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Mother's attitude on childhood obesity and its prevention.

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Abstract

Childhood obesity is one of the most important public concerns due to increased incidence with high rate of morbidity. The study intended to identify obese mother's attitude on causes and prevention of childhood obesity. With stratified random sampling method, 120 obese children mothers called for interview to find their attitude. The results of the study expressed in mean and standard deviation (mean percentage). The mother's attitude score expressed in terms of obesity 5.65 ± 1.87 (56.50%), causes 39.06 ± 6.52 (55.80%), consequences 10.55 ± 2.96 (52.75%) and prevention 27 ± 6.15 (54%). The overall mean score and standard deviation were 82.26 ± 13.81 (54.84%). The mother's had moderate attitude score (61.67%) on causes and prevention of childhood obesity. Obesity prevention requires effective intervention measures. To carry out the intervention, mother and child should have a good attitude on obesity and its prevention.

Keywords: Mother's attitude, Childhood obesity, Prevention of obesity.

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Introduction

Globally, Childhood obesity is one of the most serious public health challenges in 21st century. In 2017, Commission of Ending Childhood Obesity (ECHO) reported that worldwide the obesity increased 10 fold among children and adolescents in last 40 years. According to World Health Organization (WHO) Childhood Obesity Surveillance Initiative (COSI) data, childhood obesity rates are highest in the Southern European Countries in the World. Between 2015 and 2017, Countries like Cyprus, Greece, Italy, Malta, San Marino and Spain childhood obesity rates were highest, one in five boys (18%-21%) and slower among girls. European Office for Prevention and Control of Non-communicable diseases, has stated that the obese children are five to seven times more likely be obese in adulthood compared to non-obese children [1].

Dramatic increase of prevalence of obesity mainly because of consumption of high calorie and high density foods, un healthy food choices, physical inactivity, unhealthy lifestyle practices, over stress, poor parenting, parent lifestyle influences, lack of playground, medias, school society influences and genetic cause [2]. Childhood obesity has been much correlated with other observable behaviours, including hours spent on watching television [3], diet and exercise [4,5] among others. Another study concluded that overeating, more time on-screen, decreased outdoor play, ineffective breastfeeding during infancy period, junk food advertisements are the causes of obesity. Also, mothers are having poor knowledge (94.40%) on childhood obesity [6]

Childhood obesity is mainly influenced by obesity related behaviours of parents; they are the role model for their child [7-9], particularly among under five children. Health behaviours are very important, it's difficult to change when the age progress [9] and tend to track into adulthood [10], but are amenable in early childhood period [9]. However, early childhood period is a propitious time to give intervention in which parents play a vital role to carry out intervention [11]. Childhood obesity and overweight is conjecture to adult obesity, increasing plausibility of morbidity (Chronic diseases like diabetes, hypertension, heart disease, orthopedic problems and lack of self-confident and poor self-esteem) among adults [12-18]. Along with parental influences television viewing is widely reported as influential on adolescent eating behaviors, including eating insufficient fruits and vegetables and increased soft-drink and fat intakes [19].

Perception is intricate expression which is highly influenced by knowledge, cultural practices and beliefs of any person [20,21]. Mothers are primary care giver, therefore their perceptions about child health highly influence on children's nutrition and physical activity. They play a vital role in sculpting the knowledge, behavior and attitudes of their children at early ages [22,23], help them in developing eating behavior, energy intake and food preferences [24]. The primary prevention inevitably involves good obesity-related knowledge by parents and proper attitudes leading to efficient practices [25,26]. The research findings revealed that parents had weak attitude towards overweight also, there was a gap between nutrition knowledge and attitude were found particularly on causes of overweight and its prevention [27]. Nearly 65% of the mothers of preschool aged children were not aware of childhood obesity as a health problem. This lack of knowledge on childhood obesity presents a challenge to any intervention because an underlying cause of poor health (like obesity) might be perceived as manifestation of good health [28].

Management of Obesity requires behavior change including diet and physical activity. These are possible by health care

professionals and families who are providing adequate support and reinforcement of healthy lifestyles among children and help parents recognize obesity will control the growing epidemic of obesity among children [6]. Research study proposed that family education and impulse are essential for treating childhood obesity [29], school play a significant role in promoting healthy eating habits and physical activity [30]. This study aimed to assess the attitude of mothers about causes and prevention of childhood obesity, which may help the parents to have proper attitude and behavior towards healthy lifestyle practices among children.

Materials and Methods

A descriptive study carried out to assess the attitude of mothers about childhood obesity and its prevention. Formal permission obtained from the authorities of primary education, with the random sampling method as Zone 1 chosen and obtained permission from head of the institution of concern school, children with the age group of 6-12 years screened for obesity. By Stratified random sampling method, 120 obese children mothers were informed on the significance of the study and consent obtained for willingness to take part in the study. Initially, personal information obtained about child and mother and then attitude scale administered to assess the attitude of mothers on obesity and its prevention.

Development and description of the tool

5 point Likert's scale developed to assess the attitude of mothers about causes and prevention of childhood obesity. Likert's scale consists of five responses namely (a) strongly disagree, (b) disagree, (c) neither agree nor disagree, (d) agree and (e) strongly agree. The numerical score assigned against each response are strongly disagree - score 1, disagree - 2, neither agree nor disagree - 3, agree - 4 and strongly agree -5. Attitude scale has four domains (General information on obesity - 2 questions, causes of obesity - 14, consequences of obesity - 4 and prevention of obesity - 10) with 30 questionnaires which was developed by the investigator and validated by the experts of various fields like pediatrician, nutritionist, and nursing fraternity. The attitude score ranked as poor (0- 50%), moderate (51 - 75%) and good (76 - 100%). Reliability of the tool assessed by using cron-bach Alpha method r=0.85 and pilot study was conducted to assess the feasibility of the study.

Study participants

Mothers of obese children are the participants of the study. In regard to personal information on child and parents, a greater number of female children (57.50%) with the age of 10-12 years (39.17%), studying class four (25%) identified as obese. 65% of family has two child norms with the child-birth order of two (50%). Fathers are graduate (26.03%), and employment status as unskilled employee (38.66%), 79.17% of mothers is home maker and they completed higher school education (42.50%). Majority (85%) of them residing in urban area. All children are consuming non-vegetarian and the frequency of consumption were twice a week (34.86%).

Inclusion/ Exclusion criteria of the study

Inclusion criteria:

- The mothers of obese school age children who are
- Available at the period of data collection
- Willing to attend the nutritional counselling
- Able to understand Tamil and English

Exclusion criteria:

- The mothers of obese school age children who are
- Family history of obesity
- Having associative illness like cardiac and other problems

Statistical Analysis

Analysis performed by using IBM Statistical Package for the Social Sciences (SPSS) version 16 and Software for Statistics and Data Science (STATA) version 10 and Statistical Software for Epidemiology (Epi info) Version 3.5.1. Child and mother's personal data were given in frequencies with their percentages. Attitude scores were given in mean and standard deviation.

Results

The mothers' attitude on causes and prevention of childhood obesity against all questionnaire expressed in mean, standard deviation and mean percentage listed in the Table 1. Mothers attitude classified strongly agree, agree, neither agree nor disagree, disagree and strongly disagree on each question in attitude scale. Mother's attitude on listed questions were, 34.17% of mothers strongly disagree with obese children are healthy where as 28.17% of them agreed. Only 36.67% of mother's agreed that obesity is the major health problem, 43.33% of them disagreed that obese parents have obese child, and 45% of them disagreed that breast-feeding infant has less prevalence of obesity. Mothers neither agree nor disagree on skipping the breakfast (51.67%), physical inactivity and lengthy screen time (40.83%), lack of sleep (46.67%), may increase obesity. Also, they agreed with faulty food habits (40.83%), unhealthy lifestyle practices (55.83%), and parent dietary behaviour (39.17%) is associated with obesity.

Table 1. *Mother's attitude questionnaire on obesity and its prevention.*

Questionnaire	Mean score	SD	% of mean score
Obese children are healthy	2.73	1.18	54.60%
Obesity is major health problem	2.92	1.04	58.40%
Obese children parent are obese	2.86	1.12	57.20%

Breastfeed infant are less likely to be obese	2.29	0.97	45.80%
Skipping of breakfast increases the weight	2.65	0.86	53.00%
consumption of dairy products and Energy dense food increases the weight of the child	2.93	1.04	58.60%
Unhealthy Lifestyle practices & environment are important causes for obesity	3.05	0.96	61.00%
Physical in activity and longer television watching/ video gaming increases body weight	3.06	1.01	61.20%
Parent dietary behavior associated with child obesity	3.14	0.91	62.80%
lack of sleep induces obesity	2.94	0.9	58.80%
Increase intake of sweet will increase the risk of obesity.	3.01	0.99	60.20%
Increase intake of carbonated drinks increase the risk of obesity	2.85	1.04	57.00%
Increase intake of fried foods may increase the risk of obesity	2.66	0.9	53.20%
Increase intake of chocolates may increase the risk of obesity	2.48	1.1	49.60%
Increase intake of ice creams may increase the risk of obesity	2.42	0.97	48.40%
Mass media trigger the child to eat more unhealthy food	2.72	1.1	54.40%
Obesity results in diabetes, kidney disease, and cardovascular diseases	2.58	1.09	51.60%
Obesity may induce the Musculo-skeletal problem	2.59	1.05	51.80%
Obese children have Psychological and emotional instability	2.63	1.01	52.60%
Obesity decreases the cognitive thinking ability in children	2.75	0.99	55.00%
Obesity can be cured and prevented	3.05	0.77	61.00%
Parent role in modification of children healthy lifestyle practices	2.99	0.89	59.80%
Parent should be a role model for their children (through actions on healthy dietary practices, nutritional snacks, and lifestyle)	2.69	0.96	53.80%
Regularize or restrict the television watching time reduces risk of obesity	2.39	1.14	47.80%
Daily physical exercises for 30 min to 1 hour reduces the risk of obesity	2.8	0.84	56.00%
Parent should discourage their children watching food advertisement	2.57	0.89	51.40%
Consumption of required quantity of fruits and vegetables in daily diet decreases the risk of obesity	2.75	1.09	55.00%
Avoid eating while watching TV will reduces the risk of obesity	2.69	0.98	53.80%
Physical education classes may increases the energy expenditure and reduce the risk of obesity	2.52	0.98	50.40%
Dietary restriction and physical activity may control obesity	2.55	0.93	51.00%

The attitude of mother neither agrees nor disagree to accept the truth of obesity that increased intake of carbonated drinks (35%) may increase the risk of obesity, but they agreed with high intake of sweet (41.67%) and chocolates (49.17%) ice creams (50%), fried foods (53.33%) induces obesity. 35% of mother accepted that, media influence the child eating behaviour. The mother ' s acknowledged musculoskeletal problem (36.67%), and diabetes, kidney and cardiovascular problems (36.67%) are common among obese children. But they disagreed with psychological problems (35.83%), and decrease cognitive thinking ability (35%) not because of obesity. About 57.50 % of mothers strongly agreed that obesity be cured and prevented. Mother's agreed with parent role in change of lifestyle practices (55%), parent role modeling (46.61%), daily physical activity (51.67%), and physical education classes (48.33%), diet restriction (60%) may decrease the risk of obesity. Whereas, they confused with food advertisement (43.33%), consumption of required quantity of fruits and vegetables (34.17%), avoid eating while watching television (45.83%) may influence obesity. The domain wise attitude means score, mean percentage and standard deviation was given in Table 2. The overall attitude score gained by the mothers shown in Figure 1.

Table 2. *Domain wise statistics on attitude of mother's regarding chilhood obesity and its prevention.*

Attitude	Questions	Score Range	(N=120)		
			Mean	%	SD
General	2	0 -10	5.65	56.50%	1.87
Causes	14	0 - 70	39.06	55.80%	6.52
Consequences	4	0 - 20	10.55	52.75%	2.96
Prevention	10	0 -50	27	54.00%	6.15
Total	30	0 - 150	82.26	54.84%	13.81

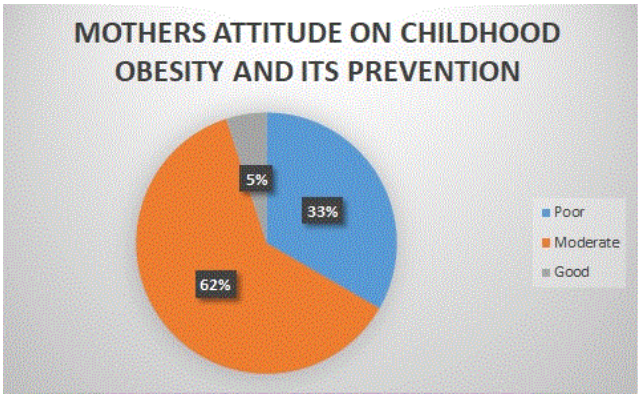

Figure 1. *Mothers attitude on childhood obesity and its prevention.*

Discussion

The study aimed to assess the attitude of mothers about childhood obesity and its prevention. The study finding shows prevalence of obesity was high in girls which were in line with research published. The Global burden of disease study found prevalence of obesity in children and adolescents in developing countries was high among girls (13.4%) compared to boys (12.9%) [31]. In contrast, other research study found that girls had lower prevalence of obesity than boys [31]. In this study mother's attitude on obesity was major health problem (36.67%) which agreed well with the research study, that 35.04% of respondents perceived childhood obesity could be a health problem for their children [28]. But, in Hossain et al. study more than half of the mothers' perceived obesity as a sign of good health [28].

More than two third of mothers are not aware of consequences of obesity (68.6%), this result contradicts to the finding of the study [28]. Few studies show, though the mothers are knowledgeable about healthy eating habits, health risks of overweight and obesity, they were unable to decide their own child's weight status. Many parents believe that obesity is an inherited problem, a genetic cause, which causes the excess weight gain, and do not consider how their own eating habits and the surrounding environment affect the child [28].

Television advertisements on junk food may influence obesity were neither agreed nor disagreed by mother's but similar study proved that 81.6% of mothers agreed that it alters the child eating practice [32]. Hunt et al. addressed 74% of their participants supported advertisement on junk foods need a ban to tackle obesity [33]. Parent role modelling is highly influencing the child eating behaviours. Campbell et al. found that the mother's intake of high-energy fluids, sweet and savory snacks, and take-out foods were positively correlated with the children intake of similar foods. The existence of these unhealthy foods in the home environment was further positively correlated with children consumption of high-energy drinks, sweet and savory snacks [34].

Brown and Ogden parental modeling and its impact on child's eating attitudes and behaviour proved that there is a significant correlation between the unhealthy snack intake, such as chocolates, crisps, and sweets with that of the parents and the children. There was also a significant positive correlation between the parent's and children's internal motivations for eating and body dissatisfaction [35]. Mushonga et al. found 70% of parents agreed that overweight and obesity is one of the risk factor of cardiac diseases [27], which were same with the study findings. The attitude of parents on overweight was weak in Mushonga et al. but in this study it was moderate. Our results are consistent with the study conducted by Olds et al. to assess the attitudes towards obesity among parents and their children, where lifestyle is a primary cause of obesity and considered a serious health problem [36]. Similarly, the study conducted by Njelekela et al. found that the majority of schoolchildren agreed to do physical activities and disagreed that obesity is an indicator of good health [37].

Conclusion

Prevalence of overweight and obesity alarming the health care professional to act immediately on culminating this problem. Otherwise the consequences of obesity increase the morbidity and mortality among children and adults. Prevention is supreme focus; it starts from home, school and community. Parents play a significant role in preventing childhood obesity because they are the role model for their child. Parents' attitude towards obesity brings several intervention measures to eliminate obesity among child and adolescents. The study findings also proved that the mothers had moderate attitude on obesity and its prevention. Their attitude reflects on food choices and physical activities of their children. Though the children are having adequate knowledge of obesity their attitude shows negative, due to their parental influences. It signals that health care providers need to give certain intervention like counselling for both children and parent, family based, school based intervention program on healthy lifestyle practices and its importance.

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