

# Awareness on childhood obesity among mothers attending pediatrics outpatient department at tertiary care teaching hospital

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## ABSTRACT

**Background:** Childhood obesity is emerging as a global issue that needs more focus nationally and internationally. Increased calorie intake along with decreased physical activity among children is on the rise that has been responsible for unhealthy weight gain. Health education is essential to tackle decreased awareness among mothers regarding childhood obesity. **Objectives:** (1) The objectives of the study were to know whether mothers are aware about childhood obesity and how it affects their child's health. (2) To create an awareness about beneficial effects of breastfeeding in prevention of obesity. **Materials and Methods:** A descriptive cross-sectional study was conducted among mothers attending Paediatric Outpatient Department at Chennai Medical College Hospital and Research Centre, Trichy, from October to November 2017. A total of 200 mothers were studied using pre-structured and pre-designed questionnaire. The data were collected, and statistical analysis was done. **Results:** Of 200, only 5.6% of study participants had good knowledge, 56.9% poor knowledge, and 37.5% had no knowledge about it. **Conclusion:** The present study highlights that awareness camps about childhood obesity and overweight must be included in routine health care visits for preventing the current increasing trends of non-communicable diseases.

**KEY WORDS:** Overweight; Physical Activity; Childhood Obesity; Health Education; Non-communicable Diseases


## INTRODUCTION

Obesity is defined as abnormal or excessive fat accumulation that may impair health. Obese infants and children are likely to continue being obese in adulthood and more likely to develop a variety of non-communicable diseases.<sup>[1]</sup> Since 1980, the percentage of children who are overweight has more than doubled, while rates among adolescents more than tripled. In 2010, 43 million children were estimated to be overweight and obese. The worldwide prevalence of childhood obesity and overweight increased from 4.2% in

1990 to 6.7% in 2010. This trend is expected to reach 9.1% in 2020.<sup>[2]</sup>

The essential cause of the increase in overweight among children and adulthood is an excess calorie intake<sup>[3]</sup> compared with calorie expenditure and reduced physical activity.<sup>[4]</sup> In other words, our young people are making unhealthy eating choices and are not getting enough physical activity.

Unhealthy eating habits apart from their own choices are also influenced by false messages in the advertisement industries.<sup>[5]</sup> Children of obese parents are at greater risk than children of thin parents.<sup>[6]</sup> Research on genetic factors in obesity supports this hypothesis.<sup>[7]</sup> However, this research does not provide information regarding individual development of obesity. Some studies state that inadequate breastfeeding in first few months of life can cause childhood obesity and further will increase the risk of obesity in later life.<sup>[8]</sup> Science shows that genetics plays role in obesity. Gherlin/leptin hormonal

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pathway dysfunction also causes childhood obesity and over eating.<sup>[9]</sup> Along with genetic factors, environmental factors such as abundant food supply also contribute to it.<sup>[10]</sup> Role of drugs is also implicated in gaining weight in children such as various antipsychotic drugs, drugs used in attention-deficit/hyperactivity disorder, corticosteroids, antihistamines, and beta-blockers.<sup>[11-14]</sup> Complications arising from obesity were considered unusual in childhood. However, a plethora of minor and major problems may arise in children and adolescents with obesity. Most of these have considerable impact on quality of life, and some may reduce life expectancy. Common complications are type 2 diabetes, hypertension, atherosclerosis, dyslipidemia, and fatty liver.<sup>[15]</sup>

Prevention is primarily according to the cause of obesity. Studies suggested that the treatment of childhood obesity must involve education and motivation of the whole family.<sup>[16]</sup> School can also play a crucial role in preventing childhood obesity by promoting healthy eating habits and physical activity.<sup>[17]</sup>

Health education to mothers plays vital in preventing childhood obesity.<sup>[18]</sup> Ranjani *et al.* published a prevalence data from 52 studies conducted in 16 of the 28 States in India, which showed that the prevalence of childhood and adolescent obesity was higher in north, compared to south India. The pooled data after 2010 estimated a combined prevalence of 19.3% of childhood overweight and obesity which was a significant increase from the earlier prevalence of 16.3% reported in 2001–2005. Further in lieu of increasing trends of its prevalence, we have taken up the study to know the awareness among mothers about childhood obesity and its prevention.

## MATERIALS AND METHODS

A descriptive cross-sectional study was done for a period of 2 months with a sample size of 200 at Chennai Medical College Hospital and Research Centre using a pre-structured and pre-designed questionnaire, among mothers who have attended Paediatric Outpatient Department (OPD), we selected 200 study participants and gave all relevant information regarding the study in oral and printed format. After obtaining informed consent from them, the subjects were provided with the pre-structured and pre-designed questionnaire. Information was obtained about their sociodemographic characteristics and knowledge about childhood obesity. Their knowledge was assessed based on who answered more than 7 questions correctly, and they were taken as having good knowledge and  $\leq 7$  as having poor knowledge.

### Data Collection

This study was taken from mothers with children more than 6 and <12 years of age. The questionnaire contains 13 questions to assess mother's knowledge about childhood obesity and

data were collected at Paediatrics Outpatient Department, Chennai Medical College Hospital and Research Centre, Trichy.

### Data Analysis

The data were entered into MS Excel spreadsheet and analyzed in SPSS software version 18.

## RESULTS

Of the 200 participants studied, 49% were in the age group of 28–32 years, 39.5% in 22–27 years, and 11.5% in 33–37 years, with the mean age being 28.39. 65% of them were housewives and the rest (35%) in working class. In terms of socioeconomic class, 42% belonged to lower socioeconomic class. Mean age of the children of study participants was 8.41 with 75% of them in the age group of 6–9 years and 25% in the age group of 10–12 years. 52.5% of the children were females and the remaining (47.5%) males [Table 1, sociodemographic data]. It was found that 62.5% of the study participants heard the term childhood obesity and 37.5% not heard. From those who were aware of childhood obesity, we carried out the further study and obtained the results.

Figure 1 shows that maximum of the study participants (48.8%) gathered information from the TV, 27.2% from the internet (social media), 14.4% from doctors, and 9.6% from magazines/newspapers. 30.4% suggested that overeating, 22.4% spending more time in front of screen (TV, mobile,

**Table 1:** Sociodemographic data

Sociodemographic details	Frequency (%)
Mother's age	
22–27	79 (39.5)
28–32	98 (49)
33–37	23 (11.5)
Mother occupation	
Housewife	130 (65)
Working	70 (35)
Socioeconomic status	
Upper	18 (9)
Upper middle	28 (14)
Middle	26 (13)
Lower middle	44 (22)
Lower	84 (42)
Child's age	
6–9	150 (75)
10–12	50 (25)
Child's sex	
Male	95 (47.5)
Female	105 (52.5)

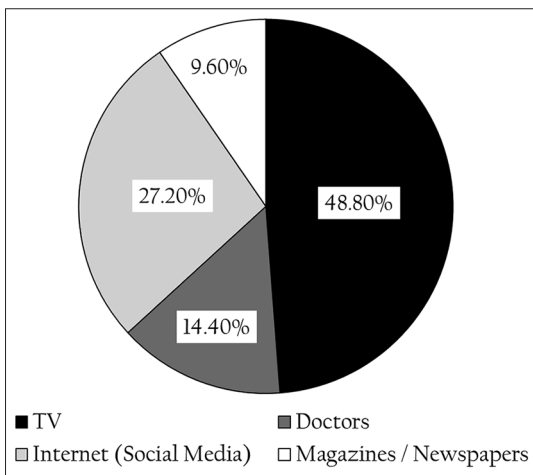
and laptop), 8% decreased outdoor play, and 39.2% said all of them can contribute to childhood obesity [Figure 2]. 56.8% of the study participants were not aware that family history can contribute to childhood obesity. Most of them (60%) did not know that breastfeeding can prevent obesity in later life [Figure 3]. 65.6% of them accepted that schools play a key role in motivating healthy food practice in children and 34.4% did not accept. Majority of them (81.6%) agreed that advertisements on junk foods can alter their child's eating practice and the rest (18.4%) did not agree. Concerning the role of drugs in childhood obesity, 72.8% of the study participants were not aware, and 48% had knowledge about BMI.

Regarding the perspective on child looking fat, 64.8% of the study participants made a viewpoint that its a health issue and 35.2% said its normal. 55.2% of the study participants had knowledge that all of the diseases (heart disease, diabetes mellitus, and hypertension) can be faced by the obese child in the future. Majority of them (87.2%) accepted that allowing the child to play outdoor will help in preventing childhood obesity. 67.2% of participants insisted that warning labels on packaged foods are not useful.

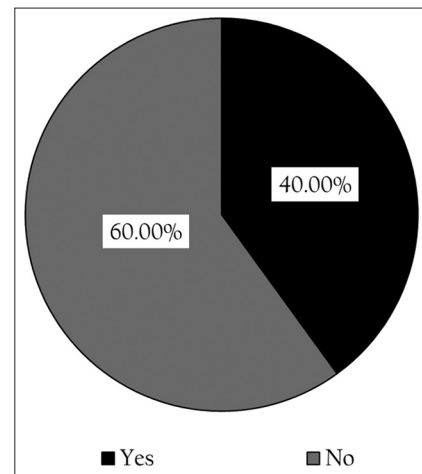
Overall, on assessing the total of 200 participants, only 5.6% had good knowledge, and 94.40% poor knowledge about childhood obesity [Figure 4].

**DISCUSSION**

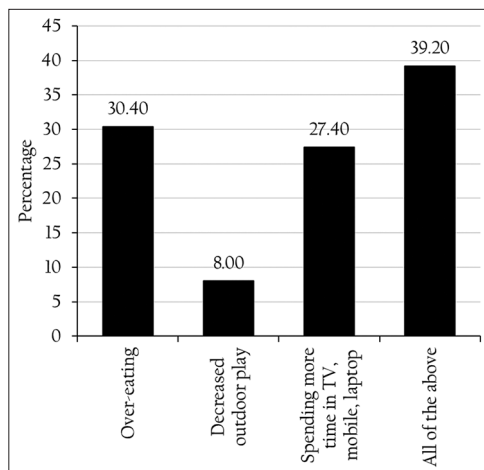
We have interviewed 200 participants who were attending Paediatric OPD at Chennai Medical College Hospital and Research Centre, Trichy, 49% were in the age group of 28–32 years, 39.5% in 22–27 years, and 11.5% in 33–37 years. 65% of them were housewives and the rest (35%) in working class. 42% belonged to lower socioeconomic class. Mean age of the children of study participants was 8.41 with 75% of them in the age group of 6–9 years and 25% in the age group of 10–12 years. It was found that 62.5% of the study participants heard the term childhood obesity and 37.5% not heard. From those who were aware of childhood obesity, we carried out the further study and obtained the results. maximum of the study participants (48.8%) gathered information from the TV, 27.2% from internet (social media), 14.4% from doctors,



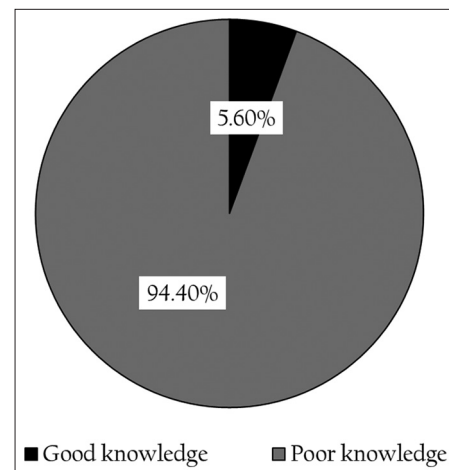
**Figure 1:** Source of knowledge about childhood obesity



**Figure 3:** Knowledge on breastfeeding is beneficial to prevent childhood obesity



**Figure 2:** Factors contributing to childhood obesity



**Figure 4:** Assessment of knowledge on childhood obesity

and 9.6% from magazines/newspapers. 30.4% suggested that overeating, 22.4% spending more time in front of screen (TV, mobile, and laptop), 8% decreased outdoor play, and 39.2% said all of them can contribute to childhood obesity. 56.8% of the study participants were not aware that family history can contribute to childhood obesity. Most of them (60%) did not know that breastfeeding can prevent obesity in later life. 65.6% of them accepted that schools play a key role in motivating healthy food practice in children and 34.4% did not accept. Majority of them (81.6%) agreed that advertisements on junk foods can alter their child's eating practice and the rest (18.4%) did not agree. 72.8% of the study participants were not aware of childhood obesity can be caused by some drugs. 48% had knowledge about BMI. Regarding the opinion on child looking fat, 64.8% of the study participants accepted that it's a health issue and 35.2% said it's normal. 55.2% of the study participants had knowledge that all of the diseases (heart disease, diabetes mellitus, and hypertension) can be faced by the obese child in the future. Majority of them (87.2%) accepted that allowing the child to play outdoor will help in preventing childhood obesity. 67.2% of participants insisted that warning labels on packaged foods are not useful. Overall, only 5.6% had good knowledge, 94.40% poor knowledge about childhood obesity.

In the present study, 75% of the children were in the age group of 6–9 years and participants were belonging to lower socioeconomic class (42%). This study showed that 62.5% of them were aware about childhood obesity and 39.2% knowing that overeating, decreased outdoor play, spending more time in front of screen (TV, mobile, and laptop) all can contribute to it. A study done by Babela *et al.* showed that 83.8% of the parents knew about childhood obesity and its etiology, with 47.6% of them belonging to middle socioeconomic status.<sup>[19]</sup> Our study showed that 40% of the study participants knew the importance of breastfeeding in preventing the childhood obesity. Comparatively a study by Maheshwari *et al.* reflected that 96% of their study participants knew its importance.<sup>[20]</sup> We also found that majority of the participants (87.2%) agreed that outdoor play is essential in preventing childhood obesity, supportively 71.3% of the subjects in the study by Evrard *et al.* strongly agreed the same.<sup>[19]</sup> 55.2% of our study group are aware of consequences that can be faced by an obese child in future. Hunt *et al.* did a study that addressed 74% of their participants supported advertisements on junk foods needs a ban to tackle obesity,<sup>[21]</sup> whereas positively our study subjects (81.6%) also supported the same.

## LIMITATION

It is a hospital based study. If we do the study in the community, we can observe the prevalence and can improve the knowledge about childhood obesity and its outcome,

and further can reduce the increasing trends of childhood obesity.

## CONCLUSION

This study concludes that majority of the mothers had poor knowledge about childhood obesity and only few having good knowledge about it. Health education plays a key role for those having poor knowledge and it's essential to bring down the increasing trends of childhood obesity and overweight. The study also highlights the importance of inculcating awareness camps in routine health care visits for preventing the non-communicable diseases in later life.

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