



## EFFECT OF TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE REGARDING PREVENTION OF OBESITY

Prashanth K and Umarani J\*

Department of Paediatric Nursing, Yenepoya Nursing College, Yenepoya University, Mangalore-575 018, India

Received for publication: February 04, 2013; Accepted: April 25, 2013

**Abstract:** In 1998 the World Health Organization declared childhood obesity as a “global epidemic.” It has also been observed that the health problems of adult obesity can be prevented, if obesity is controlled in childhood. This study aims to assess the effectiveness of structured teaching programme on knowledge and attitude regarding prevention of obesity and Correlate the knowledge and attitude regarding prevention of obesity among adolescents in a selected pre-university college. A pre-experimental one group pre-test post-test design was adopted. Convenience sampling technique used for selecting the adolescents. A structured knowledge questionnaire on prevention of obesity and a five-point Likert scale to assess the attitude regarding prevention of obesity were developed as the tools for data collection. The data obtained were analyzed based on the objectives and hypotheses, using descriptive and inferential statistics. The result showed that the mean post-test knowledge and attitude score of adolescents on prevention of obesity was higher than the mean pretest knowledge and attitude score. There was no correlation between knowledge and the attitude. The present study concludes that the teaching programme improved the knowledge and attitude of adolescents regarding prevention of obesity.

**Keywords:** Effectiveness, Structured Teaching Programme, Knowledge, Attitude, Adolescents, Obesity

### INTRODUCTION

Childhood obesity is defined as “the condition of abnormal excessive fat accumulation in adipose tissue to that extent the health may be impaired” (WHO)<sup>1</sup>. Lifestyle is considered to be an important determinant of health and sickness. Some of the health problems are rooted in childhood habits and lifestyles, and among them obesity is a major problem<sup>2</sup>. Today it is estimated that over 250 million people in the low and middle income countries suffer from obesity, but globally more than one billion adults are overweight and of these 300 million are obese. Even in India it is a growing concern<sup>3,4</sup>.

As the Indian economy is growing, even the Indian middle class families are at risk<sup>2</sup>. Adolescence is the period of crucial growth. During this phase physical changes including growth, the onset of menarche for the girls, and increase in fat and muscle mass takes place<sup>5</sup>. Urbanization has a remarkable impact on socio-economic status, and lifestyle; and also globalisation of food markets is the major force thought to underline the epidemic. In addition to this, cultural factors such as dietary practices, and attitude towards food are changing which ultimately contribute to the prevalence of incidence of obesity<sup>6</sup>. People who are obese or severely overweight are at risk in many ways<sup>7</sup>.

Obesity is also associated with increased morbidity and mortality in their adulthood. Studies have revealed

that adolescent girls would often experience social problems, prejudice and discrimination; not only from the general public, but also from health professionals and this may make them reluctant to seek medical advice<sup>8</sup>. About 25% of children are overweight or obese, according to newly established national criteria. These teens are having more risk for becoming obese adults, and adolescent obesity predisposes to variety of medical and psychosocial problems<sup>9</sup>.

High risk of gestational diabetes in pregnant women causes higher birth weights in babies that could lead to the development of obesity in childhood and in adolescence<sup>10</sup>. Some schools do not have any playground at all. Thus children are made inactive, which can result in obesity. Unhealthy eating and wrong choices of food cause obesity in children<sup>11,12</sup>. Overweight children and adolescents may have disadvantage physically, socially as well as economically<sup>13</sup>.

### OBJECTIVES

- Assess the knowledge and attitude on prevention of obesity among adolescents.
- Determine the effectiveness of a structured teaching programme on knowledge and attitude regarding prevention of obesity among adolescents Correlate knowledge and attitude regarding prevention of obesity.

#### \*Corresponding Author:

Mrs. Umarani J,  
Associate Professor and HOD,  
Department of Paediatric Nursing,  
Yenepoya Nursing College, Yenepoya University,  
Mangalore-575 018, India.



- Find out the association of knowledge and attitude with selected demographic variables.

## MATERIALS AND METHOD

Identification of the knowledge base requires the development and recognition of concepts and theories<sup>14</sup>. Conceptualization is a process of forming ideas which utilize and form a conceptual framework for a particular study<sup>15</sup>. The conceptual framework for the present study was developed on the basis of Health Belief Model by Rosenstock and Becker and Maiman (1978)<sup>16</sup>.

The study design selected was pre-experimental one group pre-test and post-test design. The present study was conducted among the 50 adolescents aged 16 to 18 years studying in I PUC and II PUC of Pre-university College, Mangalore, Karnataka. The samples were selected by convenience sampling technique.

The tools used were baseline proforma, structured knowledge questionnaire with 26 questions and five-point "Likert scale" with 10 items to assess the attitude regarding the prevention of obesity. A blueprint of the questionnaire was prepared and presented as knowledge, comprehension and application category. The items were prepared on General information – 25%, Causes – 21%, Clinical features – 4%, Prevention – 38%, and Management – 12%. The intervention given in the study was structured teaching programme regarding the prevention of adolescent's obesity.

After obtaining ethical clearance from the institution ethical committee and written consent from the study participants, the pre-tested and validated tool was administered to the study samples. The pretest assessment of knowledge and attitude were carried out and the structured teaching programme with variety of audio-visual aids was administered on the same day. Post-test was conducted on the seventh day to assess the knowledge and attitude. The data collected was then compiled for data analysis.

## RESULT AND DISCUSSION

The 't' value (table.1) computed between pre-test and post-test knowledge scores is statistically significant at 0.05 level of significance. The calculated 't' value ( $t=10.57$ ) is greater than the table value ( $t(49)=2.0096$ ). This indicates that the teaching programme on prevention of obesity was effective in improving the knowledge of adolescents. A study was conducted among adolescent girls at Delhi. The study findings revealed 7.4 percent obesity among adolescent girls<sup>17</sup>. A study conducted among Africa-American preschool children in USA to elicit their knowledge about overweight and obesity. The results showed that they had some knowledge about environmental factors contributing obesity<sup>18</sup>.

The 't' value (table2) computed between pre-test and post-test attitude scores is statistically significant at 0.05 level of significance. The 't' value ( $t=3.75$ ) computed is greater than the table value ( $t(49)=2.0096$ ) and showed that the teaching programme on prevention of obesity was effective in improving the attitude of adolescents. A study was conducted to assess adolescents' attitude of controllability and its relationship to explicit obesity bias among 231 seventh and eighth graders from physical education classes. The subjects completed a perception of controllability questionnaire and weight stereotype explicit scale ratings. The results showed that adolescents had a better attitude of controllability<sup>19</sup>.

For determining the correlation between the knowledge and attitude regarding prevention of obesity among adolescents, Karl Pearson's Correlation Coefficient test was used. The data showed that there was no correlation between knowledge and the attitude ( $r=0.2$ ). A study result showed that physical activity, inactivity, and perception of ideal body size emerged as the most important contributory factors to obesity status<sup>20</sup>.

The data showed that there was no association between pre-test knowledge, attitude score and demographic variable. The pre-test knowledge score is independent of all variables, that is, age ( $\chi^2=2.6$ , table value=3.84), gender ( $\chi^2=0.01$ , table value=3.84), educational status ( $\chi^2=2.25$ , table value=3.84), and area of residence ( $\chi^2=1.09$ , table value=3.84), at 0.05 level of significance.

**Table.1:** Mean, Standard deviation (SD) and 't' value between pre-test and post-test Knowledge scores N=50

Test	Max. Score	Knowledge			Paired 't' test
		Mean	Mean diff	SD	
Pre-test	24	9.50	5.92	3.96	10.57*
Post-test	24	15.42			

$t_{(49)}=2.0096$ ,  $P<0.05$  \*significance

**Table.2:** Mean, Standard deviation (SD) and 't' value between pre-test and post-test attitude scores N=50

Test	Attitude			Paired 't' test
	Mean	Mean diff	SD	
Pre-test	37.92	3.80	7.17	3.75*
Post-test	41.72			

$t_{(49)}=2.0096$ ,  $P<0.05$  \*significance

The present study was confined to a specific geographical area which is a limitation for generalization. The study findings could be generalized only to the population who fulfilled the criteria in the study. The study used convenience sampling so the

researcher did not give equal opportunity to participate in the study.

The present healthcare delivery system emphasises more on preventive rather than curative aspect. The study also implies that health personnel have to be properly trained on how to teach the public regarding healthcare. Health education is an important tool of healthcare agency. Posters and pamphlets on the prevention of obesity can be exhibited in the classroom and community. Government should initiate policy regarding frequent supervision in the schools and periodical examination. A study can be done to determine the effect of dietary modification and exercises on obesity.

### CONCLUSION

The teaching programme given to adolescents was effective in terms of gain in knowledge and attitude regarding prevention of obesity. It is one of the most effective interventions and is concerned with promoting health and preventing diseases.

### REFERENCES

1. WHO. Curing obesity. Health Action 2005; 4-6.
2. Mandowara SL. IAP criteria for grading the nutritional status of Indian children need modification. Indian Journal of Paediatrics 1986; 53:127-8.
3. Lasser PG. Obesity related knowledge, attitudes, and behaviours in obese and non-obese urban Philadelphia female adolescents. Obesity Research 2001; 9(2):112-8.
4. A weighty crisis. Health and Environment 2005; 3(2):1-6.
5. Obesity and overweight. World Health Organization 10/1/04. 1-4.
6. WHO: Obesity and overweight 2004.
7. Lubans DR, Morgan PJ, Okely AD, Dewar D, Collins CE, Batterham M, et.al obesity among adolescent girls. Archives of pediatrics and adolescent medicine.2012;166(9):821-827
8. Pearson D. Taking obesity in the community. Journal of Community Nursing; 17 (6):19-22.
9. Thakar HG, Kumar P, Desai RK. Physical growth standards for urban adolescents (10-15 years) from South Gujarat. Indian Journal of Community Medicine 2000; 25: 86-92.
10. Symalamba, Mangrulkar NV. Understanding adolescents. Health Action 2001; 2: 16-9.
11. Prabhakaran. Watching weight. Health Action 2004; 7: 31-3.
12. Bhave S, Bavadekar A.IAP National Task Force for Childhood Prevention of Adult Diseases. Child obesity. Indian Paediatrics 2004; 41: 550-75.
13. Troiano RP, Flegal KM, Kuczmarski RJ, Campbell SM, Johnson CL.Overweight prevalence and trends for children and Adolescents. Archives of pediatrics and adolescent medicine.1995; 149(10):1085-1091
14. Park K. Textbook of preventive and social medicine. 17th ed. Jabalpur: Banarsidas Bhanot Publishers; 2002.
15. Polit DF, Hungler BP. Nursing research principles and methods. 6th ed.Philadelphia: J. B. Lippincott Company; 2000.
16. Jones Bartlett, The Health Belief Model (HBM). American journal of health studies,19(2,115-112)
17. Subramanyam V, Jayashree R, Mohamad R. Prevalence of overweight and obesity in affluent adolescent girls in Chennai in 1981 and 1998. Indian Paediatrics 2003; 40:332-6.
18. Ohzeki T. Obesity in later childhood and counter measures. JMAJ, 2005; 48(2):53-8.
19. Adolescents' perceptions of controllability and its relationship to explicit obesity bias. Journal of School Health 2011 Jan; 13-6.
20. Wierenga ME, Oldham KK. Weight control: a lifestyle-modification, Nursing clinics of North America. 2002. Jun 37 (2) 303-313.

Source of support: Nil

Conflict of interest: None Declared