



---

## A study to assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of city

Mahima Sharad Alekar<sup>1</sup>, Sussane Mathew<sup>2</sup>

<sup>1</sup> Department of Mental Health Nursing, VSPM MDINE, Nagpur, Maharashtra, India

<sup>2</sup> Associate Professor, Department of Mental Health Nursing, VSPM MDINE, Nagpur, Maharashtra, India

---

### Abstract

**Objectives:** 1) to assess the existing knowledge regarding anorexia nervosa among adolescent girls in a selected schools of city. 2) To assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of city. 3) To associate the post test knowledge score with selected demographic

**Methodology:** Pre Experimental One group pre test and post test research design used for the study. It was conducted over 60 adolescent girls by using Non probability Convenient sampling technique.

**Results:** Assessment was done by using structured questionnaire on anorexia nervosa. Analysis showed that in pre test 32(53.33%) of the adolescent girls were having poor level of knowledge, 28.33% had average and 18.33% of them had good level of knowledge score, the mean score for the pretest was  $6.70 \pm 3.55$ . And in post test 1(1.67%) of the adolescent girls were having average level of knowledge, 8.33% had good, 31.67% had very good and 58.33% of them had excellent level of knowledge score, the mean score for the posttest was 19.93 with a percentage score of 79.73 %. Significance of difference between knowledge score in pre and post test of adolescent girls in relation to knowledge regarding anorexia nervosa is The tabulated value for  $n=60-1$  i.e 59 degrees of freedom was 2.00. In addition the calculated 'p' values for overall knowledge regarding anorexia nervosa in adolescent girls was 0.000 which is ideal for any population.

**Conclusion:** There was marked improvement of scores. The post test was evident as 58.33% of subjects had excellent score and 31.67% subjects had very good score. It means planned teaching programme was effective. There was no significant association between education of parents, religion, place of living and source of information about anorexia nervosa and significantly associated with age and food habits. So researcher accepts research hypothesis  $H_1$ .

**Keywords:** planned teaching programme, knowledge, anorexia nervosa, adolescent girls, schools

---

### Introduction

Nutrition is required to sustain life, and most individuals acquire nutrients from eating food; however, nutrition and life sustenance are not the only reasons most people eat food. Eating is the social activity; seldom does an event of any social significance occur without the presence of food. Hence, society and culture have a great deal of influence on eating behaviours. <sup>[1]</sup> The term anorexia nervosa is derived from the Greek term from "loss of appetite" and Latin word implying nervous origin." Anorexia Nervosa is a syndrome characterised by three essential criteria. The first is a self induced starvation to a significant degree: the second is restless derived for thinness and the third is presence of medical signs and symptoms resulting from starvation. <sup>[2]</sup> norexia Nervosa is an eating disorder characterised by intense fear of becoming obese. This fear does not decrease even if body becomes very thin and underweight. There is often body image disturbance. There is refusal to maintain the body weight above a minimum normal weight for the age, sex, and height. <sup>[3]</sup> Anorexia Nervosa is characterised by highly specific behavioural and psychopathological symptoms and significant somatic signs. The core psychopathological features are the dread of fatness, weight phobia and a drive for thinness. <sup>[4]</sup> Anorexia Nervosa is common among teens; 10% of adolescent girls have anorexia, boys and men can also develop, but less often than girls and women; 1% of older adults and women have anorexia. However, it can be well before even puberty or well after that, even starving in midlife or beyond. It occurs much more often in females as compared to males. The common age of onset is adolescent (13 – 19 years of age). <sup>[5]</sup>

### Background

Eating disorders of various kinds have been reported in up to 4% of adolescent and young adult students. Anorexia Nervosa has been reported most frequently over the past several decades, with increasing reports of the disorder in prepubertal girls and in boys. The most common age of onset of anorexia nervosa is the midteens, but up to 5% of anorectic patients have the onset of the disorder in the early 20s. The most common age of onset is between 14 to 18 years. Anorexia Nervosa is estimated to occur in about 0.5% to 1% of adolescent girls. The

prevalence of young women with some symptoms of anorexia nervosa who do not meet the diagnostic criteria is estimated to be close to 5%. It seems to be most frequent in developed countries, and it may be seen with greatest frequency among young women in professions that requires thinness such as modelling and ballet. [6]

The incidence of anorexia nervosa has increased in the past 30 years both in the United States and in Western Europe (Halimi 2008). Studies indicate a prevalence rate among young women in the United States of approximately 1% (Black and Andreasen 2011). Anorexia nervosa occurs predominantly in females 12 to 39 years. Fewer than 10% of cases are males (American Psychiatric Association 2000). Anorexia nervosa was believed to be more in the higher socioeconomic classes, but evidence is lacking to support this hypothesis. [7]

The term "anorexia" literally means absence of appetite. Anorexia can be associated with medical conditions or medications that cause a loss of appetite. Anorexia nervosa, however, involves a psychological aversion to food that leads to a state of starvation and emaciation. [8]

Research conducted with young people in 2010 on behalf of the NEDC indicated that: Up to 20% of females may have undiagnosed eating disorders. The risk of premature death for women with Anorexia Nervosa is 6-12 times higher than the general population. The risk of premature death for women with Anorexia Nervosa is 'much higher' than other psychiatric disorders. For females with Anorexia Nervosa and diabetes, there is a 15.7-fold increase in mortality rates when compared with females with diabetes alone. [9]

### **Need of the Study**

Anorexia Nervosa occurs in approximately 0.5% to 3.7% of the female population. Its onset is usually between 13 to 20 years of age, but the illness can occur in any age group, including the elderly and prepubertal children. Anorexia nervosa is also seen in male, who are thought to make up only 5% to 10% of the anorectic population. The mortality from anorexia nervosa is estimated to be approximately 50%.

The number of people with anorexia nervosa who fully recover is small. Although some patients improve symptomatically over time most continue to have disturbances with body image, distorted eating, and other psychiatric problems. [10]

In a survey of 185 female students on a college campus, 58% felt pressure to be a certain weight, and of the 83% that dieted for weight loss, 44% were of normal weight. 91% of women surveyed on a college campus had attempted to control their weight through dieting. 22% dieted "often" or "always." 86% report onset of anorexia nervosa by 20 years of age. Anorexia is the third most common chronic illness among adolescents. 95% of those who have eating disorders are between the ages of 12 and 25. The mortality rate associated with anorexia nervosa is 12 times higher than the death rate associated with all causes of death for females 15-24 years old. [11]

Based on international data, the lifetime prevalence for females is between .3% and 1.5%. Approximately one in 100 adolescent girls develops anorexia nervosa. Anorexia has the highest mortality rate on any psychiatric disorder. 1 in 5 premature deaths of individuals with Anorexia Nervosa are caused by suicide. The onset of anorexia usually occurs during adolescents with a median age of 17. The average duration is 7 years. More than half of anorexia sufferers have been sexually abused or experienced some other major trauma. [12]

### **Problem statement**

"A study to assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of city"

### **Objectives**

1. To assess the existing knowledge regarding anorexia nervosa among adolescent girls in a selected schools of city.
2. To assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of city.
3. To associate the post test knowledge score with selected demographic variables.

### **Hypothesis**

1.  $H_0$ -There will be no significant difference in knowledge regarding anorexia nervosa among adolescent girls.
2.  $H_1$ -There will be significant difference in knowledge regarding anorexia nervosa among adolescent girls.

### **Objectives**

1. To assess the existing knowledge regarding anorexia nervosa among adolescent girls in a selected schools of city.
2. To assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of city.
3. To associate the post test knowledge score with selected demographic variables.

### **Operational Definition**

- Assess:

In this study Assess means to find out the knowledge regarding anorexia nervosa among adolescent girls.

- Effectiveness

In study Effectiveness means to the extent to which plan teaching programme have achieved the desired effect on knowledge of adolescent girls regarding anorexia nervosa.

- Planned Teaching Programme

In this study Planned teaching Programme meanse it is the process of giving systematic information about anorexia nervosa.

- Knowledge

In this study Knowledge refers to the information possessed by teachers regarding anorexia nervosa assessed by structured questionnaires.

- Adolescent

In this study the age of adolescent girls is between 13 to 18 years of age.

- Anorexia Nervosa

In this study Anorexia Nervosa is a disorder characterized by a preoccupation with the body weight and food; behavior directed towards losing weight; peculiar patterns of handling foods, weight loss, and intense fear of gaining weight, disturbances of body image, amenorrhea.

### Hypothesis

1.  $H_0$ -There will be no significant difference in knowledge regarding anorexia nervosa among adolescent girls.
2.  $H_1$ -There will be significant difference in knowledge regarding anorexia nervosa among adolescent girls

### Dilimitations

1. The study will be limited to adolescent girls in a selected schools of city.

### Ethical Aspect

The study was approved by the Institutional Ethical Committee and the study will be conducted in accordance with the ethical guidelines prescribed by Central Ethics Committee on Human Research.

### Review of Literature

The review of literature is done under following areas of Anorexia Nervosa.

1. Literature related to Anorexia Nervosa
2. Literature related to prevention and management of Anorexia Nervosa.
3. Literature related to planned teaching on Anorexia Nervosa.

### Conceptual Framework

The conceptual framework used for the present study is based upon general open system model

### Methodology

- Research approach- Quantitative research approach
- Research design- Pre Experimental One group pre test and post test research design
- Setting of the study-The study is conducted in selected schools of the city.
- Research variable- The dependant variable is Knowledge and Independent Variable is Planned teaching programme.
- Demographic variables-Age, Education of parents, Food habits, Place of living, religion, Do you have any information about anorexia nervosa
- Population – Girls
- Target population: It includes Adolescent girls
- Accessible population: In this study accessible population is consists of adolescents studying in schools and is available at the time of data collection.
- Sampling -
- Sample size: 60 Adolescent Girls.
- Sampling technique: Non probability convenient sampling technique

- Sampling criteria -

- Inclusion criteria:

In this study, inclusion criteria was adolescent who are,

- Adolescent girls knowing English.
- Adolescent girls who are willing to participate.
- Adolescent girls who are present during the time of data collection.

- Exclusive criteria:

Students who are,

- Adolescent girls who are below the age of 13 years and above the age of 18 years.
- Adolescent girls who are not willing to participate in the study.

- Description of Tools -

1. Section I - Semi structured questionnaire of demographic variables
2. Section II - Structured Questionnaire on Anorexia Nervosa

- **Validity -**

To obtain content validity of the tool, the prepared tool with synopsis, Evaluator's response sheet and content validity certificate. The tool was given to 18 experts for the content validity; including Mental (Health) Psychiatric Nursing experts, expert from Research and Medical Education Unit, Psychiatrist, Statistician. Valuable suggestions were given and necessary corrections were made after the consultation of guide.

- **Reliability -**

In this study, by using Guttman Split Half method of reliability, it was found to be 0.92 and hence tool is reliable and valid.

- **Pilot study -**

It was conducted on 6 adolescent and The collected data was coded, tabulated and analyzed by using descriptive statistics (mean, mean percentage, standard deviation) correlation coefficient and to find out the association between the demographic variables and knowledge scores. The data was represented in the form of tables and graphs. The data regarding knowledge of adolescent girls was analyzed statistically by using paired 't'-test. It was found to be significant at 0.05 level. The pilot study was feasible in term of time, money and resources.

- **Data collection -**

The main study data was gathered from 12/11/13 to 19/11/13 Permission from the principal was taken before conducting the study. The investigator introduced her and explained the purpose of the study and consent was obtained. The questionnaires were distributed to the samples. The questionnaires were completed in the presence of the investigator to avoid contamination and bias in the collection of data.

## Results

**Table 1:** Percentage wise distribution of adolescent girls according to their demographic characteristics n=60

Demographic Variables	Frequency (n)	Percentage (%)
<b>Age (yrs)</b>		
13-14 years	34	56.7
15-16 years	20	33.3
17-18 years	6	10.0
<b>Education of parents</b>		
Primary and Secondary	13	21.7
Higher Secondary	9	15.0
Diploma	6	10.0
Graduate	23	38.3
PG	9	15.0
<b>Food Habits</b>		
Food/Junk Food	7	11.7
Homely Food	30	50.0
Mixed Food	20	33.3
Other	3	5.0
<b>Place of living</b>		
With Parents	60	100.00
Hostel	0	0.00
Relative's Home	0	0.00
Paying Guest	0	0.00
<b>Religion</b>		
Hindu	35	58.3
Muslim	14	23.3
Christian	2	3.3
Others	9	15.0
<b>Information about anorexia nervosa</b>		
Yes	0	0.00
No	60	100.00

## Section II

Assessment of Knowledge Regarding Anorexia Nervosa among Adolescent Girls in A Selected Schools of City

**Table 2:** General assessment with pre test

n=60

Level of knowledge score	Pre Test		Mean Score	Mean %
	Frequency	Percentage		
Poor (0-5)	32	53.33	6.70 ± 3.55	26.80
Average (6-10)	17	28.33		
Good(11-15)	11	18.33		
Very Good (16-20)	0	0.00		
Excellent (21-25)	0	0.00		

The above table shows that in pre test 32(53.33%) of the adolescent girls were having poor level of knowledge, 28.33% had average and 18.33% of them had good level of knowledge score. The minimum score in pretest was 0 and the maximum score was 15, the mean score for the pretest was 6.70 ± 3.55.

**Table 3:** General assessment of post test

n=60

Level of knowledge score	Percentage score	Post Test		Mean score	Mean percentage
		Frequency	Percentage		
Poor	0-5	0	0.00	19.93	79.73
Average	6-10	1	1.67		
Good	11-15	5	8.33		
Very Good	16-20	19	31.67		
Excellent	21-25	35	58.33		

The above table shows that in post test 1(1.67%) of the adolescent girls were having average level of knowledge, 8.33% had good, 31.67% had very good and 58.33% of them had excellent level of knowledge score. The minimum score in posttest was 8 and the maximum score was 25, the mean score for the posttest was 19.93 with a percentage score of 79.73 %.

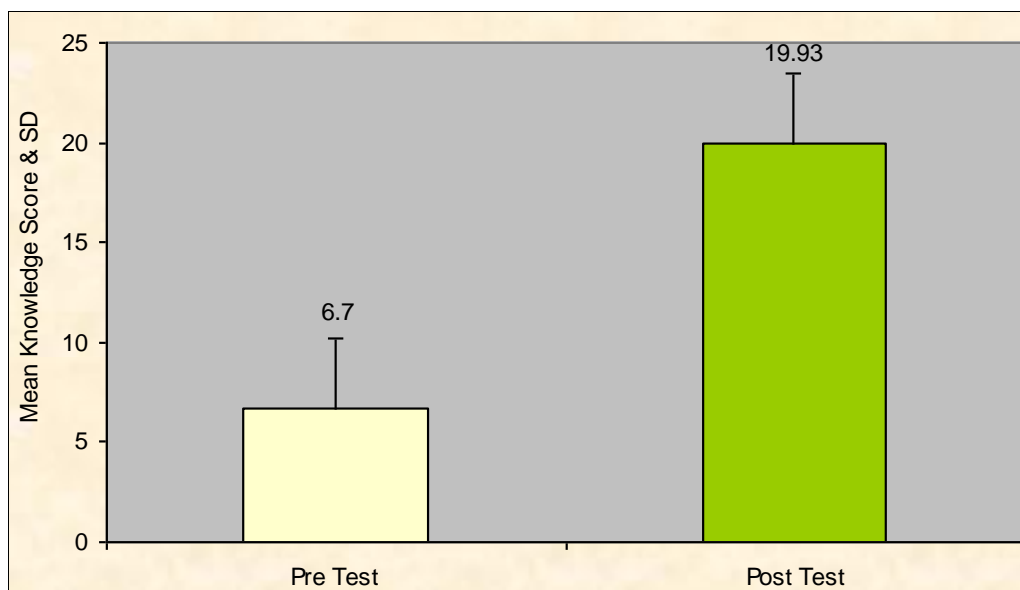
### Section III

Evaluation of Effectiveness of Planned Teaching Programme on Knowledge Regarding Anorexia Nervosa in Selected Schools of The City

**Table 4:** Significance of difference between knowledge score in pre and post test of adolescent girls in relation to knowledge regarding anorexia nervosa

n= 60

Tests	Mean	SD	t-value	Table value	d. f.	p-value	Significance
Pre Test	6.70	3.55	20.68	2.00	59	0.000	Highly Significant
Post Test	19.93	3.73					

**Fig 1:** Bar diagram representing significance of difference between knowledge score in pre and post test of adolescent girls in relation to knowledge regarding anorexia nervosa.

The calculated 't' value are much higher than the tabulated value at 5% level of significance for overall knowledge score which is statistically acceptable level of significance. In addition the calculated 'p' values for overall knowledge regarding anorexia nervosa in adolescent girls was 0.000 which is ideal for any population. Hence it is statistically interpreted that the planned teaching programme on knowledge regarding anorexia nervosa in adolescent girls was effective. Thus the  $H_1$  is accepted.

#### Section IV

Association of Knowledge Score in Relation to Demographic Variables

**Table 5**

	No. of adolescent girls	Mean post test knowledge score	F-value	p-value
<b>Age (yrs)</b>				
13-14 years	34	20.70±2.79	4.22	0.019 S,p<0.05
15-16 years	20	19.75±3.99		
17-18 years	6	16.16±5.56		
<b>Education of parents</b>				
Primary and Secondary	13	19±3.21	0.37	0.82 NS,p>0.05
Higher Secondary	9	20.22±3.45		
Diploma	6	19.33±5.57		
Graduate	23	20.17±4.01		
<b>Food Habits</b>				
Food/Junk Food	7	20.71±4.57	7.39	0.000 S,p<0.05
Homely Food	30	20.96±2.37		
Mixed Food	20	19.30±3.75		
Other	3	12±4.00		
<b>Religion</b>				
Hindu	35	20.05±3.31	1.20	0.31 NS,p>0.05
Muslim	14	18.57±5.18		
Christian	2	22.50±3.53		
Others	9	21±2.12		

In this study, 56.7% subjects were from the age group of 13-14 years, 38.3% subject parents were graduate, 50.0% subjects were used to have homely food, 100% subjects were live with their parents, 58.3% subjects were belongs to Hindu religion, and 100% subjects were don't have information about anorexia nervosa.

There was marked improvement of scores. The post test was evident as 58.33% of subjects had excellent score and 31.67% subjects had very good score. It means planned teaching programme was effective.

There was no significant association between education of parents, religion, place of living, and source of information about anorexia nervosa and significantly associated with age and food habits. So researcher accepts research hypothesis  $H_1$ .

#### Discussion

The present study was conducted to assess the effectiveness of planned teaching programme on knowledge regarding anorexia nervosa among adolescent girls in selected schools of the city.

The findings of the study are discussed as:

Majority 56.7% subjects were from the age group of 13-14 years, 38.3% parents of sample were graduate, 50% samples eat homely foods, 100% samples were living with their parents, 58.3% samples were Hindu and 100% samples don't have information about anorexia nervosa. The pre test was evident as 28.33% had average score and 53.33% had poor and 18.33% had good score. It means planned teaching programme was effective. In post test knowledge score there was no significant association with education of parents, place of living, religion, and source of information and had significant association with age and food habits.

#### Conclusion

After the detailed analysis, this study leads to the following conclusion:

The adolescent girls do not have 100% knowledge regarding anorexia nervosa. There was a significant increase in the knowledge of subjects after the introduction of planned teaching. To find the effectiveness of planned teaching 't' test was applied and t value was calculated, post test score was significantly higher at 0.05 level than that of pre test score. Thus it was concluded that planned teaching on anorexia nervosa was found effective as a teaching strategy. Demographic variables did show a major role in influencing the pre test and post test knowledge score among the adolescent girls.

Hence, based on the above cited findings, it was concluded undoubtedly that the written prepared material by the investigator in the form of planned teaching helped the adolescent girls to improve their knowledge about anorexia nervosa.

**Acknowledgement**

By being grateful to god you acknowledge that nothing is gained by your power alone. This dissertation would not have been possible without the inspiration and support of a number of wonderful people – my thanks and appreciation to all of them for being part of this journey and making the dissertation possible.

**References**

1. Mary C, Townsend. Psychiatric Mental Health Nursing. 7<sup>th</sup> ed. New Delhi: jaypee brother medical publishers, 2012, 739.
2. Kaplan, Sadocks. Synopsis of psychiatry, Behavioural science/clinical psychiatry. 10<sup>th</sup> ed. India: Williams & Wilkins publications, 2007, 570.
3. Niraj Ahuja. A short Textbook of Psychiatry. 20<sup>th</sup> ed. New Delhi: jaypee brother medical publishers, 2011, 142.
4. Sreevani R. A Guide to Mental Health and Psychiatric Nursing. 3<sup>rd</sup> ed. New Delhi: jaypee brother medical publishers, 2010, 261.
5. Neeraja KP. Essentials of Mental Health and Psychiatric Nursing. New Delhi: jaypee brother medical publishers, 2011:2:495.
6. Kaplan, Sadocks. Synopsis of psychiatry, Behavioural science/clinical psychiatry. 10<sup>th</sup> ed. India: Williams & Wilkins publications, 2007, 727.
7. Mary C Townsend. Psychiatric Mental Health Nursing. 7<sup>th</sup> ed. New Delhi: jaypee brother medical publishers, 2012, 739.
8. Available at [www.health.nytimes.com](http://www.health.nytimes.com)
9. Available at [www.ned.com.au/eating disorder in Australia](http://www.ned.com.au/eating-disorder-in-australia)
10. Stuart Gail W. Principles and practice of psychiatric nursing. 7<sup>th</sup> edition. China: Mosby publications, 2001, 257.
11. Available at [www.anad.org](http://www.anad.org)
12. Available at [www.eatingdisorder.org](http://www.eatingdisorder.org)