A STUDY TO ASSESS THE PREVALENCE OF CHILDHOOD OBESITY AND ASSOCIATED RISK FACTORS AMONG ADOLESCENTS IN SELECTED SCHOOL AT PUDUCHERRY

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ABSTRACT

The study to assess the prevalence of childhood obesity and associated risk factors among adolescents in selected school at Puducherry. Quantitative research approach with descriptive design was used for the study. The sample of 100 adolescents were selected through convenient sampling technique. Demographic variables and risk factors were collected by using structured questionnaire and clinical variables were measured in height (measuring tape in centimetres) , weight(weighing scale in kilograms) , body mass index (formulae weight/height in metres square) .The collected data were analyzed using descriptive and inferential statistics. The analyzed data showed that variables ,in regard to weight, 6(6%) of adolescents were in >97th percentile (obese state) which is concerned as for chance of developing obesity. Based on height 96 (96%) of adolescents are in 3rd to 97th percentile (normal state) and 4(4%) of adolescents are in higher order category. Regarding the Body Mass Index (BMI) 27(27%) of the adolescents were in obese category and 30(30%) of adolescents are in risk of overweight. In regard to the identification of risk factors of obesity related to watching television, Majority 81(81%) of the adolescents watch television almost every day in week days and 78(78%) of adolescents watch television less then half an hour in week days. More than half of the adolescents 93(93%) take food while watching television. Regarding the identification of risk factors of obesity related to food pattern ,majority 77(77%) of the adolescents take breakfast & lunch from home. With regard to eating food from a take away restaurant about 67(67%) of adolescents have it once in a month .Regarding the favourite food ,majority 42(42%) of adolescents like to have bakery items. With regard to the identification of risk factors of obesity related physical activity ,majority 60(60%) of the adolescents do not prefer to go to school by walking or cycling and about 28(28%) of the adolescents involve in any one day in outdoor activity after schooling. Regarding the time spent on physical activity 38(38%) of the adolescents spent 30-60 minutes per day.

All the adolescents actively involve in physical education classes which is for 1-2 hours allotted in school. The study concluded that the result showed that watching television for more hours than required and faulty food habits with limited intake of fruits & vegetables in a day were more risk of obesity among the adolescents .

Key words: Prevalence, Childhood Obesity, Associated Risk Factors, Adolescents

BACKGROUND OF THE STUDY

Worldwide obesity has more than doubled since 1980.In 2014, more than 1.9 billion children were overweight. Of these over 600 million were obese. About 39% of them were overweight in 2014. Most of the world's population lives in countries where over weight and obesity kills more people than under weight.

Obesity is a major public health problem and becomes an important epidemic in both developed and developing countries since an increase in the risky lifestyles. Obesity is an global problem affecting an estimated 900 million people worldwide and its prevalence in the recent decade has a rapid increase. Moreover ,studies indicated that obesity are associated with an increase in mortality and a considerable reduction in life expectancy.

NEED FOR THE STUDY:

Globally, owing to the demographic, economic, social, and nutritional transitions in the past decades, a significant height in prevalence of overweight and obesity has been found almost all age groups. Overweight and obesity are the 5th leading risk for global deaths, are usually means the accumulation of abnormal or excessive fat that may interfere with the maintenance of optimal state of health .In fact almost 2.8 million children are prone to death every year owing to their overweight or obese status .However it is not only the amount of excess fat but even its distribution in the body that eventually determines the health risk**.**

STATEMENT OF THE PROBLEM:

A study to assess the prevalence of childhood obesity and associated risk factors among adolescents in selected school at Puducherry.

OBJECTIVES:

- To assess the prevalence of childhood obesity among adolescents.
- To identify the risk factors of obesity among adolescents.
- To associate the risk factors of obesity with the selected clinical variables of the adolescents.
- To associate clinical variable with the selected demographic variables

MATERIAL & METHODS:

Research Approach: Quantitative research approach.
Research Design: Descriptive research design
Research Variables :
Independent Variable: Risk factors of obesity.
Dependent Variable: Prevalence of obesity.

Setting: Wiseman Higher Secondary School in Mudaliarpet, Puducherry.

Population: Students studying from 7th -11th standard

Sample: Adolescents girls/boys.

Sample Size: 100 adolescents girls/boys.

Sampling Technique: Convenient sampling technique.

Sample Criteria:

Inclusion Criteria:

- Adolescents girls/boys who are between the age group of 12-16 years.

- Adolescents who can follow Tamil or English.

- Adolescents who are willing to participate in the study.

Exclusion Criteria:

- Adolescents who are not willing to participate.

- Adolescents who were sick.

- Adolescents who have been exposed to similar study previously.

Development And Description Of Tool:

After extensive review of literature and discussion with the experts the following tool was developed and finalized. The tool is constructed under the following selection

Section A: Demographic variables.

Section B: Clinical variables.

Section C: Risk factors of childhood obesity questionnaire.

DATA COLLECTION PROCEDURE:

The data collection was collected in the month of 10th December,2017 to 10th January,2018 at Wiseman Higher Secondary School at Mudaliarpet, Puducherry . The Formal permission was obtained from the Principal of the school. The teachers and the students in the school were informed about the objectives of the study. Adolescent girls/boys who met the inclusion criteria were selected by using convenient sampling technique. After a brief introduction of the group members, the investigator explained the purpose of the study and obtained assent from them. Good rapport was established. Semi-Structured questionnaire was administered to the adolescent boys/girls for a period of one hour and doubts were clarified. Time taken for data collection was 15-25 minutes. to answer the question including the demographic data was 25-30 minutes. Researcher thanked the participants for their co-operation during the study. Confidentiality was reassured.

RESULTS & FINDINGS

MAJOR FINDINGS:

- The percentage distribution of demographic variables, with respect to age equal numbers of the variables were in 12 to 16 years that is 20 (20%) .

- Equal proportion of male & female adolescents were 50(50%).

- With respect to religion, 67 (67%) are belonging to Hindu religion.

- Regarding the residence 83 (83%) were residing in urban area.

- Regarding father's education 38 (38%) of them have completed secondary school education and education of mother, 29(29%) of them have completed primary school.

- Regarding occupation of the father 44 (44%) and mother 43 (43%) were working as a skilled worker.

- With regard to birth order in the family, 47 (47%) of adolescents were second child to their family.

- Regarding history of obesity 54 (54%) of adolescents have family history of obesity . 94(94%) of adolescents live with both parents .

- The percentage distribution regarding clinical variables, in regard to weight , 94(94%) of the adolescents were in 3rd to 97th percentile (normal state) and 6(6%) of adolescents were in $>97^{th}$ percentile (obese state) which is concerned as for chance of developing obesity.

- Based on height 96 (96%) of adolescents are in 3rd to 97th percentile (normal state) and 4(4%) of adolescents are in higher order category.

- Regarding the Body Mass Index (BMI) 27(27%) of the adolescents were in obese category and 30(30%) of adolescents are in risk of overweight category.

TABLE : Identification of risk factors of obesity among adolescents related to watching television.

(n-100)

S.No	Variables	N	Percentage (%)
1.	Habit of watching television a) Yes.	100	100
	b) No.	-	-
2.	If yes, Days in a week you will watch television a) Almost every day.	81	81
	b) Two to three days.	14	14
	c) Any one day.	5	5
3.	In week days, Hours of watching television a) Less then half an hour.	78	78
	b) More than a hour.	22	22
4.	Have television in your bedroom a) Yes.	36	36
	b) No.	64	64
5.	Taking food while watching television a) Yes.	93	93
	b) No.	7	7

Table. Reveals the identification of risk factors of obesity related to watching television, all of the adolescents (100%) have the habit of watching television .Majority 81(81%) of the adolescents watch television almost every day in week days and 78(78%) of adolescents watch television less then half an hour in week days. More than half of the adolescents 93(93%) take food while watching television.

TABLE: Identification of risk factors of obesity among adolescents related to food pattern.

(n-100)

S.No	Variables	N	Percentage(%)
1.	On school days, breakfast is taken from		
	a) Home.	77	77
	b) School canteen.	3	3
	c) Shops outside school.	8	8
	d) From friends.	-	-
	e) Don't eat breakfast.	12	12
2.	On school days, lunch is taken from		
	a) Home.	77	77
	a) School canteen.	3	3
	b) Shops outside school.	8	8
	c) From friends.	-	-
	d) Don't eat lunch.	12	12
3.	Eating food from a take away restaurant		
	a) Once in a month.	67	67
	b) Two to three times a month.	15	15
	c) Most of the days.	9	9
	d) Not at all.	9	9
4.	Favourite food.		
	a) Fruits & vegetables.	13	13
	b) Bakery items.	42	42
	c) Fried items.	27	27
	d) Sweets & beverages	6	6
	e) Milk & milk products	12	12
5.	Habit of consuming aerated drinks		
	a) Yes	21	21
	b) No	79	79

The table shows that the identification of risk factors of obesity related to food pattern, majority 77(77%) of the adolescents take breakfast & lunch from home. With regard to eating food from a take away restaurant about 67(67%) of adolescents have it once in a month .Regarding the favourite food ,majority 42(42%) of adolescents like to have bakery items and 79(79%) of adolescents does not have the habit of consuming aerated drinks.

Identification of risk factors of obesity among adolescents related to physical activity.

- Majority 60(60%) of the adolescents do not prefer to go to school by walking or cycling and about 28(28%) of the adolescents involve in any one day in outdoor activity after schooling.

- Regarding the time spent on physical activity 38(38%) of the adolescents spent 30-60 minutes per day and more than half of the adolescents 91(91%) prefer mostly to involve in indoor games . All the adolescents actively involve in physical education classes which is for 1-2 hours allotted in school.

Association of risk factors of obesity with selected clinical variables (weight) of the adolescents.

Regarding watching television significant association were found in hours of watching television on weekdays and having television in bedroom with selected clinical variables. With regard to food pattern, there is significant association on breakfast & lunch is taken from home, food taken from restaurant and having the habit of consuming aerated drinks with selected clinical variables. Regarding the physical activity, there is no significant association among adolescents with selected clinical variables.

CONCLUSION

The descriptive design was conducted to assess the prevalence of childhood obesity and associated risk factors among adolescents at selected school Puducherry. Most of the adolescents have faulty food habits with limited intake of vegetable serves , fruits serves and milk serves in a day and they gets mostly attracted on fast food because of their easy availability and taste. Adolescents rarely do exercise per day or week, so the physical activity is decreased. The result of this study showed that watching television for long hours and improper food pattern were more risk of childhood obesity among the adolescents . There is no significant association among adolescents with selected clinical variables and there is no significant association between weight with selected demographic variables. Hence the study concludes that, obesity prevalence was more in urban due to lack of exercises and availability of fast food snacks and more awareness regarding health hazards of junk foods and risks associated with it among adolescents should be given.

RECOMMENDATIONS:

1) A similar study may be replicated on a different population , setting , larger sample thereby findings can be generalized for larger population.

2) A quasi experimental study can be carried out to find out the effectiveness of structured teaching programme on health hazard of junk food.

3) A comparative study can be done between rural and urban areas regarding knowledge of health hazards of junk foods.

4) A comparative study can be carried out among private and government school age children.

5) A similar study may be replicated with control group.

6) A similar study can be conducted regarding contributing factors and its management on obesity.

7) Individual case study can be done childhood obesity.

8) A similar study on prevalence of eating disorders among teens can be conducted.

9) A similar study can be conducted to find out the effectiveness of lifestyles changes like yoga, exercises and meditations.

10) A similar study can be conducted for larger number of samples in the other health care settings.

11) Further research can be conducted with the help of other obesity assessment scales.

12) An explorative study can be done at various settings like corporate hospitals.

BIBLIOGRAPHY

BOOKS:

1. Achar,T.(2012). Textbook of paediatrics.4th edition. New Delhi : published by SwarnaRekhaBhat. Page no: 30-34.

2. Annuphama.(2015).Textbook of child health nutrition.New Delhi.published by Vikas.Page .no:234-239.

3. DC dutta.(2014). Textbook of obstetrics. 7th edition. West Bengal : printer new central book agency (p) Ltd. Page No:400-402.

4. Darshan Sohi. (2015).Elements of Nutrition.2nd Edition .India. published by Vikas Medical. Page. No: 3-5.

5. David Katz. (2013).Nutrition in Clinical Practice. 2nd Edition. London. Wolters Kluwer Publishers. Page.No: 43-87.

6. Dorthymarlow (2012). Textbook of paediatric nursing. 6th edition.New Delhi: published by elseiver.Page No: 1184-1185.

JOURNALS:

1. Anderson.(2014).Journal of nursing and health science.Facts of childhood obesity.Volume -03.Page.No:15-18.

2. Coonaka.(2015).Clinical child nutrition.A study to assess meals versus snacks consumption in adolescents,Page.No:121-150.

3. Mohantibiswotjit,(2014).The overweight and obesity in adolescents of Pondicherry", .Govt of Pondicherry.2013-2014.Page.No: 25-28.

4. Maheswari.(2014).American association .Study of obesity.Volume-17.Page.No: 49-56.

5. Malhothra.(2014).Avicenna J Med.Prevention of childhood obesity. Volume-04.Page.No:88-93.

ELECTRONIC JOURNALS:

1. EHO (Obesity and overweight) 2015.

2. International classification of adolescents underweight, overweight and obesity according BMI http://.apps.who.int/bmi/bmi/index.