

## Research Article



## Barriers to Healthy Diet and Physical Activity among School going Children in Relation to Home Environment

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Received: 29-05-2017; Revised: 18-07-2017; Accepted: 22-08-2017.

### ABSTRACT

The home environment and parenting can influence a child's health by shaping dietary and physical behaviours, such as providing access to fruits and vegetables or encouraging kids to play outside. The study aims to explore the barriers of healthy diet and physical activity among school going children and the role of home environment in shaping of eating habits of children. A correlational descriptive research design was under taken to conduct the study. The data were collected from 100 samples and structured questionnaire were used to collect the data. The findings of the study show that 78% of samples perceived look and taste of junk food were the most barrier to healthy diet, 56% samples reported insufficient time of mother's act as a facilitator for junk food and 41% perceived that easily accessible of junk food during the recess. 62% samples were perceived that lack of open field was the great barrier to physical activity, 77% of the samples prefer to play videogame instead of outdoor game and 49% were prefer to watch TV and 60% samples were spending less than 60-45 minutes in physical activity. Further it was observed that mother 'education, occupation and parent's eating habit were co-related with child's eating habit. To inculcate healthy behavior among children set-up of healthy home environment is necessary. It's high time to change, the parents should have focused for their child's life style modification and spare some productive time for them.

**Keywords:** Barriers, healthy diet, physical activity, home environment.

### INTRODUCTION

Childhood obesity is one of the most challenging public health issues of 21<sup>st</sup> century. Nearly half of the all overweight fewer than five children lived in Asia and it increasing in alarming rate. Living pattern, life style, food habit is changing and influenced by western world as impact of globalization among Asian countries and specifically in India. The prevalence of childhood obesity has increased significantly over the past three decades. As per WHO, the number of under-five obesity increased from 32 million to 42 million in between 1990 to 2013. The International Association for the Study of Obesity (IASO) and International Obesity Task Force (IOTF) said that approximately, 200 million school going children are either obese or overweight around the globe.<sup>1</sup> If this trends continue the number will increase up to 70 million globally by 2025. As globalization made the world wealthier, the diet pattern of developing countries like India influenced by western food and obesity rises. In India the prevalence of childhood obesity is 4%-22%.<sup>2</sup> As per recent survey in Delhi, 1 in 10 children either overweight or obese which enhance the risk of serious complications over 35% and children are more likely to be diagnosed with high blood pressure, high cholesterol, diabetes and cardio-vascular related disease.<sup>3</sup> Early years obesity and overweight are a harbinger of metabolic syndrome, low physical and mental health, glucose intolerance etc, can emerge in adulthood also.<sup>1</sup> As the childhood overweight persist into adolescent and adulthood, the rising number of adult will be vulnerable

to serious complications of overweight.<sup>3,4</sup> Modernization of culture, overnight booming of fast food outlets, lack of open field as well as resources for outdoor games and growing sedentary pursuits are few of the factors of overwhelming obesity. Obesity and overweight predominantly covered by mainly two factors, i.e. shifting in diet and inadequate physical activity.<sup>1,5</sup>

Moreover, some studies have been shown that, parental eating behavior, weight, desk-bound life style and home environment deploy a salient impression on children in terms of eating behaviours.<sup>6</sup> Parents are the child's first teacher and role model and normally children are mostly influenced by their parent's attitude, behavior and even by their talk also. Parents are having pivotal role in making the home environment healthy which is facilitate healthy behavior among children. Parents can shape their children's behavior and foster healthy habits like physical activity, healthful eating practices, sedentary behavior and ultimately their weight status in many ways.<sup>7</sup> According to T. Ostbye et al. reported that parenting and home environment had a great impact on children's eating habit and physical activity in their study. They found that a significant association was there in between home environment and children's physical activity and healthy vs junk food intake.<sup>7</sup> A study was done by A Jennifer on barriers to healthy eating & physical activity among children and adolescents was found that major barrier to healthful eating were convenient, easy availability quick preparation, taste, peer pressure, reward drive and mood enhancer and the barriers of



physical activity were preferences for indoor activities (watching TV, playing videogames, books, music etc), time constraints, feeling tired and sluggish, low energy level, peer pressure and low level of self-motivation.<sup>8</sup> As per EPPI centre, 3 main barriers to physical activity were preferences and priorities, family life and parental support and restricted access to opportunity for participation in sports and exercise.<sup>9</sup>

### Aims and Objectives

The study aims to explore the barriers of physical activity and healthy diet among school going children and the role of home environment.

- To assess the perceived barriers of physical activity among school going children.
- To determine the perceived barriers of healthy diet among school going children
- To find out the association in between selected demographic variables with physical activity and healthy diet.

### MATERIALS AND METHODS

The present study was a correlational descriptive study that assessed barriers of healthy diet and physical activities among school going children. The study was conducted in DAV Public School, Kalinga Nagar, Bhubaneswar, Odisha. School going children in between the 8-12 years' children were selected from various schools, who were willing to participate and individual parents signed informed consent along with administrative permission. 100 samples were selected by computer generated simple random sampling method.

Structured questionnaire was used to collect the data. It consist 3 sections

Section 1- Consists of items related to demographic variables

Section 2-Consists of items pertaining to the barriers of physical activity

Section 3-Consists of items related to the barriers of healthy diet

Data was collected, coded, and entered in SPSS version 17.0 and subjected to statistical analysis. Graphical presentation was carried out by Microsoft excel and also used for data handling. Data was analyzed by descriptive and inferential statistics. Descriptive statistics was used to analyze, organize and summarize the data and results were represented in the form of frequency, percentage and SD. Inferential statistics like chi-square test was used to find out the association between subjects' baseline data and outcomes and the level of significance at  $P$ -value < 0.05.

### RESULTS

**Table 1:** Characteristics of samples

S. No.	Items	Percentage (%)
1	<b>Age (in years)</b>	
	6-8	11
	8-10	58
2	10-13	31
	<b>Sex</b>	
	Male	54
3	Female	46
	<b>Types of Family</b>	
	Nuclear	62
4	Joint	38
	<b>Education (in Standard)</b>	
	ii - v	49
5	vi - viii	51
	<b>Father's Education</b>	
	Higher secondary	21
6	Graduation	34
	Post-Graduation	45
	<b>Mother's Education</b>	
7	Higher secondary	32
	Graduation	40
	Post- Graduation	28
8	<b>Father's Occupation</b>	
	Government	40
	Private	60
9	<b>Dietary Pattern</b>	
	Non-Vegetarian	75
	Vegetarian	25

Table 1 reveals that, 100 samples were considered for this study. Percentage wise distribution of samples as per gender revealed that 54% were boys and 46% were girls. The highest percentage of samples 58% were within the 8-10 years of age group, 31% were within 11-13 years and 11% were within 6-8 years. Half of the samples (51%) belongs to standard-6th to 8<sup>th</sup> and others were in between standard 2<sup>nd</sup> to 5<sup>th</sup>. With respect to father's education, 45% samples father were post graduated where as 34% samples father were graduated and 21% samples father were qualified up to higher secondary. In terms of mother's education, most of the samples mother was graduate, i.e. 40%, where as 28% were post-graduate and 32% were qualified up to higher secondary. Majority of the samples 62% were from nuclear family and most of the samples were non-vegetarian in nature. Majority of the samples father (60%) was under private job where as 40% were under government job.

**Table 2:** Item analysis of barriers to healthy diet

Sl. No.	Items	Percentage (%)
1	Easily accessibility of junk food	41
2	Insufficient time for mothers	56
3	Likes outside food more than homemade food	78
4	Peer pressure	65

Table 2 reveals that, the findings of the study show that 78% of the samples were like outside food more than homemade food and they perceived look and taste of fast food was the greatest barrier to healthy diet. Most of the samples were reported that peer pressure was also a barrier to healthy diet. 56% samples said that insufficient time of mothers were also a facilitator for junk food and allowable and available of junk food at home, 41% perceived that easily accessible of junk food during the recess.

**Table 3:** Item analysis of barriers to physical activity

Sl. No.	Items	Percentage (%)
1	Watching TV during leisure time	77
2	Time constraints	66
3	Lack of open field or playground	52
4	Do not like to play regularly	27

Table 3 reveals that, the item wise analysis of perceived barriers to physical activity revealed that 77% samples were likely to watch TV during their leisure time. Majority of the samples were don't play regularly but 27% were regular player. 66% samples viewed that time constraints was a greatest barrier, they didn't get time to play. A significant portion of the samples were perceived that lack of open field was the great barrier to physical activity and 52% samples were like to sleep in leisure time.

Further it was observed that mother 'education, occupation and parent's eating habit were co-related with child's eating habit and also it was found that home environment was statistically significant with the eating habits of children.

## DISCUSSION

Once an issues of the western countries, is now steadily engulfing the developing countries as the effect of globalization over the past few decades. Since poor eating habits and poor physical activity has the long term devastating effect on the physical and psycho-social development of children leads to bitterness in life. So the prime duty of nurse, not only nurse every health professional to create awareness among children as well as their parents about the importance of healthy food, proper eating habits, the importance of every constituents of foods, frequency of feeding etc.

As the above findings suggested, multiple and variety barriers are there for healthy food choices like personal, family origin, social and environmental among school going children. Majority of the samples reported that look and taste of junk food attract them more, whereas peer pressure is also a major influence of their food preferences. Jennifer A. stated that look and taste of junk food is an important barrier of healthy eating and friend influence is also acted as a barrier.<sup>8</sup>

The researcher also found that mothers were act as a facilitator of junk food and most of the time fast foods are available and allowable in home. As per the samples information, the instant recipes for children are understood to be increasing in consumption due to the lack of time of their mothers.<sup>11</sup> A study has suggested that, comparatively non-working mother's children tend to have wholesome healthy lifestyle compare to the employed mother's children. They nibble more on outside junk food, sugary drink, wrap foods and far from healthy home prepared foods, fruits and vegetables. This study shows that 37% of children munched on fried crispy snacks and 41% children mostly indulged into sugary beverages. This type of lifestyle pattern departs children from good health and leaves them more at risk for obesity and lifestyle diseases.<sup>12</sup> Sarah C et al demonstrated that foods habit was associated with unhealthy food availability at home and high calorie beverages with permissive feeding style.<sup>13</sup>

Also the result shows that, availability of junk food outlet near the school was a great barrier of healthy eating behavior among school going children. One of the previous researches suggested that, rate of overweight was associated with the close proximity of food outlet near to the school.<sup>14</sup>

However, our finding that majority of the samples was physically inactive and television viewing is one of the most preferred activities during leisure time. Outnumber amount of samples reported that no adequate open space and less time were two main constraints for less physical activity. It is evident from this study that; children were facing variety of barriers in relation to physical activity. Majority of the samples viewed time constraints was the greatest barrier of physical activity.<sup>15</sup> Furthermore, indoor activities like watching television and playing computerized games were a significant barriers of physical activity.<sup>16</sup>

As stated above, home environment played a crucial importance in relation to the development of child's eating habit and physical activity. Some previous study demonstrated that mother's education, occupation and parent's eating habit had a notable with children's eating habit.

Molly et.al found that 47% of samples were perceived easy access of junk food was the barrier to healthy diet and 70% were go with taste and 45% were suggest that unavailable of resources like play ground, play material were the barrier of poor physical activity.<sup>10</sup>

In Conclusion, childhood overweight is associated with multiple health related problems. Overweight children may experience health consequences which may pose risk for weight related health problems in adulthood. So to inculcate healthy behavior among children set-up of healthy home environment is necessary. It's high time to change, the parents should have focused for their child's life style modification and spare some productive time for

them. Parents can influence their children, can control and modify their home environment to address this problem and shape their child's future.

## REFERENCE

- Ending childhood obesity: Screening the future for our children, WHO report, May, 2016, [www.who.int/end-childhood-obesity/news/wha69-event/en](http://www.who.int/end-childhood-obesity/news/wha69-event/en)
- India with 4 million obese people ranks 3<sup>rd</sup> after US & China, Indo-Asian news Service, June, 2014 with 41 million obese, India third after US, China: Report, [www.ndtv.com/india-news/with-41-million-obese-india-third-after-us-china-report-575969](http://www.ndtv.com/india-news/with-41-million-obese-india-third-after-us-china-report-575969).
- 1 in 10 school children overweight in Delhi-NCR, September, 2014, [www.ndtv.com/india-news/one-in-ten-children-overweight-in-delhi-ncr-report-696170](http://www.ndtv.com/india-news/one-in-ten-children-overweight-in-delhi-ncr-report-696170).
- Veugelers, J Paul, L Angela, Prevalence of risk factors of childhood overweight & obesity, Canadian Medical Association Journal, 607(13), 2005.
- Mohanty S, Biswal E, Faulty eating pattern among adolescents of junior college, SÓÁ University, i-manager journal of nursing, 6(1), 2016.
- Tzou I. Lin, Chu N-F, Parental influence on childhood obesity: A Review, Health, 4(12A), 2012.
- Ostbye T et.al, The effect of the home environment on physical activity and dietary intake in preschool children, International Journal of Obesity, 2013.
- O'Dea Jennifer A, Why do kids eat healthful food? Perceived benefits and barriers to healthful eating & physical activity among children & adolescents, Journal of the America Dietetic Association, 103(4), 2003, 497-501.
- Children and Physical activity: A systematic review of barriers and facilitators, 2003, <https://eppi.ioe.ac.uk/cms/linkclick.aspx?fileticket=KBOtEby5yg%3D&tabid=245&mid=1081>.
- Moore Molly M et al., Barriers to Physical activity & healthy diet among children ages 6 through 13 in Mississippi Elementary School, Journal of Paediatric Nursing, 20(1), 2014, 74-82.
- Lee Y-M, Kim J H, Jinoh Y, Lee M-J, Mother's perception of children's food behaviours: Use of focus group interview study, Nursing Research and Practice, 2(4), 2008.
- Hope J, Working Moms beware: Why children of stay-at-home mothers have healthier lifestyle, 2009- [www.dailymail.co.uk/health/article-1216806/working-mothers-beware-why-children-stay-home-parents-healthier.html](http://www.dailymail.co.uk/health/article-1216806/working-mothers-beware-why-children-stay-home-parents-healthier.html)
- Couch S. C, Glanz K, Zhou C, Sallis J F, Saelens B E, Health Food environment in relation to children's diet quality and weight status. Journal of Academi Nutrition Diet, 114(10), 1569-79, 2014.
- Howard PH, M Fitzpatrick, B Fulfroost, Proximity of food retailers to schools and rates of overweight ninth grade students: an ecological study in California, BMC Public Health, 2011.
- Musaiger A. O. et al, Perceived barriers to healthy eating and physical activity among adolescents in seven Arab Countries: A cross cultural study, The Scientific World Journal, 2013.
- John M, Nizah NK, Jacob Cherian V, Physical activity, sedentary behaviours and eating habits among school children in Kerala, Paediatric Review: International Journal of Paediatric Research, 3(3), 2016.

**Source of Support:** Nil, **Conflict of Interest:** None.

