

# A study To Evaluate The Effectiveness of Educational Intervention on Knowledge And Attitude Regarding Childhood Obesity Among Mothers of School Going Children In Selected Rural Areas at Tiruchirappalli

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**Abstract-** Pre experimental research design was conducted among mother of school going children in selected rural areas at Tiruchirappalli. It aims to assess knowledge and attitude on obesity among school going children before and after educational intervention and to evaluate the effectiveness of educational intervention on knowledge & attitude regarding childhood obesity among school going children. 60 samples were selected using purposive sampling technique. The data was collected using educational intervention. Data was used by using descriptive and inferential statistics. The mean score of pre-test level of stress is 12.53 and mean score of post-test level of stress is 18.55. The enhancement of knowledge in mean score and SD which the effectiveness of educational intervention. The analysis depicted that there is increase in the level of knowledge related childhood obesity which indicate the effectiveness of selected educational intervention.

**Keywords-** Evaluate, Effectiveness, Educational Intervention, Knowledge, Attitude, Childhood Obesity, Mothers, School going children

## I. INTRODUCTION

### “Prevention is better than cure”

In the 21st century, Childhood obesity is one of the major health issues among people. The childhood obesity is affecting many middle and low income countries, particularly in urban settings. The prevalence has increased at an alarming rate. Globally, an estimated 38.2 million children under the age of 5 years were overweight or obese in 2019. Previously higher income country had overweight and obesity, but nowadays obesity increased gradually in low and middle income countries also.

Obesity is defined as excess body fat. Obesity is calculated by body mass index (BMI), a common scientific way to screen for whether a person is underweight, normal weight, overweight or obese. The proportions of children in the general population who are overweight and obese have doubled over the past two decades in developed and developing countries including India and have a rising prevalence of diabetes. Obesity and overweight have become major problem among school going children and it is still increasing in both industrialized and developing countries.

In the global, China and India are first and second-highest number of overweight children respectively, nearly 14.4 million kids in the country have excess body weight. Health professionals have attributed the rise in obesity to unhealthy eating and low level of physical activities among the children. The prevalence rate of obesity in children is 15% and the children belong to upper-income families upward trend are highest number of obese children.

Overweight is the one of cause of type 2 diabetes, hypertension, osteoarthritis, various types of cancers in women like breast cancer and uterus cancer, menstrual disorder and infertility and many more diseases, according to experts.

Schools also have some sports equipment's, such as gyms, cycling equipment and outdoor playing fields, and physical education programs. Schools also have access to school nurses who can provide screening, counselling and continuum of care. Currently, more than half (59%) of all states fund school based or school-linked health clinics, which provide primary care and preventive services to students.

According to reports, 20% of the Indian school going children is overweight. It is estimated that the 15% of the student population is at the risk of being overweight.

Impact of obesity on health: Obesity also puts you at risks of serious health conditions, such as heart attack, high blood pressure, atherosclerosis, cancer, diabetes, metabolic syndrome, mobility impairment, osteoarthritis and stroke -and many others. Obesity causes up to 300,000 premature deaths each year in the United States alone. Some of the common mental ailments of obese people struggle with are low self-esteem, depression and anxiety.

Obesity can be reduced and prevented by increased consumption of fruit and vegetables, as well as legumes, whole grains and nuts, limit energy intake from total fats and limit the intake of glucose; and be physically active and accumulate at least 60 minutes of regular, moderate- to vigorous-intensity activity each day that is developmentally appropriate.

Hence the Researcher decided to create awareness among school going children regarding obesity because mothers school going children were unaware about risk of childhood obesity. Also obesity is one of the major threatening health problems by the year 2021. Therefore I felt the need to conduct the study.

#### OBJECTIVES:

- 1) To assess knowledge and attitude on childhood obesity among school going children
- 2) To evaluate the effectiveness of educational intervention on childhood obesity among school going children
- 3) To find out the association between post-test knowledge of school going children and selected demographic variables.
- 4) To find out the association between post-test attitude of school going children and selected demographic variables.
- 5) To determine the relationship between knowledge and attitude regarding obesity among school going children.

#### HYPOTHESIS:

H1- There is a significant difference between Pre and Post-test Knowledge and attitude on childhood obesity among school going children in Selected rural area

H2- There is a significant association between Post-test knowledge on childhood obesity among school going children and selected demographic variables.

H3 -There is a significant association between knowledge and attitude on childhood obesity among school going children and selected demographic variables.

H4-There is a significant association between knowledge and attitude on childhood obesity among school going children

#### ASSUMPTION:

- The mothers of school going children have inadequate Knowledge regarding child hood obesity.
- Educational intervention may help to gain knowledge regarding childhood obesity among school going children and may bring a change in their attitude.

## II. RESEARCH METHODOLOGY

Pre experimental one group pretest and posttest design was conducted among mother of school going children in selected rural areas at Tiruchirappalli. 60 samples were selected using purposive sampling technique. The data were collected after obtaining the institutional ethical clearance and formal administrative permission. Informed consent from the subjects was obtained and the confidentiality has been assured.

An Educational intervention was used to evaluate the level of knowledge of mothers of school going children. The questionnaire was translated in to the vernacular language: Tamil, the appropriateness of the translation was verified by back translation. The reliability of the questionnaire was established using test retest method ( $r = 0.84$ ). There were 30 multiple choice questions related to general information on stress, Consequences and its prevention. Each correct response had been given the score of one. In pre-test 62% of the mothers had poor knowledge, 27% of them had average knowledge and 11% of mothers had good knowledge where as in the post test about 77 % of the mothers had good knowledge 21% of the mothers had average knowledge and 2 % of them had poor knowledge.

Pre-test on assessment of knowledge were conducted by using the structured questionnaire. Time taken by the mothers to complete the knowledge questionnaire was approximately 30 minutes. After the pre-test, the mothers were divided in to six groups of having 10 subjects in each. Educational intervention about childhood obesity was administered for 30 minutes for each group. The post-test was conducted after fourteen days of intervention.

GROUPS	Pre test	Educational intervention	post-test.
Experimental group	O1	X	O2

- O1- Pre-test -Before using educational intervention
- X-Educational intervention on childhood obesity
- O2- Post-test- After attending the educational Intervention.

**III. RESULTS AND DISCUSSION**

Majority of the mothers (42%) were in the age group of 26 to 30 years and most of them(47%) had undergone secondary education. 47% of the mothers belonged to Hindu religion. Most of the mothers (62%) were belonged to nuclear family. Regarding residence, 37 % of them were from rural area and 63% of them from urban area. Majority of the mothers (63%) were having two children. 68% of the mothers had family history of obesity. Most of the mothers received information regarding childhood obesity through the electronic media.

**Table – 1 Distribution of demographic variables  
N= 60**

S.No	Demographic variables	Frequency (n)	Percentage %
1.	<b>Age in years</b>		
	<25years	10	16%
	26-30 years	25	42%
	31-35years	18	30%
	36-40 years	7	12%
3.	<b>Mother's education</b>		
	primary	7	12%
	Secondary	28	47%
	Higher secondary	13	21%
	Graduate	12	20%
4.	<b>Religion</b>		
	Hindu	28	47%
	Muslim	13	22%
	Christian	17	28%
	others	2	3%
5.	<b>Occupation of the mother</b>		
	Home maker	5	8%
	Coolie	2	3%
	Government	17	28%
	Private	24	40%
	Professional	12	20%
6.	<b>Type of family</b>		
	Nuclear	39	65%
	Joint	18	30%
	Extended	3	5%
7.	<b>Residence</b>		
	Urban	38	63%
	Rural	22	37%
8.	<b>No of children</b>		
	Two	38	63%
	Three	15	25%
	More than three	7	12%
9.	<b>Family history of obesity</b>		
	Yes	41	68%
	No	19	32%
10.	<b>Sources of information</b>		
	Printing media	16	8%
	Electronic media	20	33%
	Friends / Relatives	12	20%
	Health personnel	12	20%

The above table reveals that, Majority of the mothers (42%) were in the age group of 26 to 30 years and most of them (47%) had undergone r secondary education. 47% of the mothers belonged to Hindu religion. Most of the nursing students (62%) were belonged to nuclear family. Regarding residence, 37 % of them were from rural area and 63% of them from urban area. Majority of the mothers (63%) were having two children. 68% of the mothers had family history of obesity. Most of the mother received information regarding childhood obesity through the electronic media

**Table: 2. Distribution of mothers of school going children according to the level of knowledge related sexual abuse before and after educational intervention.**

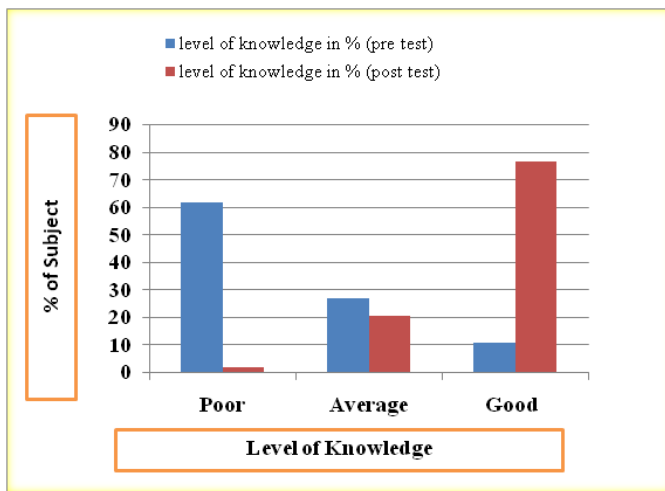
LEVELS OF KNOWLEDGE	PRE TEST		POST TEST	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Poor	37	62%	1	2%
Average	16	27%	13	21%
Good	7	11%	46	77%
Total	60	100	600	100

The above table revealed that in pre-test 62% of the mothers had poor knowledge, 27%of them had average knowledge and 11% of mothers had good knowledge where as in the post test about 77 % of the mothers had good knowledge, 21% of the mothers had average knowledge and 2 % of them had poor knowledge.

**Table –2.Effectiveness of Educational intervention related childhood obesity among mothers of school going children**

S.N	Variables	Total	Pre test		Post test		Mean	Paired t test
			Mean	SD	Mean	SD		
1.	Knowledge	30	12.53	3.02	18.55	2.71	6.02	20.07

Further, the mean post-test level of knowledge scores among mothers of school going children(18.55+2.71 was significantly higher ( P<0.05) than mean pre-test knowledge score(12.53+3.02). The statistically significant association (P<0.05) was found between knowledge and attitude of mothers among school going children.



**Figure 3:Level of knowledge regarding childhood obesity among mothers of school going children during pre and post test**

The above figure revealed that Majority of the mothers (62%) had poor knowledge, 27% of them had average knowledge and 11% of mothers had good knowledge in the pre-test where as in the post test

About 77 % of the mothers had good knowledge 21% of the mothers had average knowledge and 2 % of them had poor knowledge.

The present study revealed that educational intervention regarding childhood obesity is significantly effective ( $P < 0.05$ ) in improving the knowledge (pre-test mean  $(12.53 \pm 3.02)$  Vs post-test mean  $(18.55 \pm 2.71)$ ) of mothers of school going children .They found a significant ( $P < 0.05$ ) improvement in the knowledge of the subjects regarding childhood obesity after educational intervention.

The findings of this study have significant implications for mothers of school going children. The mothers involved in child care should actively participate in planning and implementation of educational intervention to prevent .Coping strategies can be used as a tool to teach the nursing students on various topics related to the stress.

#### IV. CONCLUSION

This study revealed that nursing intervention regarding childhood obesity among mothers of school going children were very effective. This confirms that educational intervention as a tool could be utilized effectively to create awareness on various topics.

The study concluded that the mothers of school going children had in adequate knowledge at different levels. The difference in the level of knowledge by the paired 't' value 20.07 which was found significant at  $p < 0.05$  with the table value of 2.02 shows the effectiveness educational intervention on childhood obesity among mothers of school going children.

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Conflict of Interest - Nil

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