P-ISSN: 2617-9806
E-ISSN: 2617-9814

Impact Factor: RJIF 5.2
www.nursingjournal.net

International Journal of Advance Research in Nursing

Volume 8; Issue 1; Jan-Jun 2025; Page No. 616-621

Received: 25-04-2025
Accepted: 29-05-2025

Indexed Journal
Peer Reviewed Journal

A descriptive study to assess the level of knowledge regarding childhood obesity among adolescents at a selected school, Coimbatore

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DOI: https://www.doi.org/10.33545/nursing.2025.v8.i1.H.515

Abstract

Introduction: Adolescence is the transitional phase of growth and development between childhood and adulthood. The child's emotional, biological, and social development occurs during this time. Childhood obesity is a serious medical condition where excess body fat negatively affects children and adolescent's health or well-being. It often causes health concerns such as overweight and obese adolescents are at an increased risk of developing comorbidities like type 2 diabetes, insulin resistance, high blood pressure, heart diseases and high cholesterol, social and mental problems etc.

Methods: Non-experimental descriptive research was adopted for this study. The study was conducted in selected school, Coimbatore district. 30 samples were selected by using non-probability convenience sampling technique. Semi Structured questionnaire was used to assess the level of knowledge regarding childhood obesity among adolescents.

Results: The study results showed that with regard to level of knowledge regarding childhood obesity among adolescents, 3(10.0%) had inadequate knowledge, 26(86.7%) had moderately adequate knowledge, 1 (3.3%) had adequate knowledge.

Conclusion: The study concluded that majority of adolescents had moderately adequate knowledge regarding childhood obesity. So there is a need to improve knowledge among adolescents.

Keywords: Knowledge, childhood obesity, adolescents

Introduction

Adolescence is the transitional phase of growth and development between childhood and adulthood [1]. The child's emotional, biological, and social development occurs during this time. It is a distinct period of human growth and a critical period for establishing the groundwork for optimal health [2].

The World Health Organization defines an adolescent as any person between ages 10 and 19. Early adolescence starts with puberty and is characterized by egocentricity, emotional liability, and concrete thinking [3]. During this period, adolescents may face various challenges and problems as they transition from childhood to adulthood. It is also a vulnerable time for children since they may experience several problems of adolescence, which may impact their mental health and overall well-being and lead to significant problems later in life. The common problems are self- esteem and body Image, stress, bullying, depression, cyber addiction, drinking and smoking, defiant behaviors, peer-pressure and competition, changes in sleep patterns, declined interest in normal and healthy activities etc. [4]

Around 22% of the population of India is between 10 and 19 years old, and it is found that the major health problems in adolescence are regarding nutritional disorders, such as malnutrition and obesity. Increasingly unhealthy diets, inactive lifestyles, mental ill-health, alcohol and tobacco use are some of the most prominent issues facing adolescents today [5].

Childhood obesity is a complex condition, various factors can play a part in causing it. In addition, advancements in entertainment and technology such as television, computers and videogames have contributed to the growing childhood obesity problem. Approximately 63% 8 to 18 years olds have a television in their bedrooms and watch television an average of 4 hours a day in the United States [6].

Childhood obesity often causes health concerns and conditions, these can affect a child's physical, social and mental well-being. Overweight adolescents are at an increased risk of developing comorbidities like type 2 diabetes, insulin resistance, high blood pressure, heart diseases and high cholesterol, social and mental problems etc. [7]

Need for the study

Overweight and obesity are a growing threat to children's well-being globally, largely driven by a trap of unhealthy and highly processed foods combined with a lack of physical activity and sedentary behaviour. Globally, out of 1 billion adolescents, a total of 207 million are affected by

overweight or 17.3%, whereas among 638 million school-age children, 131 million are affected by overweight or 20.6% [8].

Almost 40 million under-fives around the world are overweight, equivalent to nearly 6 per cent of this age group. Among children aged 5 to 19 years rates are significantly higher; it is estimated that more than 340 million have overweight, almost 18 per cent. Growth is most rapid in low- and middle-income countries [8].

In India, among children aged 5 to 19 years, rates are significantly higher; it is estimated that more than 340 million are overweight, almost 18 per cent. Obesity is a primary concern with over 17 million children and adolescents projected to be obese by 2025. The factors contributing to the rise in childhood obesity in India are dietary changes, sedentary lifestyle and urbanization, that is increased consumption of processed foods and sugary drinks, reduced physical activity due to increased screen time and lifestyle changes associated with urban living.

It is evident that the rising rates of childhood obesity in India are influenced by a complex interplay of factors. Recognizing these factors and implementing comprehensive strategies are essential steps towards ensuring a healthier future for the younger generation [9].

Objectives

- To assess the level of knowledge regarding childhood obesity among adolescents.
- To find out the association between the level of knowledge regarding childhood obesity among adolescents with their selected socio demographic variables.

Materials and Methods: Non-Experimental descriptive research was adopted for this study. The study was conducted in selected school, Coimbatore district. 30 samples were selected by using non-probability convenience sampling technique. Semi Structured questionnaire was used to assess the level of knowledge regarding childhood obesity among adolescents. Data were obtained by the following methods:

Section A: Demographic Variables - It consists of Age, Gender, Year of studying, dietary habits, Family structure, Religion, Education of the parents, Occupation of the parents, Monthly Income, Family history of obesity.

Section B: It includes a self -structured knowledge questionnaire, to assess the level of knowledge regarding childhood obesity. It consists of 25 multiple choice questions related to childhood obesity.

Scoring key

Each correct answer was given "1" mark where as wrong answer was given "0" mark. The raw score was converted into percentage to interpret the level of knowledge. The overall score was "25" and minimum "0".

Interpretation of score

Score in Percentage	Level of Knowledge
< 50% (1-8 marks)	Inadequate knowledge
51- 75% (9- 16 marks)	Moderately Adequate knowledge
76 - 100% (17-25 marks)	Adequate knowledge

Ethical Clearance: An approval to conduct the study in school was obtained from the Principal of concern school. Ethical clearance had been approved from The Institutional Human Ethics Committee (IHEC), PSG Institute of Medical Science and Research, had reviewed the proposal on (Ref No 19/297, dt.26.02.2020) and approved to conduct the study after getting the clearance from IHEC the researcher obtained the informed consent from the study participant and their parents and assent from the adolescents. The confidentiality was maintained throughout the study and anonymity was maintained.

Data analysis Plan

Data was analyzed on the basis of objectives and testing of hypothesis by using descriptive and inferential statistics.

Results

Table 1: Frequency and percentage distribution of demographic variables among adolescents N = 30

Demographic Variables	Study Participants	
	f	%
Age in years		
13	13	43.3
14	14	46.7
15	3	10.0
Gender		
Male	16	53.3
Female	15	46.7
Year of studying		
8th STD	14	46.7
9th STD	16	53.3
Family structure		
Nuclear family	19	63.3
Joint family	9	30.0
Extended family	2	6.7
Place of resident		

Urban	23	76.7
Rural	7	23.3
Dietary habits		
Vegetarian	10	33.3
Non-vegetarian	20	66.7
Education of the father		
Illiterate	2	6.7
Primary	8	26.7
Secondary	14	46.7
Graduate	6	20.0
Education of the mother		
Illiterate	3	10.0
Primary	10	33.3
Secondary	14	46.7
Graduate	3	10.0
Father's occupation		
Skilled	11	36.7
Unskilled	2	6.7
Business	12	40.0
Professional	5	16.7
Mother's occupation		
Skilled	13	43.3
Unskilled	12	40.0
Business	2	6.7
Professional	3	10.0
Monthly income		
Below 10,000	4	13.3
10,001-15,000	12	40.0
15,001-20,000	4	13.3
Above 20,000	10	33.4
Family history of obesity		
Yes	14	45.0
No	16	55.0
Health issue of the family		
Diabetes mellitus	4	13.3
Hypertension	7	23.3
Cardiovascular diseases	1	3.3
None	18	60.0

*p<0.05, S - Significant, N.S - Not Significant

The table 1 shows that most of the adolescents, 14 (46.7%) were aged 14 years, 16(53.3%) were female, 16(53.3%) were studying in 9th std, 19(63.3%) were belonged to nuclear family, 23(76.7%) were residing in urban area, 20(66.7%) were non-vegetarian, 14(46.7%) of fathers and 14(46.7%) of mother's had secondary education, 12(40.0%) of father were businessmen, 13(43.3%) of mothers were skilled workers, 12(40.0%) had monthly income of 10,001-15,000, 16(55%) had no family history of obesity and 18(60%) had no health issue in the family respectively.

Table 2: Frequency and percentage distribution of level of knowledge regarding childhood obesity among adolescents N = 30

Level of Knowledge	Study Participants	
	f	%
Inadequate (1 - 8)	3	10.0
Moderately adequate (9 - 16)	26	86.7
Adequate (17 - 25)	1	3.3

The table 2 shows that regarding the level of knowledge 3(10.0%) had inadequate knowledge 26(86.7%) had moderately adequate knowledge and 1(3.3%) had adequate knowledge regarding childhood obesity.

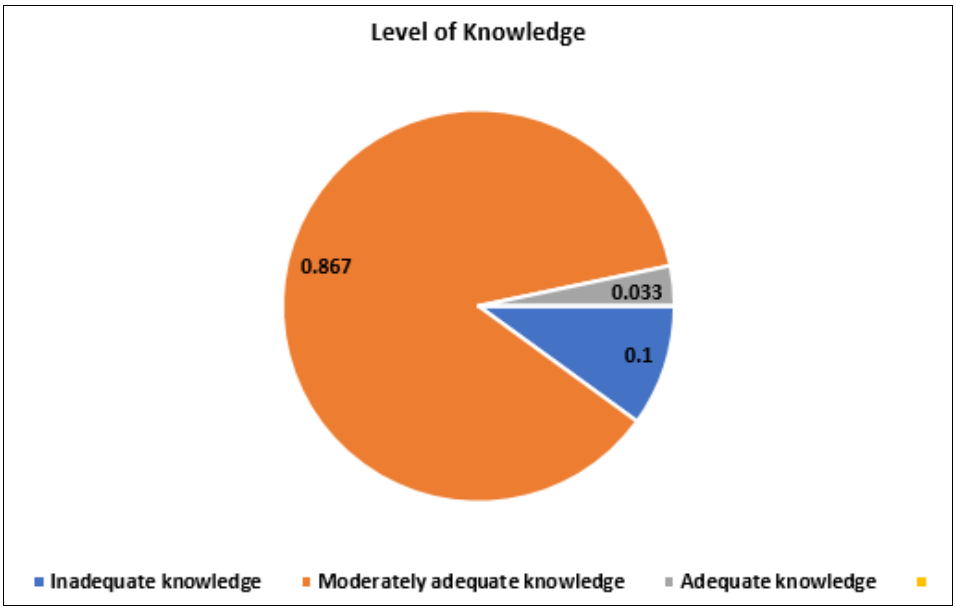

Fig 1: Level of knowledge regarding childhood obesity

Table 3: Mean and Standard deviation regarding level of knowledge regarding childhood obesity among adolescents N = 30

Level of Knowledge	Mean	S. D	Mean Difference & percentage
	11.53	2.31	7.50 (30%)

The above 3 depicts the mean and standard deviation score of knowledge was observed to be 11.53±2.31 and the mean difference score was 7.50.

Table 4: Association between the level of knowledge regarding childhood obesity among adolescents with selected demographic variables N = 30

Demographic Variables	Moderately Adequate		Adequate		Chi-Square & p-value
	f	%	f	%	
Age in years					χ^2=4.542 d.f=2 P=0.103 N.S
13		6.7	11	36.7	
14		6.7	12	40.0	
15		6.7	1	3.3	
Gender					χ^2=0.033 d.f=1 P=0.855 N.S
Male		10.0	13	43.3	
Female		10.0	11	36.7	
Year of studying					χ^2=2.712 d.f=1 P=0.100 N.S
8th STD		3.3	13	43.3	
9th STD		16.7	11	36.7	
Family structure					χ^2=3.191 d.f=2 P=0.203 N.S
Nuclear family		6.7	17	56.7	
Joint family		10.0	6	20.0	
Extended family		3.3	1	3.3	
Place of resident					χ^2=1.354 d.f=3 P=0.716 N.S
Urban		16.7	18	60.0	
Rural		3.3	6	20.0	
Dietary habits					χ^2=0.220 d.f=2 P=0.896 N.S
Vegetarian		6.7	8	26.7	
Non-vegetarian		13.3	16	53.3	
Education of the father					χ^2=10.580 d.f=4 P=0.032 S*
Illiterate		0	2	6.7	
Primary		0	8	26.7	
Secondary		10.0	11	36.7	

Graduate		0	2	6.7	
Professional degree		10.0	1	3.3	
Education of the mother					
Illiterate		3.3	2	6.7	χ^2=6.905 d.f=4 P=0.141 N.S
Primary		10.0	7	23.3	
Secondary		3.3	13	43.3	
Graduate		0	2	6.7	
Professional degree		3.3	0	0	
Father's occupation					
Skilled		10.0	0	0	χ^2=2.509 d.f=3 P=0.474 N.S
Unskilled		3.3	1	3.3	
Business		3.3	11	36.7	
Professional		3.3	4	13.3	
Mother's occupation					
Skilled		6.7	14	46.7	χ^2=6.215d.f=3 P=0.102 N.S
Unskilled		3.3	8	26.7	
Business		3.3	1	3.3	
Professional		6.7	1	3.3	
Monthly income					
Below 10,000		0	4	13.3	χ^2=4.896 d.f=3 P=0.180 N.S
10,001-15,000		3.3	11	36.7	
15,001-20,000		6.7	2	6.7	
Above 20,000		10.0	7	23.3	
Family history of obesity					
Yes		0	15	50.0	χ^2=7.500 d.f=1 P=0.006 S**
No		20.0	9	30.0	
Health issue of the family	χ^2=5.446 d.f=3 P=0.142 N.S				χ^2=5.446 d.f=3 P=0.142 N.S
Diabetes mellitus	0	0	4	13.3	
Hypertension	2	6.7	5	16.7	
Cardiovascular diseases	3	10.0	15	50.0	
None	1	3.3	0	0	

**p<0.01, *p<0.05, S - Significant, N.S - Not Significant

The table 4 shows the association between the level of knowledge regarding childhood obesity among adolescents with selected demographic variables. Regarding the education of the father (χ^2=10.580 p=0.032) and family history of obesity (χ^2=7.500 p=0.006) had statistically significant association with level of knowledge regarding childhood obesity among the adolescents at p<0.05 level and the others did not show statistically significant association with the level of knowledge towards childhood obesity at p<0.05 level.

Discussion

The study finding revealed that the level of knowledge regarding childhood obesity (86.7%) had moderately adequate knowledge, (10.0%) had inadequate knowledge and (1%) had adequate knowledge. According to the research finding presented by Garggy shaji et.al (2019)[40] identified that 46.4% of adolescents had low knowledge, 46.9 have moderate knowledge, and only 6.7% of them had high knowledge on obesity.

The study reveals that the association between the level of knowledge regarding childhood obesity among adolescents with selected demographic variables. Regarding the education of the father (χ^2=10.580 p=0.032) and family history of obesity (χ^2=7.500 p=0.006) had statistically significant association among the adolescents at p<0.05 level and the others did not show statistically significant association with the level of knowledge towards childhood obesity at p<0.05 level.

References

1. Hockenberry MJ, Wilson D, Winkelstein ML, Kline NE, Rodgers C, Keane KN, *et al*. Essentials of Pediatric Nursing. 8th ed. Netherlands: Elsevier; 2009. p. 551-558.
2. Gaete V. Adolescent psychosocial development. Rev Chil Pediatr. 2020;86(6):436-437. https://doi.org/10.1016/j.rchipe.2015.07.005
3. World Health Organization. Adolescent health. March 2024. Available from: https://www.who.int/health-topics/adolescent
4. Gingala S. Common problems of adolescence and their solutions. Mom Junction. 2025 Jan 10. Available from: https://www.momjunction.com

5. United Nations Children's Fund (UNICEF). Adolescent health and well-being. March 2025.
6. Singh S, Awasthi S, Kapoor V, Mishra P. Childhood obesity in India: a two-decade meta-analysis of prevalence and socioeconomic correlates. Clin Epidemiol Glob Health. 2023;23:101390.
7. Mayo Clinic. Childhood obesity in children. 2022 Nov. Available from: https://www.mayoclinic.org/disease-conditions/childhood-obesity/
8. United Nations Children's Fund (UNICEF). Prevention of overweight and obesity in children and adolescents. 2021.
9. Khilnani P. Several health complications are associated with obesity: What's behind the rising rates of childhood obesity in India. The Times of India. 2023 Mar 4;14:53 IST.

How to Cite This Article
Anitha J, Nirmala M. A descriptive study to assess the level of knowledge regarding childhood obesity among adolescents at a selected school, Coimbatore. International Journal of Advance Research in Nursing. 2025;8(1):616-621