed, skipping breakfast, and attending physical education class. School nurses are suggested to have knowledge about the risk factors and provide assessment, consultation, and education to reduce UWCB.

Limitations of the study: The study is limited to 100 adolescent girls studying in B.V.V.S High school Bagalkot.

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