

AN ANALYTICAL STUDY OF KNOWLEDGE, ATTITUDES, AND COMPLIANCE OF PARENTS OF OBESE CHILDREN AT CHENNAI

Edna Sweenie J, Research Scholar, Malwanchal University, Indore

Dr. Anu V. Kumar, Professor, Malwanchal University, Indore

Abstract

Obesity is easier to prevent than to treat, so prevention should focus in a large measure on parental education. This is the high time we the nurses should take action and pass on this message to the public to prevent the “Globesity”. Parents should be the main change mediator in weight related interventions, because their involvement is crucial for the induction of a healthy environment, modeling of healthy eating and activity patterns, and improvement in the child’s practices and weight status in the long term. The research approach used for the study was evaluative approach and true experimental design with two groups pretest-posttest design. Out of 200 samples, 100 samples to study group and 100 samples to control group were allotted randomly through lottery method. The IEC interventions were given only to study group on childhood obesity on one-to-one basis with the help of laptop power point presentation at the respective houses of the mothers. As a consequence of the rising incidence of obesity, and concern about the long-term implications for population health and the impact of the obesity epidemic on healthcare systems, there has been an increased focus internationally on the prevention of obesity.

Keywords: Educative Supportive Intervention, Childhood, Obesity, children, parent

INTRODUCTION

Every human being wishes to have healthy children who would grow to be healthy adults and enjoy a long life. It is clear that in many countries this aim may be unachievable for number of years because many specific adult health problems have their origins in childhood. One such health problem is “Childhood Obesity”. All mothers want to have chubby babies so, increasing prevalence of obesity has become a most common and serious nutritional disorder in children. Many mothers believe that childhood fat is puppy fat, which children will lose as they grow up. But children who are obese before age five seem to have greater risk of adult obesity.

Childhood obesity has become a worldwide phenomenon cutting across regional and economic barriers. It has emerged as an epidemic not only in the developed countries but also in the developing countries that are in rapid epidemiological transition, and India is no exception (Yadavs., 2001). According to Bhave (2004), school-based data in India demonstrates prevalence of obesity in the range of 5-6% to 24% among children and adolescents. Children learn a lot from school, environment and experience. Whether a child is a member of our family or not, it is our responsibility to help the child to grow in a healthy way. Childhood obesity is rapidly emerging as a global epidemic which will have profound public health consequences, as noted earlier, many overweight children will become overweight adults (Bellizzi & Dietz 1999).

- **Heredity**

Heredity contributes a risk factor of 5 to 40 percent for obesity, and studies indicate that 50 to 70 percent of a person's BMI is determined by genetic influences (Epstein, 1998). If both parents are overweight, the children have a 75 percent chance of being obese. If one parent is obese, the probability is 25 to 50 percent. But while the connection between genetics and obesity has been established, the problem is usually caused by multiple genes interacting with environmental and behavioral factors. Given that the genetic characteristics of a population change slowly, the rapid weight increases in America show that skyrocketing obesity rates are probably due to behavioral and environmental factors combining with genetic factors, rather than genetic predisposition alone. The upside is that making some basic changes in lifestyle and nutrition can make a big difference.

- **TV Time**

One of the biggest culprits is a sedentary lifestyle dominated by TV watching, computer activities and video games. It's estimated that American kids are spending 25 percent of their day watching television, and that those who log the most TV hours have the highest rate of obesity. First, because they're not burning enough calories, and second because they're usually eating unhealthy snacks while they're watching. What they're watching is also a factor. A March 2007 study (Gronback.H) found that kids age 2 to 7 see an average of 12 food advertisements every day, while kids of age 8 to 12 see 21 advertisements, and teens view up to 17 food advertisements daily. A 2006 study showed that for each additional hour of television viewing, kids consumed 167 extra calories. So, it's obvious that limiting TV time is one of the best health care decisions parents can make for their family.

LITERATURE REVIEW

Samundeeswari, Arunachalam & Kandasami, Maheswari. (2019). Due to its increasing prevalence and associated illness, childhood obesity has emerged as a major public health issue. The purpose of this research was to learn how obese mothers felt about the reasons and solutions to their children's weight problems. Using a stratified random sample technique, we interviewed 120 moms of obese children to gauge their perspective. The average and standard deviation (average %) of the study's findings. The mean and standard deviation of the mother's obesity-related attitude scores are as follows: 5.65 1.87 (56.50%), 39.06 6.52 (55.80%), 10.55 2.96 (52.75%), and 27 6.15 (54%). The average score was 82.26, with a standard deviation of 13.81 (54.84 percent). The mothers had a moderate outlook on the factors that contribute to and may be used to combat their children's obesity (61.67%). Effective intervention strategies are necessary for the prevention of obesity. Both the mother and the kid must have a positive outlook on obesity and its prevention for the intervention to be successful.

Gautam, Sujan & Jeong, Hyoung-Sun. (2019) Many nations with low and intermediate incomes are now facing a major public health crisis due to the prevalence of childhood obesity. Finding out how common childhood obesity is and what causes it are the primary goals of this research. Methods In Udupi, India, 1185 secondary school pupils participated in cross-sectional research at their school. Self-administered questionnaires were used to compile the data. Body mass index (BMI)

was determined by taking measurements of height and weight. World Health Organization (WHO) standards for BMI distribution by gender and age were used to compute the z-score and classify BMI. Frequencies and percentages were recorded for each BMI group. Factors related to childhood obesity were identified using Chi-square testing at a 5% level of significance, followed by multiple logistic regressions. Results It was observed that 10.8% of youngsters were overweight and 6.2% were obese. The percentages of men who were deemed 'overweight' (11.0) and 'obesity' (7.1%) were higher than those of women (10.6%) and 5.4%. There was a statistically significant correlation between going to a private school (AOR: 2.87, CI: 1.55-5.31), identifying as Muslim (AOR: 2.26, CI: 1.39-3.67), and having a parent who worked in business (AOR: 2.43, CI: 1.05-5.62). Conclusion The frequency of childhood obesity was rather high in our research. Childhood obesity is a precursor to adult obesity, thus it's crucial that school health programs be put into place and be actively pursued.

Krishnaswamy, Vangal & Dudeja, Puja & Sashindran, V K. (2020) The number of overweight people in the world has doubled between 1990 and 2015. The alarming trend is seen more often in young people than in adults. The number of overweight and obese school-aged children and adolescents has increased by a factor of 10 in just three decades, with an estimated 200 million students around the world being overweight or obese, according to the International Association for the Study of Obesity (IASO) and the International Obesity Task Force (IOTF). Obesity rates among Indian youngsters aged 5-19 years old varied between 3.6% and 11.7%. By 2025, 17 million Indian youngsters are expected to be overweight. The most significant driver in India's rising obesity rate is urbanization. Additional influences include those of an epigenetic, nutritional, family, psychological, educational, and occupational nature. Roughly half of overweight children will remain overweight as adults. Children are also seeing an uptick in the incidence of conditions including hypertension, type 2 diabetes, dyslipidaemia, and non-alcoholic fatty liver disease. It's very tough to encourage kids to lose weight and keep it off, therefore preventing childhood obesity is crucial. Beginning a balanced diet and active lifestyle before to conception is essential and should continue throughout a child's development.

Midha, Tanu & Nath, Bhola & Kumari, Ranjeeta & Rao, Yashwant & Pandey, Umeshwar. (2011) Both childhood underweight and obesity have become major problems in developing nations. India has had a recent and severe pandemic of childhood obesity. As a result, the authors sought to investigate how common childhood obesity is in India. Both automated and human searches were used to locate the studies. Random effects meta-analysis was used to investigate the reliability of prevalence estimates. We found nine research with a total of 92,862 participants and analyzed them. Obesity was projected to affect 3.39 percent of the population while overweight affected 12.64 percent (95% CI 8.48-16.80 percent). According to the available data, childhood obesity and overweight should be a top priority for policy and treatments.

Kundu, Debolina & Mishra, Rakesh & Chakravorty, Swastika. (2021) In certain regions, the obesity epidemic has reached pandemic proportions. In emerging nations, childhood obesity is on the rise at an alarming rate. However, health policies and programs seldom adequately address this issue. Worrying trends and patterns are emerging at the national, urban, and Delhi levels. There is a rising tendency in the percentage of overweight children, and this is mostly attributable to the growing

number of obese children. Child obesity has significant economic and societal consequences, including greater loads on health systems and decreased economic output in later years, in addition to the immediate health-related morbidities. Urban children have a unique set of challenges that contribute to an obesogenic environment, thus efforts to combat this rising health concern must be refocused. The incidence of childhood obesity is affected not only by demographic factors but also by socioeconomic factors. In most industrialized nations, childhood obesity decreases as socioeconomic status (SES) rises. The prevalent social and cultural assumptions and misperception that fat children are healthy in India contribute to the increased incidence of obesity and overweight among children from rich homes in India. Children's rural or urban living is also an essential consideration. Compared to their rural counterparts, children living in Delhi are 5 times more likely to be overweight or obese due to differences in nutrition and lifestyle. Obesity risk is also strongly related with education levels, particularly in large urban centers. Individual-level variables, such as children's ages and their mothers' levels of education, are also positively related with childhood obesity, in addition to geographical influences. India's policymakers haven't called this problem what it is: a developing crisis. Extending the reach of current plans and initiatives is possible. By incorporating health, education, and cultural infrastructure into urban development plans, the Indian government hopes to better position itself to achieve the SDGs by 2030. If we want to address regional problems, such childhood obesity in urban settings, we need to include direct intervention tactics into the bigger list of measures aimed at creating healthier and more environmentally friendly urban environments.

RESEARCH METHODOLOGY

Sample

Mothers who had obese children aged between 5-18 years who fulfilled the inclusion criteria were recruited for the study. Sample size 200, out of which 100 parents were assigned to study group and 100 parents were assigned to control group randomly.

Variables

- **Independent variable**

In this study independent variable refers to IEC on childhood obesity.

- **Dependent variable**

The dependent variable refers to knowledge, attitude and compliance towards childhood obesity education and weight reducing measures of obesity.

Setting of the study

The study was conducted at residences of Parents of obese children at South West Chennai (Valasaravakkam, Manapakkam, Ramapuram, Nandampakkam, Mugalivakkam etc.).

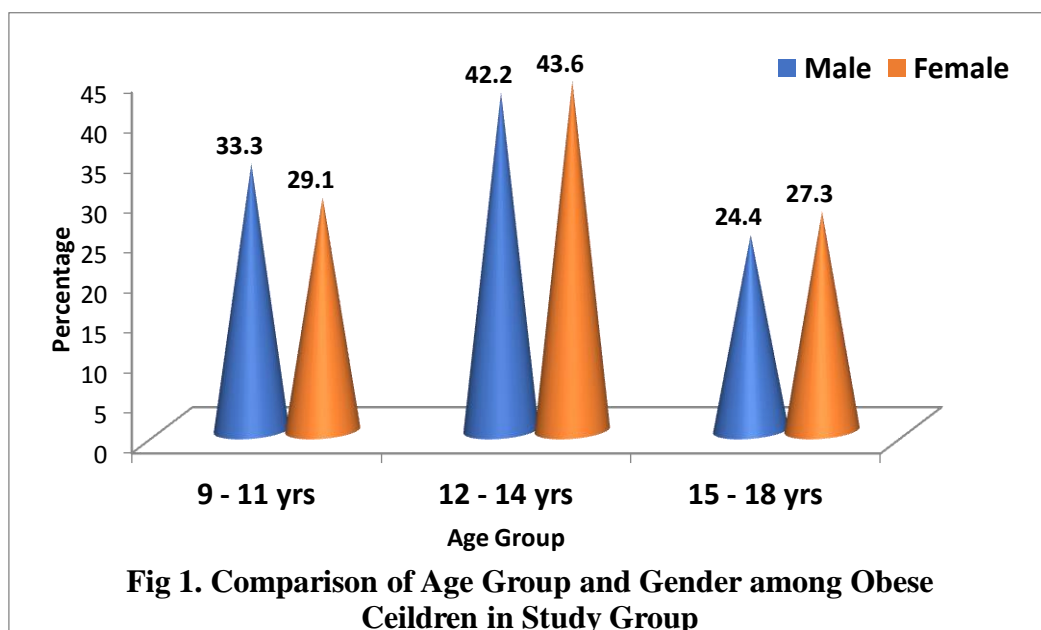
DATA ANALYSIS

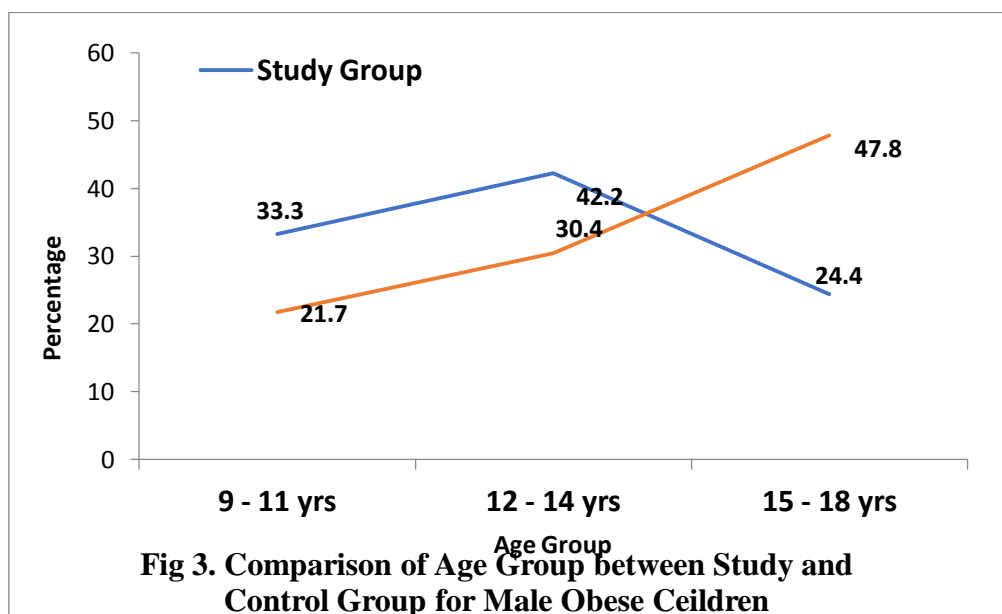
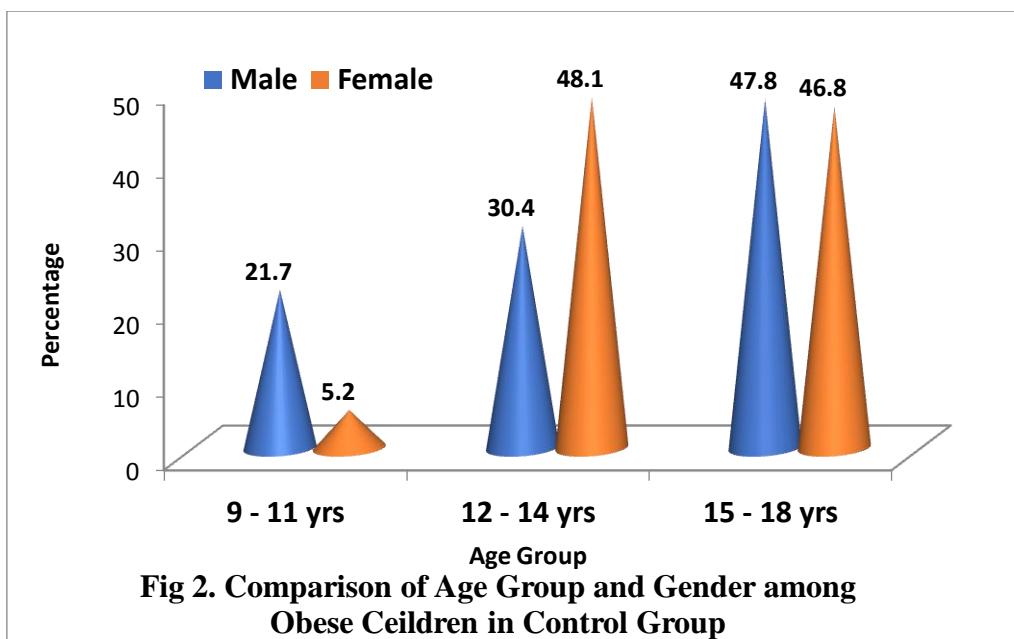
Comparison of the knowledge, attitudes, and compliance of parents of obese children in the study group and the control group with regard to childhood obesity

Table 1. Comparison between Age and Gender among Obese Children Control Group (n=100)

Age group	Male		Female	
	No.	%	No.	%
9 – 11 years	5	21.7	4	5.2
12 – 14 years	7	30.4	37	48.1
15 – 18 years	11	47.8	36	46.8
Total	23	100.0	55	100.0

Table 1 illustrates the trend of obesity as per age and gender distribution. In both study and control groups as the age increases the obesity prevalence also increasing in girl children.





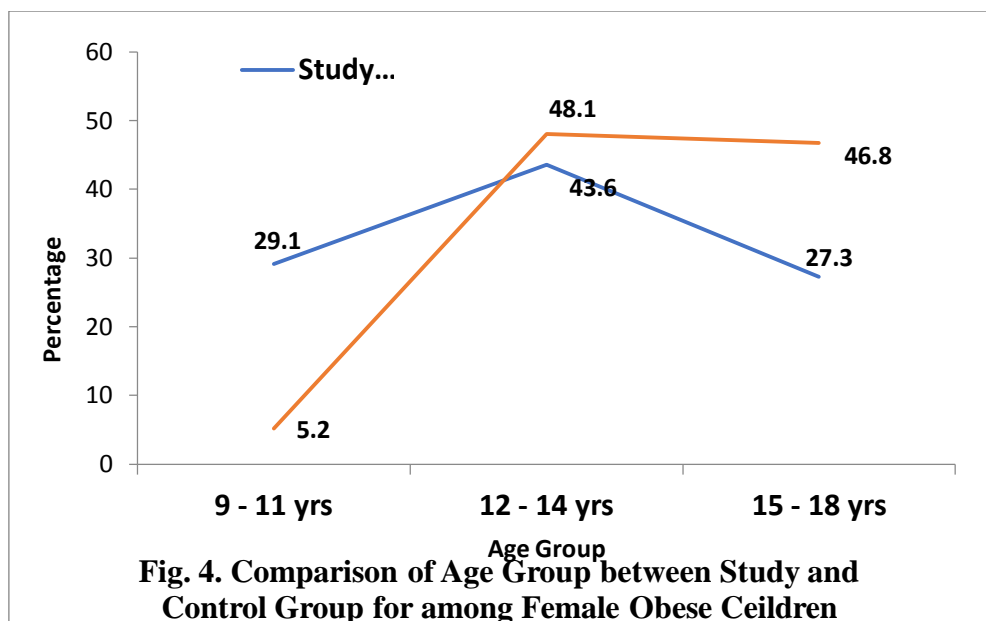


Table 2: Distribution of Clinical Variables among Obese Children in Study and Control Group (N=200)

Clinical Variables	Study Group		Control Group		Chi Square Value & P Value
	No.	%	No.	%	
1. Birth Weight					$\chi^2 = 3.242$,
a) Less than 2.5 kg	12	12.0	6	6.0	D.F. = 3,
b) 2.5 to 3.5 kg	69	69.0	79	79.0	P= 0.356
c) More than 3.5 kg	6	6.0	4	4.0	(N.S)
d) Don't know	13	13.0	11	11.0	
2. Gestational Age					$\chi^2 = 1.802$,
a) Full term	90	90.0	95	95.0	D.F. = 1,
b) Pre term	10	10.0	5	5.0	P= 0.179
					(N.S)
3. Duration of Breast Feeding					$\chi^2 = 5.360$,
a) Nil	8	8.0	2	2.0	D.F. = 3,
b) Birth – 6 months	60	60.0	67	67.0	P= 0.147
c) 7 months – 12months	16	16.0	20	20.0	(N.S)
	16	16.0	11	11.0	

d) More than 12 months					
4. Family History of Obesity					$\chi^2 = 5.294$,
a) One obese member	45	45.0	50.0		D.F. = 3,
b) Two obese members	27	27.0	18.0		P= 0.151
c) Three obese members	6	6.0	2.0		(N.S)
d) No Obese member	22	22.0	30.0		
5. Diet					$\chi^2 = 2.940$,
a) Vegetarian	21	21	12	12	D.F. = 1,
B) Mixed	79	79	88	88	P= 0.086
					(N.S)
6. How Going to School					$\chi^2 = 18.542$,
a) By walk	23	23.0	25	25.0	D.F. = 2,
b) By vehicle	50	50.0	70	70.0	P= 0.000 ***
c) By cycling	27	27.0	5	5.0	
7. Duration of watching TV					$\chi^2 = 10.784$,
a) 1 hr/day on week days	60	60	47	47	D.F. = 1,
b) \geq 2hrs/day on week days	40	40	53	53	P= 0.000 ***
c) 1- 3hrs/day on holidays	80	80	78	78	
d) \geq 3hrs/day on holidays	20	20	22	22	
8. Hours of Physical Play					$\chi^2 = 3.890$,
a) Less than half an hour	41	41.0	41	41.0	D.F. = 2,
b) Half to one hour	41	41.0	50	50.0	P= 0.143
c) More than one hour	18	18.0	9	9.0	(N.S)
9. Eating out (Fast food)					$\chi^2 = 1.570$,
a) Once a week	50	50	48	48	D.F. = 2,
b) 2-3 times a week	33	33	40	40	P= 0.455

c) Daily	17	17	12	12	(N.S)
10. Is there a Problem due to Obesity					$\chi^2 = 0.740$, D.F. = 1,
a) Yes	5	5.0	8	8.0	P= 0.389
b) No	95	95.0	92	92.0	(N.S)
11. Type of Problem					
a) Chest pain	0	0	0	0.0	$\chi^2 = 0.740$,
b) Leg pain	5	5	8	8.0	D.F. = 1,
c) Breathing difficulty	0	0	0	0.0	P= 0.389
d) Hypertension	0	0	0	0.0	(N.S)
e) No problems	95	95.0	92	92.0	
11. Exposure to obesity teaching					$\chi^2 = 1.293$,
a) Mass media	4	4.0	3	3.0	D.F. = 5,
b) Doctor	9	9.0	8	8.0	P= 0.936
c) Nurse	2	2.0	1	1.0	(N.S)
d) Dietician	2	2.0	1	1.0	
e) Doctor & Dietician	4	4.0	6	6.0	
f) No Exposure	79	79.0	81	81.0	

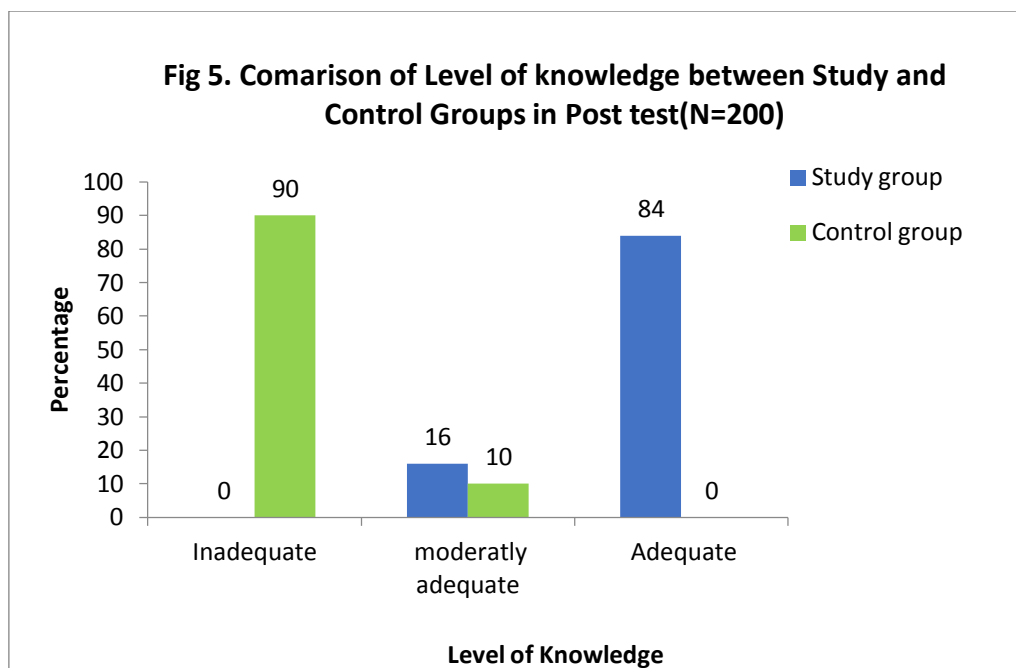
Table 2 illustrates the Distribution of Clinical Variables among Obese Children in Study and Control group. Mode of going to school by motorized vehicle has got high significance on childhood obesity ($P < 0.001$). Also, the duration of watching television has got an impact on childhood obesity at $P < 0.001$.

Table 3 Comparison of Knowledge on Childhood Obesity among Parents of Obese Children in Study and Control Group in posttest (N=200)

Knowledge Aspects	Study Group Level of knowledge (n=100)			Control Group Level of knowledge (n=100)		
	Inadequate	Moderately	Adequate	Inadequate	Moderately	Adequate

	(< 50%)		Adequate (50-75%)		(>75%)		(< 50%)		Adequate (50-75%)		(>75%)	
	No.	%	No.	%	No	%	No.	%	No.	%	No	%
In relation to childhood obesity	31	31.0	58	58.0	11	11.0	78	78.0	19	19.0	3	3.0
Pre disposition factor	13	13.0	85	85.0	2	2.0	95	95.0	5	5.0	0	0.0
Causes	0	0.0	2	2.0	98	98.0	82	82.0	18	18.0	0	0.0
Problem due to obesity	0	0.0	0	0.0	10	10.0	93	93.0	7	7.0	0	0.0
Complication	0	0.0	5	5.0	95	95.0	92	92.0	8	8.0	0	0.0
Importance of prevention	0	0.0	18	18.0	82	82.0	10	10.0	90	90.0	0	0.0
Dietary management	0	0.0	6	6.0	94	94.0	74	74.0	26	26.0	0	0.0
Exercise management	0	0.0	75	75.0	25	25.0	98	98.0	2	2.0	0	0.0
Importance of follow up	7	7.0	76	76.0	17	17.0	64	64.0	36	36.0	0	0.0
Overall knowledge	0	0.0	16	16.0	84	84.0	90	90.0	10	10.0	0	0.0

Table 3 reveals that in posttest, 84% of parents have adequate knowledge and 16% of them have moderately adequate knowledge in study group, this proves the effectiveness of IEC. And in control group 90% of parents have inadequate knowledge and 10% of parents have moderately adequate knowledge.



CONCLUSION

In this paper parents are the keys to develop a home environment that foster healthy eating and physical activity among children and adolescents. Parents have responsibility to shape their children's dietary practices, physical activity, sedentary behaviors and ultimately their weight status in many ways. So, parents' role at home in promoting healthful eating practices and levels of physical activity are so critical in preventing obesity. Parent's knowledge over nutrition, their influence on food selection, meal structure, and home eating patterns; their modeling of healthful eating practices; their levels of physical activity; and their modeling of sedentary habits including television viewing are all influential in their children's development of lifelong habits that contribute for normal weight to overweight and obesity.

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