International Journal of Community Medicine and Public Health
Nelson et al. Int J Community Med Public Health. 2024 Jun;11(6):2366-2372
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20241501

Original Research Article

A study to evaluate the effectiveness of planned educational programme on knowledge and attitude regarding psychosocial problems of eating disorders among adolescent girls studying in selected P.U Colleges at Vijayapur

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Received: 24 April 2024
Accepted: 22 May 2024

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ABSTRACT

Background: Eating problems are prevalent, with girls more likely to develop issues in adolescence. Concerning indicators include weight fluctuations, altered eating patterns, and excessive physical activity. Outpatient treatment is effective for most, but some may require hospitalization or residential programs for stability and care.
Methods: This research adopted an evaluative research approach and employed a pre-experimental (one group pre-test post- test design), and a sample of 60 adolescent girls studying in PU College is recruited through simple random sampling technique. The investigation was conducted at selected PU colleges, Vijayapur. Karnataka, among the adolescents.
Results: This study assessed the knowledge and attitudes of adolescent girls in PU colleges in Vijayapur regarding eating disorders. Pretest results showed a majority with moderate knowledge and unfavorable attitudes. Following an educational program, significant improvements in knowledge and attitudes were observed. The findings highlight the effectiveness of targeted interventions in enhancing awareness and promoting positive attitudes. H1: Post-test knowledge scores significantly improved compared to pre-test scores ($p<0.05$). H2: Post-test attitude scores significantly enhanced compared to pre-test scores ($p<0.05$). H3: No significant associations were found between knowledge and attitude scores and socio-demographic variables among adolescent girls.
Conclusions: In summary, targeted interventions can enhance knowledge and attitudes about eating disorders among adolescent girls in PU colleges. Outpatient treatments and education are crucial for addressing these issues, but more research and interventions are needed to promote awareness and positive attitudes.

Keywords: Eating disorders, Adolescents eating problems, Nutritional disorders of adolescents, Binge eating, Planned education program

INTRODUCTION

The rising frequency of eating disorders among adolescent girls has emerged as a notable issue in public health, impacting their physical and mental health significantly.[1] Adolescence is a critical period of development where individuals are particularly vulnerable to body image concerns and societal pressures related to appearance. Studies have indicated that eating disorders, such as anorexia nervosa, bulimia nervosa, and binge eating disorder, have a higher impact on adolescent girls, resulting in severe outcomes like nutritional deficiencies, emotional turmoil, and social seclusion.[2] Anorexia nervosa is a serious mental illness that mostly affects teens and young women.[3] It is essential to comprehend the risk factors, prevalence, and available treatment options for eating disorders in this demographic to develop successful intervention and prevention tactics.[4] Anorexia nervosa and bulimia nervosa are recognized as distinct clinical conditions.[5] The need for early prevention efforts and ongoing interventions to address disordered eating in adolescence and young adulthood is crucial.[6] At least 9% of individuals worldwide have eating disorders. 28.8 million Americans-9%-will acquire eating disorders. Fewer than 6% of eating disorder individuals are medically "underweight."28-74% of eating disorders are inherited. Mental problems including eating disorders kill second only to opiate overdose. Eating disorders kill 10,200 people every year-one every 52 minutes. 26% of eating problem sufferers attempt suicide. Eating disorders cost $64.7 billion yearly.[7] The analysis suggests prospective trials utilizing conventional outcome factors to track anorexia nervosa in Indian teenagers.[8]

Objectives

This study aims to assess the pre-test knowledge and attitude of adolescent girls regarding psychosocial problems of eating disorders. It also seeks to evaluate the effectiveness of a planned educational program on enhancing their knowledge and attitudes towards these issues. Additionally, the research aims to investigate the association between knowledge and attitude scores of adolescent girls and selected socio-demographic variables.

METHODS

The study framework and subjects

In this interventional study, we have used a pre-experimental group design and a quantitative evaluative research approach to examine the effects of a planned education programme on knowledge and attitude regarding psychosocial problems of eating disorders among adolescent girls studying in selected P.U Colleges at Vijayapur. The research is conducted from 05/06/2023 to 30/06/2023. The adolescent girls were chosen from a selected PU colleges via the convenient sampling technique.

Inclusion and exclusion criteria

The study includes adolescents aged 16 to 19 who are currently enrolled in selected PU colleges in Vijayapur. Adolescent girls who are not willing to participate as well as with vision or hearing impairments are excluded from the study.

Samples size and methodology

The sample comprised 60 adolescent girls who were enrolled in PU colleges in Vijayapur. The data gathering method was initiated after obtaining formal permission from the PU college principle, Vijayapur. On day 1 (pretest), the investigator employed convenient sampling to pick a total of 60 samples. The subject's understanding of psychological issues related to eating disorders was evaluated, and on the same day, the planned educational programme was implemented. During the day 7 brainstorming session, participants were presented with scenarios and asked to address questions pertaining to age-related psychosocial issues linked with eating disorders. On day 14, the investigator administered a post-test to the same group of teenage females. This evaluation and termination phase involved asking questions, providing positive reinforcement for their efforts, and giving comments.

Statistical analysis

The demographic data will be evaluated using frequency and percentage. The mean pre-test and post-test knowledge and attitude scores will be examined using statistical measures such as mean, median, standard deviation, and range. The paired t test is utilized to assess the efficacy of the planned educational programme. The relationship between pretest knowledge score and demographic factors will be assessed using a Chi-square test a $p<0.05$.

RESULTS

Here are the details of the statistical analysis performed on the 60 adolescent girls who contributed in the study.

Section I: Distribution of sample characteristics according to socio demographic variables

In the Table 1 demographic data analysis, it was found that the maximum number of subjects, accounting for 45.0%, were in the age group of 17 years, followed by 40.0% in the age group of 16 years, and 15.0% in the age group of 18 years. Regarding religious affiliation, 80.0% of the subjects identified as Hindu, 15.0% as Muslim, and 5.0% as Christian. Family structure analysis revealed that 60.0% of the subjects belonged to nuclear families, 25.0% to Joint families, and 15.0% to Extended families. In terms of family income, 55.0% of subjects had a monthly income of 10000-15000 rupees, while 45.0% had less than 10000 rupees per month. Additionally, dietary

patterns showed that 80.0% of subjects were vegetarian, 15.0% were non-vegetarian, and 5.0% had a mixed dietary pattern. Finally, the analysis of information sources indicated that 60.0% of subjects relied on family and relatives for information, 20.0% on books, and another 20.0% on magazines.

Table 1: Demographic variables of college students (n=60).

Demographic variables	N	Percentages (%)
Age (in years)		
16	24	40.0
17	27	45.0
18	9	15.0
19	0	0.00
Religion		
Hindu	48	80.0
Muslim	9	15.0
Christian	3	5.0
Others	0	0.0
Type of the family		
Nuclear family	36	60.0
Joint family	15	25.0
Extended family	9	15.0
Family income (per month in rupees)		
<10,000	27	45.0
10,000-15,000	33	55.0
>15000	0	0.00
Dietary pattern		
Vegetarian	48	80.0
Non vegetarian	9	15.0
Mixed	3	5.0
Source of information		
Family/ relatives	36	60.0
Friends	0	0.0
Books	12	20.0

Section II: Analysis and interpretation of scores regarding psychosocial problems of eating disorders among adolescent girls

Table 2 reveals that the pretest knowledge revealed that 12 (20.0%) had inadequate knowledge, 42 (70.0%) had moderate knowledge and only 6 (10.0%) had adequate knowledge. In the post-test knowledge assessment, 33 (55.0%) of students demonstrated adequate knowledge, 27 (45.0%) had moderate knowledge, and none of them had inadequate knowledge.

Table 3 reveals that mean and SD of pretest overall mean is 14, SD=3.7 and mean % is 46.7 and in posttest mean and SD of, overall mean-25.7, SD-2.4 and mean %= 85.7.

Table 4 reveals the pre test attitude of adolescent girls are 36 (60.0%) of respondents have unfavorable attitude, 16 (2.7%) of respondents have moderate attitude and 8 (13.3%) of them have favorable attitude and in post test attitude of adolescent girls are 6 (10.0%) of respondents have unfavorable attitude, 30 (50.0%) of respondents have moderate attitude and 24 (40.0%) of them have favorable attitude.

Table 5 reveals that pre and post test attitude regarding eating disorders among adolescent girls of selected PU colleges at Vijayapur. Pre test Mean is 28.5, SD is 3.7 and mean percentage is 57.0. Post test mean is 40.5, SD is 3.2 and mean percentage is 81.0.

Table 06 reveals that t test values are significant to aspect wise knowledge among adolescent girls of selected PU college in Vijayapur, hence planned educational programme on eating disorders is effective to improve knowledge of selected sample group.

Tables 7 and 8 reveals that r value is significant to planned educational programme on eating disorders is effective to improve knowledge of selected sample group hence it is improvement in knowledge and attitude of adolescent girls of selected PU colleges at Vijayapur regarding eating disorders.

Table 9 reveals that there was association between post tests on knowledge scores with their selected socio-demographic variables such as type of family and family income. But there were not significant association between post test knowledge scores with age, religion, dietary pattern and source of information.

Table 10 reveals that there were association between attitude scores with their selected socio-demographic variables such as religion, type of family and family income in rupees per month. But there were not significant between attitude scores and selected socio demographic variables such as age, dietary pattern and source of information.

Table 2: To assess the pretest and posttest knowledge regarding psychosocial problems of eating disorders among adolescent girls studying in selected PU colleges at Vijayapura (n=60).

Level of knowledge	Score	Pre test		Post test	
		N	%	N	%
Inadequate	<50	12	20.0	0	0.0
Moderate	50-75	42	70.0	27	45.0
Adequate	>75	6	10.0	33	55.0
Total	-	60	100	60	100

Table 3: To assess mean and SD of pretest and posttest knowledge regarding eating disorders among adolescent girls of selected PU college (n=60).

Aspects wise knowledge	Max score	Range	Pre test			Range	Post test		
			Mean	SD	Mean%		Mean	SD	Mean%
Basic Information	6	0-4	2.4	2.4	40	4-6	5.2	1.8	86.7
Causes, risk factors and signs and symptoms, diagnosis	13	3-9	5.6	3.2	43.1	8-13	11	2.2	84.6
Treatment, prevention and complications of eating disorders	11	03-10	6	3.5	54.5	7-11	9.5	1.6	86.4
Overall	30	6-21	14	3.7	46.7	13-28	25.7	2.4	85.7

Table 4: To assess the pretest and posttest attitude regarding psychosocial problems of eating disorders among adolescent girls studying in selected PU colleges at Vijayapura.

Level of attitude	Score	Pre test		Post test	
		N	%	N	%
Unfavorable	<50	36	60.0	6	10.0
Moderate	50--75	16	26.7	30	50.0
Favorable	>75	8	13.3	24	40.0
Total		60	100	60	100

Table 5: To assess mean and SD of pre and post-test attitude regarding eating disorders among adolescent girls studying in selected PU colleges at Vijayapura (n=60).

Attitude	Max score	Range	Mean	SD	Mean%
Pre test	50	23-39	28.5	3.7	57.0
Post test	50	34-47	40.5	3.2	81.0

Table 6: To evaluate the effectiveness of planned educational programme on knowledge regarding eating disorders (n=60)

Aspects wise knowledge	Mean	SD	T test
Basic information	2.8	1.6	13.5*
Causes, risk factors and signs and the symptoms, diagnosis	5.4	2.3	18.2*
Treatment, prevention and complications of eating disorders	3.5	2.6	10.4*
Overall	11.7	2.9	31.3*

*Significant at p<0.05 at df=59, t=1.67

Table 7: To find out pre- test correlation between the knowledge and attitude regarding eating disorders among adolescent girls of selected PU colleges (n=60).

Domain	Pre test		R value
	Mean	SD	
Knowledge	14	3.7	0.21 NS
Attitude	28.5	3.7	

N.S- Not significant at p<0.05 level, r=0.25

Table 8: To find out post-test correlation between the knowledge and attitude regarding eating disorders among adolescent girls of selected PU colleges.

Domain	Post-test		R value
	Mean	SD	
Knowledge	25.7	2.4	0.26*
Attitude	40.5	3.2	

*Significant at p<0.05 level, r=0.25

Table 9: Association between post tests on knowledge scores with their selected socio-demographic variables, (n=60).

Demographic variables	N	%	No. of respondents				Chi-square value
			<mean (25)		>mean (35)		
			N	%	N	%	
Age (in years)							
16	24	40.0	14	58.3	10	41.7	4.91
17	27	45.0	9	33.3	18	66.7	Df=2
18	9	15.0	2	22.2	7	77.8	NS
19	0	0.00	0	0.0	0	0.0	
Religion							
Hindu	48	80.0	18	37.5	30	62.5	2.74
Muslim	9	15.0	6	66.7	3	33.3	Df=2
Christian	3	5.0	1	33.3	2	66.7	NS
Others	0	0.0	0	0.0	0	0.0	
Type of family							
Nuclear family	36	60.0	10	27.8	26	72.2	7.43
Joint family	15	25.0	10	66.7	5	33.3	Df=2
Extended family	9	15.0	5	55.6	4	44.4	S
Family income (in Rupees) per month							
<10,000	27	45.0	16	59.3	11	40.7	6.25
10,000-15,000	33	55.0	9	27.3	24	72.7	Df=1 S
>15000	0	0.00					
Dietary pattern							
Vegetarian	48	80.0	22	45.8	26	54.2	2.74
Non vegetarian	9	15.0	3	33.3	6	66.7	Df=3
Mixed	3	5.0	0	0.0	3	100.0	
Source of information							
Family/ relatives	36	60.0	13	36.1	23	63.9	1.14
Friends	0	0.0	0	0.0	0	0.0	Df=2
Books	12	20.0	6	50.0	6	50.0	NS
Magazines	12	20.0	6	50.0	6	50.0	

S-Significant at p<0.05 level, NS-Not significant at p.0.05 level.

Table 10: Association between attitude scores with their selected socio-demographic variables, (n=60).

Demographic variables	N	%	No. of respondents				Chi-square value
			<mean (27)		>mean (33)		
			N	%	N	%	
Age (in years)							
16	24	40.0	13	54.2	11	45.8	1.50
17	27	45.0	11	40.7	16	59.3	Df=2
18	9	15.0	3	33.3	6	66.7	NS
19	0	0.00	0	0.0	0	0.0	
Religion							
Hindu	48	80.0	18	37.5	30	62.5	9.40
Muslim	9	15.0	7	77.8	2	22.2	Df=2
Christian	3	5.0	2	66.7	1	33.3	S
Others	0	0.0	0	0.0	0	0.0	
Type of family							
Nuclear family	36	60.0	11	30.6	25	69.4	7.60
Joint family	15	25.0	10	66.7	5	33.3	Df=2
Extended family	9	15.0	6	66.7	3	33.3	S
Family income (in Rupees) per month							
<10,000	27	45.0	18	66.7	9	33.3	9.30
10,000-15,000	33	55.0	9	27.3	24	72.7	Df=1 S
>15000	0	0.00	0	0.0	0	0.0	

Continued.

Demographic variables	N	%	No. of respondents				Chi-square value
			<mean (27)		>mean (33)		
			N	%	N	%	
Dietary pattern							
Vegetarian	48	80.0	22	45.8	26	54.2	1.10
Non vegetarian	9	15.0	3	33.3	6	66.7	Df=3
Mixed	3	5.0	2	66.7	1	33.3	
Source of information							
Family/ relatives	36	60.0	15	41.7	21	58.3	3.10
Friends	0	0.0	0	0.0	0	0.0	Df=2
Books	12	20.0	4	33.3	8	66.7	NS
Magazines	12	20.0	8	66.7	4	33.3	

S=Significant at p<0.05 level, NS=Not significant at p=0.05 level.

Section III: Testing hypothesis for evaluation of effectiveness of planned educational programme

H1: A significant difference exists between pre-test and post-test knowledge scores of adolescent girls regarding eating disorders, with the post-test knowledge showing a statistically significant improvement after an educational program ($p<0.05$).

H2: A significant difference is observed between pre-test and post-test attitude scores of adolescent girls regarding eating disorders, with the post-test attitude scores showing a statistically significant enhancement after the educational program ($p<0.05$).

H3: There is no significant association between knowledge and attitude scores and socio-demographic variables among adolescent girls, as indicated by Chi-square analysis.

DISCUSSION

Eating disorders are a serious mental health concern, particularly among adolescent girls. Research has shown that psychosocial problems, such as low self-esteem, body image issues, and social pressures, can contribute to the development and maintenance of eating disorders.[9] Therefore, it is crucial to educate adolescents about these issues in order to prevent the onset of eating disorders and promote positive attitudes towards body image and self-worth. The study mentioned aims to evaluate the effectiveness of a planned educational program on knowledge and attitude regarding psychosocial problems of eating disorders among adolescent girls. Educational programs have been shown to be effective in improving knowledge and attitudes towards various health issues, including mental health concerns.[10] By providing adolescents with information about the risk factors and consequences of eating disorders, as well as strategies for promoting positive body image and self-esteem, it is hoped that the program will lead to improved awareness and attitudes towards these issues. Few of the longitudinal studies conducted by McCabe and Ricciardelli, have shown the correlates of weight loss behaviors and muscle-gaining strategies among children, underscoring the need for comprehensive educational approaches that address body image concerns.[11]Additionally, another study conducted by Wertheim et al explored sociocultural pressures influencing adolescent girls' desire to watch their weight, highlighting the role of societal norms in shaping body image perceptions.[12] Eating disorders are complex mental health conditions that often manifest during adolescence, posing significant risks to the physical and psychological well-being of young individuals. Peer influences, media exposure, and body dissatisfaction have been identified as key factors contributing to the development of eating disorders among adolescent girls. The findings of this study will be important for informing future prevention and intervention efforts targeting eating disorders among adolescent girls. By assessing the impact of the educational program on knowledge and attitudes, researchers and healthcare providers can identify effective strategies for promoting mental health and well-being in this population.

Future prospects

Future research could benefit from conducting a longitudinal study to track the long-term effects of the educational program on participants' knowledge and attitudes towards eating disorders. Including a control group in future studies would allow for a comparison of the program's effectiveness against no intervention. Diversifying the sample by including adolescent girls from various socio-economic backgrounds could enhance the generalizability of the findings. Collaboration with mental health professionals could lead to the development and implementation of more comprehensive educational programs that address not only knowledge but also skills and coping strategies related to psychosocial problems of eating disorders.

Limitations

The study's limitations include a potentially small sample size, affecting result generalizability, self-reporting bias from participants providing socially desirable responses,

time constraints possibly not fully assessing the program's impact, and external factors like media and peer pressure influencing study outcomes.

CONCLUSION

In conclusion, the planned educational program on knowledge and attitude regarding psychosocial problems of eating disorders among adolescent girls has the potential to make a significant impact on the prevention and management of these mental health concerns. By equipping adolescents with the necessary information and skills to address psychosocial issues, we can work towards promoting a positive body image and healthy self-esteem among young individuals.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Nelson, Varghese A, Desai S, Rajashekharayya CK, Rathod L, Bhatangunaki H. A study to evaluate the effectiveness of planned educational programme on knowledge and attitude regarding psychosocial problems of eating disorders among adolescent girls studying in selected P.U Colleges at Vijayapur. Int J Community Med Public Health 2024;11:2366-72.