PREVALENCE RATE OF CHILHOOD OBESITY IN KATTANKULATHUR, KANCHEEPURAM DISTRICT, CHENNAI- 2019

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ABSTRACT
Body mass index (BMI) is used to evaluate childhood overweight and obesity. BMI is calculated by dividing a person's weight in kilograms by the square of height in meters. For children it is BMI-for-age. A child's weight status is determined using an age- and gender specific percentile for BMI rather like BMI calculation for adults. Childhood obesity has reached maximum levels in developed countries as well as like a developing country like India the burden faced by children due to co-morbid factors associated with obesity will affects the development further as children are the building block of our nation. Obesity in childhood is having a perfect correlation with poor physical and psychological health. Thus this study aims to estimate the prevalence percentage of childhood obesity in Kattankulathur, India, in order to provide early life style modification intervention.
Keywords: Childhood obesity, prevalence, epidemiology, lifestyle, non-communicable disease, overweight

I.INTRODUCTION

Definition of obesity and overweight has left without exact definition and it keep on changing over time, formally it can be summarized as excessive accumulation of body fat (BF). There is no consensus statement on a cut-off point overweight or obesity in children. The Center for Disease Control and Prevention defined overweight as at or above the 95th percentile of body mass index (BMI) for age and "at risk for overweight" as between 85th to 95th percentile of BMI for age. European researchers classified overweight as at or above 85th percentile and obesity as at or above 95th percentile of BMI. Childhood obesity can directly affect children's physical and emotional well-being, and the children have poor academic achievement and self esteem. It is also associated with poor quality of life experienced by the child.

An Indian research study has defined overweight and obesity as overweight (between ≥85th and <95th percentile) and obesity (≥95th percentile).Another study has followed World Health Organization 2007 growth reference for defining overweight and obesity. Psychological wellbeing is totally lost in children with obesity and they have eating pattern disorder and this is directly associated to depression when their age match peer were not associated with these group of children with obesity in play as well as in academic activities. However, a research question has risen whether eating pattern disorder is a cause of obesity or depression is the major underlying cause for eating disorder? Additionally, in a clinical sample of obese adolescents, a higher life-time prevalence of anxiety disorders was reported compared to non-obese controls. Depending on the age, there are different methods to measure a body's healthy weight: For children aged 0-5 years: The WHO Child Growth Standards, launched in April 2006, include measures for overweight and obesity for infants and young children up to age 5 .For individuals aged 5-19 years: World Health Organization (WHO) developed the Growth Reference Data for 5-19 years. It is a reconstruction of the 1977 National Center for Health Statistics (NCHS)/WHO reference and uses the original NCHS data set supplemented with data from the WHO child growth standards sample for young children up to age 5.

II.METHODOLOGY

Totally 100 children of the age group 6-7 years were screened in the study, at the baseline we aimed in

collecting 500 children but the demographic characteristics shows wider degree of fluctuation in all the children and The study included 100 children in the age group of 6-7 years; (50.7%) were boys (49.3%) were girls. Totally 5 schools were selected from different villages around Kattankulathur in order to equalize distribution of children with obesity within the same socio–economic strata (SES) and gender. Government schools, private schools were equally analyzed but which school had a greater prevalence estimate? This has not been calculated in this study. Class teachers spent their theory hour time as well as their physical education schedule time to share the list of children whom she had diagnosed as Obese. School authorities were given a permission letter to carry out the prevalence rating at their campus and they suggested to contact their parents and requested to attend a meeting with all the parents who were considered and diagnosed as obese in order to engage their children in life style modification process. Informed consent was obtained from the parents to take anthropometric measurements and to collect data by questionnaire from their children. The questionnaire contains domains on activity level, eating habits, and occupational status of parents, birth weight (BW) of children. Height and weight were measured using standard procedure and BMI (kg/m2) was calculated. Measurements were repeated by 2 examiners as this will prevent measurement error. However in the current study the Inter-observer error was 1%. The major limitation in this study is we have not included diet score as this will be a major cause for obesity. Age-adjusted prevalence of overweight was 1.5% for boys and 0.8% for girls. The study highlighted that there is a moderate prevalence of overweight and obesity in children of urban India.

III. DATA ANALYSIS

TABLE 1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLE

Demographic variables	N (%)
Age	**6-7 YEARS**
Education of mothers	
• Primary level	**25%**
• HSS	**10%**
• Degree	**15%**
Education of fathers	
• Primary level	**20%**
• HSS	**10%**
• Degree	**20%**

TABLE 2: PREVALENCE OF OBESITY IN RELATION TO THE AGE WISE DISTRIBUTION OF CHILDREN IN KATTANKULATHUR

VARIABLE	UNDER WEIGHT	OBESE	PRE-OBESITY
AGE: 6	0.8%	1.2%	2.7%
AGE:7	1.8%	1.3%	1.7%

IV. RESULTS   AND   DISCUSSION

There is an unwavering child obesity epidemic in Kattankulathur as there is a low levels of physical activity participation among these children and majority of the time children avoids physical activity engaging sporting activities and they relies on excessive sedentary time especially in their school physical activity training session. When the activity subset has been calculated for these group of children. It has been proved that activity subset has been directly related and affected by obesity determinants. But when the Percentage of overweight is cross analyzed with diet scores. It has been proved that diet scores was not related to the activity subset. Activity score was higher in age matched non-obese children. But this current study aims at calculating the prevalence percentage of children in around Kattankulathur facing childhood obesity burden. Further research studies are needed to analyze Birth weight and its association with Childhood as well as adults who were obese.

V. CONCLUSION

The results of the present study revealed that among 100 children's analyzed. 0.8% was in underweight category

of age 6, 1.2% was Obese, and 2.7% were in pre-obesity. Hence, healthcare providers should pay their almost attention to address the childhood problems and to prevent the complications of obesity. There is a need to implement health care policies in the prevention of childhood co-morbidities which underlies obesity. However the prevalence percentage is low among childrens in and around Kattankulathur. There is a need to have adequate focus on childhood obesity and its complications.

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