

“Knowledge and attitude regarding obesity among adolescent students of Sikar, Rajasthan”

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Abstract: A descriptive study was conducted to assess knowledge and attitude regarding obesity among adolescent students of Sikar, Rajasthan. A sample comprised of 100 adolescent students were selected, convenience sampling technique was used. The tools used for data collection were structured knowledge questionnaires and attitude scale. Data analysis was done by using descriptive and inferential statistics. Findings of the study revealed that majority of the adolescent students 56% were in the age group of 17-18 years of age and with regard to educational 61% of the adolescent students were in senior secondary level of education. Knowledge of the adolescent students ranged between 1- 14 and mean knowledge score of adolescent students was found to be 5.65 ± 2.907 . Range of attitude scores lies between 65 -101, the mean attitude score of adolescent students 84.88 ± 8.346 .

Findings further showed that coefficient of correlation between mean knowledge score and mean attitude score of adolescent students regarding obesity (0.442) was found to be significant at 0.05 level of significance. Significant association was observed between levels of knowledge of adolescent students with regard to their age, gender, area of residence, monthly family in-come, heard of obesity, type of family. Significant association was observed between attitude of adolescent students with heard about obesity.

I. Introduction

Obesity is a serious health problem and its prevalence has increased dramatically over the past 20 years. Today it is estimated that over 250 million people in low and middle income countries suffer from obesity, but globally more than one billion are overweight and of these 300 million are obese. Even in India it is becoming growing concern.¹

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. This contributes to obesity. Adolescent obesity is associated with increased morbidity and mortality in adulthood. In India among adolescent increased consumption of more energy-dense, nutrient-poor foods with high levels of sugar and saturated fats, combined with reduced physical activity (due to increased use of automated transport, technology in the home) and more passive. Leisure pursuits are suspected as major contributors to rising levels of obesity.² Obesity may be caused by number of social, cultural, behavior, physiological metabolic and genetic factors that are beyond the person's control. Symptoms of obesity usually show up in the form of breathing trouble, excess accumulation of fat, insulin resistance increase in size or number of fat cells that rise in blood pressure, high cholesterol levels etc.³

According to 1999-2000 National Health and Nutritional Examination Survey (NHANES), ten percent of 2-5 Years old and adolescents of 16-19 years old in the US were overweight. The prevalence of overweight and obese children has risen dramatically and at alarming rates in the past few decades in the developing countries. 30 % of children have been found to be affected with overweight problems.⁴

A study conducted among adolescents in selected schools in the age group of 10-15 years, at Udupi district, Karnataka, revealed that the prevalence of the obesity ranged from 8.0 to 10.81% with peaks at 10 years, 12.5 years and 13 years.⁵

Since 1980 the number of overweight adolescents has tripped. In 1999, 11% of the children and adolescents were found to be overweight in India. At least one in 10 urban middle class children in India is overweight. Globally there are 300 million adolescents who are obese. India is in the midst of a rapidly escalating epidemic of Type II diabetes and coronary heart disease (CHD). It is predicted that CHD will soon become the leading cause of death in our country.⁵

Hence the gap in knowledge is growing risks that necessitate the need to systematically investigate the knowledge of obesity among adolescent. Based on the findings health education programmers can be conducted in different settings like schools, colleges, and the community. This challenged the researcher to explore the importance of knowledge and attitudes of adolescent regarding obesity, and to impart the knowledge regarding

obesity and its consequences. It is also anticipated that this study may increase awareness among adolescent regarding obesity.⁶

OBJECTIVES OF THE STUDY

1. To assess the knowledge of adolescents students regarding obesity.
2. To assess the attitude of adolescents students regarding obesity.
3. To determine the relationship between knowledge and attitude of adolescents students regarding obesity.
4. To find out the association among knowledge and attitude of Adolescents students with selected demographic variables .

HYPOTHESIS: -

H₁: There will be a significant positive relationship between the knowledge scores and attitude scores of adolescent students regarding obesity.

H₂: There will be a significant association of levels of knowledge of adolescent students regarding obesity with selected variables.

H₃: There will be a significant association of levels of attitude of adolescent students regarding obesity with selected variables.

II. Methods and Materials

A Non-experimental research approach and Descriptive survey design was used. Total sample of study was 100 students. Convenience sampling technique was used to select the sample. In view of the nature of the problem and to accomplish the objectives of the study, structured questionnaire and attitude scale was prepared focusing on knowledge and attitude of adolescent students regarding obesity. Validity was ensured in consultation with guides and experts in the field of nursing and community medicine. Reliability of the structured knowledge questionnaire was tested by KR 20 ($r = 0.71$) and for attitude scale was tested by Cronbach alpha (0.77). After obtaining formal permission from concerned authority structured questionnaire and attitude scale was used to collect the needed data. Both descriptive and inferential statistics was used to analyze the data.

III. Results

The mean knowledge score of the adolescent students was between 1- 14 and mean knowledge score of adolescent students was 5.65 ± 2.907 , median was 5 and mean percentage of knowledge score was 28.25 (Table 1)

Table 1
Range, Mean, Median, Mean Percentage and Standard Deviation of Knowledge Scores of adolescent students regarding obesity.

| | Range | Mean | Median | Mean percentage | Standard Deviation (S.D) |
|-----------|-------|------|--------|-----------------|--------------------------|
| Knowledge | 1-14 | 5.65 | 5 | 28.25 | 2.907 |

Minimum score= 0

Maximum score= 20

The 93% of the adolescent students had below average knowledge regarding obesity followed by 6% of the adolescent students had average knowledge and only 1% had had good knowledge regarding obesity. (Table 2)

Table 2
Frequency and Percentage Distribution of knowledge Scores of adolescent students regarding obesity.

| Level of Knowledge | Knowledge Score | Range of Score | f (%) |
|--------------------|-----------------|----------------|-------|
| Good | 61- 75% | 13-15 | 01% |
| Average | 50- 60% | 11-12 | 06% |
| Below Average | Below 50% | 1-10 | 93% |

Minimum score- 0

Maximum score - 20

The range of attitude scores lies between 65 -101, the mean attitude score of adolescent students 84.88 ± 8.346 , median was 86 and mean percentage of knowledge score was 56.59. (Table 3)

Table 3
Range, Mean, Mean Percentage, Median, Standard Deviation of Attitude Score of adolescent students regarding obesity.

| | Range | Mean | Mean % | Median | N=100 Standard Deviation (S.D) |
|------------------|---------|-------------------|--------|--------|-----------------------------------|
| Attitude | 65- 101 | 84.88 | 56.59 | 86 | 8.346 |
| Minimum score 30 | | Maximum score 150 | | | |

The adolescent students 84% had moderately favorable attitude regarding prevention of obesity followed by 16% of adolescent students had unfavorable attitude. (Table 4)

Table 4
Frequency and Percentage Distribution of adolescent students in terms of levels of Attitude.

| Level of Attitude | Range of Score | Frequency (%) |
|----------------------|----------------|--------------------|
| Moderately Favorable | 77- 113 | 84 |
| Unfavorable | 30- 76 | 16 |
| Minimum score- 30 | | Maximum Score -150 |

The coefficient of correlation between mean knowledge score and mean attitude score of adolescent students regarding obesity is moderately positive co-relation between knowledge score and attitude score the computed ‘r’ value between knowledge score and attitude score obtained by adolescent students was significant at 0.05 level of significance. (Table 5)

Table 5
Correlation between Mean Knowledge Score, Mean Attitude Score of adolescent students regarding obesity.

| Area | Mean Score | Standard Deviation (S.D) | Coefficient of Correlation R |
|-----------------|------------|--------------------------|------------------------------|
| Knowledge score | 5.65 | 2.907 | 0.442* |
| Attitude score | 84.88 | 8.346 | |

* **Significant at 0.05 level of significance**

The chi square value of knowledge score was found to be significant at 0.05 level of significance. (Table 6) Adolescent students in age group of 15-16 years 08 (67%) had more knowledge regarding obesity while those who are in the age group of 20-30 years 24 (75%) had less knowledge regarding STI. Male adolescent students 31(51%) had more knowledge regarding obesity while comparing with the female adolescent students 29(74%) had less knowledge regarding obesity. Adolescent students who were residing in urban 18 (44%) had more knowledge regarding obesity while comparing with the Adolescent students those who were residing in rural 36(61%) had less knowledge regarding obesity.

Adolescent students whose family in-come was more than 15001 Rs. 04(100%) had more knowledge regarding obesity while comparing with the Adolescent students whose family in-come was below 5000 Rs. 11(85%) had less knowledge regarding obesity.

Adolescent students who had heard of obesity 37(63%) had more knowledge regarding obesity while comparing with the Adolescent students was not sure to be heard of obesity 26(93%) had less knowledge regarding obesity.

Adolescent students who belongs to nuclear family 20(59%) had more knowledge regarding obesity while comparing with the Adolescent students who belongs to joint family 45(68%) had less knowledge regarding obesity.

Table 6
Chi Square Showing association of Knowledge scores of Adolescent students with selected variables.

| | | | | N=100 |
|-----------------------------|--------------------------------------|--------------|--------------|------------------|
| S.No | Demographic variables | Above Median | Below Median | Chi Square value |
| 1. | Age (in years) | | | |
| | 15- 16 | 08(25%) | 24(75%) | 6.962* |
| | 17-18 | 25(45%) | 31(55%) | |
| | 19-20 | 08(67%) | 04(33%) | |
| 2. Gender | | | | |
| Male | | 31(51%) | 30(49%) | 6.235* |
| | Female | 10(26%) | 29(74%) | |
| 3. Area of residence | Urban | 18(44%) | 23(56%) | 0.242* |
| | Rural | 23(39%) | 36(61%) | |
| | 4. Monthly family income (Rs) | | | |
| Below 5000 | | 02(15%) | 11(85%) | 9.027* |
| | 5001-10000 | 16(33%) | 32(67%) | |
| | 10001- 15000 | 19(54%) | 16(46%) | |
| | more than 15001 | 04(100%) | 00(100%) | |
| 5. Heard of obesity | Yes | 37(63%) | 22(37%) | 28.288* |
| | No | 02(18%) | 11(82%) | |
| | Not sure | 02(7%) | 26(93%) | |
| | 6. Family type | | | |
| Joint | | 21(32%) | 45(68%) | 6.765* |
| | Nuclear | 20(59%) | 14(41%) | |

*Significant at 0.05 level, NS- non significant. $X^2(1) = 3.841$, $X^2(2) = 5.991$, $X^2(3) = 7.815$

The chi square value of attitude scale was found to be significant with heard with obesity. Adolescent students who had heard of obesity 55(93%) had moderately favourable attitude regarding obesity while comparing with the Adolescent students was not heard of obesity 04(31%) had unfavourable attitude regarding obesity. (Table 8)

Table 7
Chi Square showing Association of Attitude of Adolescent students with Selected Variables.

| | | | | N=100 |
|-----------|-------------------------|----------------------|-------------|------------------|
| S.No | Demographic variables | Moderately Favorable | Unfavorable | Chi Square value |
| 1. | Heard of obesity | | | |
| | Yes | 55(93%) | 04(07%) | 6.655* |
| | No | 09(69%) | 04(31%) | |
| | Not sure | 20(71%) | 08(29%) | |

IV. Discussion

The findings of the study were discussed in terms of objective

The study was conducted to assess the knowledge and attitude regarding obesity among adolescent students of Sikar, Rajasthan.

A Descriptive Study was conducted to assess the prevalence of obesity and overweight and their association with socio-economic status (SES). A sample size of 5664 school children, aged between 12 – 18 years were selected. SES and life style factors were determined using pre – tested questionnaire. The result shows that prevalence of overweight was found to be 14.3% among boys and 9.2% among girls whereas the prevalence of obesity was 2.9% in boys and 1.5% in girls.⁷

The present study also revealed that Male adolescent students 31(51%) had more knowledge regarding obesity while comparing with the female adolescent students 29(74%) had less knowledge regarding obesity that’s why the prevalence of obesity is more in boys.

A cross-sectional study was conducted to investigate the prevalence and predictors of overweight and obesity by location of residence among randomly selected 2,577 urban school girls aged 12-17 years in Rasht, Iran. Data on age, frequency of skipping breakfast per week, physical activity, hours of television viewing, self-perception about body condition, and home address were collected. Birth weight of the girls, educational levels of parents,

weights and heights of parents and employment status of mothers were asked to the parents using a self-administrated questionnaire. The overall prevalence of overweight and obesity in this population was 18.6% and 5.9% respectively. Overweight or obesity was more common among girls from low-income areas compared to high-income areas (21.6% versus 17.1%, $p < 0.001$). Maternal education was positively related to overweight/obesity of the girls. Results of logistic regression analysis showed that risk of overweight/obesity was higher in girls whose either parent was overweight or obese. Furthermore, living in low-income areas and skipping breakfast were independently related to overweight/obesity. These data suggest that overweight and obesity are a public-health concern among school girls, especially in low-income areas in Rasht.⁸

In present study findings revealed that adolescent students who were residing in urban (44%) had more knowledge regarding obesity while comparing with the Adolescent students those who were residing in rural (36%) had less knowledge regarding obesity.

Adolescent students whose family in-come was more than 15001 Rs. (100%) had more knowledge regarding obesity while comparing with the Adolescent students whose family in-come was below 5000 Rs. (85%) had less knowledge regarding obesity.

V. Recommendations

A similar study can be conducted for a larger sample covering the entire population of adolescent students of district Sikar to validate and generalize the findings.

A study can be conducted to evaluate the effectiveness of information booklet for teachers who deal with adolescent students in schools.

A comparative study can be undertaken to assess the knowledge of adolescent students of the different states of India.

A study can be undertaken to develop and standardize the tool regarding obesity.

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References

- [1]. Mandowara SL. IAP criteria for grading the nutritional status of Indian children need Modification. Indian Journal of Pediatrics. 1986; 53:127-8.
- [2]. Obesity and overweight. World Health Organization 10/1/04. 1-4.
- [3]. Jeanette Pollock: An introduction to obesity 2006 oct. (2009 May 3rd). Available from <http://www.ezinearticles.com/?An-introduction-to-Obesity=322540>.
- [4]. Pearson D. Taking obesity in the community. Journal of Community Nursing; 17(6):19-22. A weighty crisis. Health and Environment 2005;3(2):1-6.
- [5]. Prabhakaran. Watching weight. Health Action 2004; 7:31-3.
- [6]. Bhav S, Bavadekar A. IAP National Task Force for Childhood Prevention of Adult Diseases. Child obesity. Indian Pediatrics 2004; 41:550-75.
- [7]. Ramesh K Goyal, Vitthaldas N Shah, Banshi D Saboo, Sanjiv R Phatak, Navneet N Shah, Mukesh C Gohel, Prashad B Raval, et al. Prevalence of Overweight and Obesity in Indian Adolescent School Going Children: Its Relationship with Socioeconomic Status and Associated Lifestyle Factors. JAPI • march 2010. VOL. 58.
- [8]. Wierenga ME, Oldham KK. Weight control: a lifestyle-modification.