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A STUDY TO ASSESS THE PREVALENCE OF MALNUTRITION AND ITS ASSOCIATED FACTORS AMONG TODDLERS IN SELECTED COMMUNITY AREA IN NEW DELHI

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ABSTRACT

A descriptive study was conducted to assess the prevalence of malnutrition and its associated factors among toddlers in rural area Najafgarh .The objectives of the study were to find out:
1.To assess the prevalence of malnutrition among toddlers in selected rural community.
2.To establish association of prevalence of malnutrition among toddlers and selected variables like water supply, type of family, family size etc.
3.To raise awareness in community about prevention and management of malnutrition among toddlers through skit.
It was quantitative study with non-experimental research design. The population of the study was the toddlers of Najafgarh. Convenient sampling was adopted for selecting 70 samples for the study. A structured interview schedule was used to collect the data. Analysis of data was done by frequency and percentage distribution and chi square test. BMI of the children was calculated .Out of 70 toddlers 57% were malnourished 40% were normal and 3% were Over nourished. There was no significant relationship between malnutrition and the selected factors .Health education program through role play was conducted to created awareness about Malnutrition among the people.

Key words: Malnutrition, Toddlers, BMI, Community

INTRODUCTION

Malnutrition is a condition that results from eating a diet in which nutrients are either not enough or ate too much such that the diet causes health problems. It includes calories, protein, carbohydrates, vitamins or minerals. Presently nearly 67% of country's population suffers from malnutrition [1].

Malnutrition has become an urgent global health issue, with under nutrition killing or disabling millions of children group (toddlers) each year [2]. Malnutrition also prevents million more from reaching their full intellectual and productive potential. In children's (toddlers), severe malnutrition accounts for approximately 1 million death annually, with approximately 20 million children under the age of three suffering from severe malnutrition. In India, about 2/3 portion of under 3 children of our country is malnourished among them 5.8% is severely malnourished whole rest fall in the group of mild or moderate

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malnutrition it can be said that malnutrition of the most wide spread conditions affecting child health [3,4].

Every child develops and grows at her/his own place and in his/her own time through reaching the various developmental milestones. Children's growth and development do not occur in a direct fashion, but are influenced by each child's environment, nutrition and parental care. These factors play a critical role in a child reaching his/her full potential. Recent evidence indicates the good nutrition, particularly in early childhood is critical to be positive health outcomes of children. In fact, children's nutritional status can be viewed as a good proxy indicator of community's state of health.

The nutritional status of a child is usually described in terms of anthropometry i.e body measurement, such as weight in relation to age or height, which is reflective of degree of underweight or wasting of that child [5].

NEED OF THE STUDY

Globally, more than 1/3rd of child death are attributable to under nutrition and much emphasis has been given to provide good nutrition to growing population specially in the for many years of life 80% of the world undernourished children live in India at present 48% children less than5 years age are chronically malnourished and 43%are underweight. Because of its extensive prevalence in India, mild to moderate malnutrition contributes to more death.

Growth assessment best defines the health and nutrition status of children because disturbance in health and nutrition effect the growth and hence provide an indirect measurement of the quality of life of an entire population [6].

Renuka (2008) evaluated the nutritional status of the children of Jenu kurba tribe of Mysore district in the month of July- august 2011. Certain parameter like clinical examination anthropometric immunization status literacy status of parents and family type were taken for a total of 220 children aged 1-5 years by using quota sampling. The results of the study reveal prevalence of underweight stunting and wasting was 38%, 36.8 % and 18.6%respectively which was statically significant with respect to age [7].

A cross sectional descriptive study on prevalence of malnutrition and associated factor of malnutrition in West Bengal (in 2014-2015) by Amitava pal (2008) shows that, Total number of sample are 839 subjects out of which 408 were boys and 431 were girls. Data is collected by using anthropometric means., Hb estimation, dietary survey and morbidity pattern .The result of study revealed that the girls are malnourished than the boys and anemic due to poor environmental factor and inadequate health care facility for girls [8].

Due to poor socio – economic status children do not get proper food and nutrition, due to poor housing facilities and education malnutrition occurs. Thus it becomes an important aspect to have a deep study about the malnutrition its cause side effects impact on whole population spreading of communicable diseases and mortality and morbidity rates. It is the correct measure to know the developmental statistics of India [2].

Nowadays, malnutrition is a booming problem among children in our country and the study has been planned to assess the prevalence in the selected rural area.

MATERIALS AND METHODS

A descriptive study was conducted in October 2017using non experimental research design to assess the prevalence of malnutrition among toddlers in the selected rural area called Jaatav Mohala in Najafgarh, New Delhi. 70 toddlers were selected using convenient sampling .The tool has two section section one is a structured interview schedule to collect the background data and section2 is anthropometric measurements and BMI calculation for all the toddlers participated in the study. Descriptive and inferential statistics method was used to analyze the data.

RESULTS

The analyses reveals that most of the children (42; 60%) were in age group of 1 to 2 years and. Most of the children (39; 55.7%) were male and (31; 44.2%) are female. Regarding birth order mostly (44; 58.5%) are in first order. In marital status all women are married 100%. Regarding mother's education majority is studied up to class 12 is (29; 41.4%).Regarding maternal occupation most of the mothers are unemployed (60; 85.7%) and father' education some are studied up to class 12 (27; 38%) and some are upto 5th standard (26;37.15). Regarding father's occupation half od them are working in govt/private sector (35; 50%).Regarding family size most of them are belongs to 5 to 8 is (35; 50%).most of the toddlers are belongs to nuclear family (39; 55.7%).Regarding the source of drinking water they use govt. Supply/tap at home is (50; 71.42%).Among 70 samples (68; 97.14%) got toilet at home. Regarding the meal pattern3 times is (34; 48.57%).Regarding the

immunization status children fully immunized up to date are (68; 97.14%).Many of the children are breastfed up to 1 year of age (30; 42.85%).Regarding the place of delivery most of them are delivered (62; 88.57%) at hospital/health center .Out of 70 the mothers who did the regular antenatal checkups is (64; 91.42%). Regarding Family planning use (52; 74.28%) are not using any family planning method.

The calculated chisquare value stated that there is no significant relation between malnutrition[BMI] and the selected factors like sex of child, mother;s education, family size,type of family, source of drinking water,type of latrine, meal pattern, duration of breastfeeding.

Table 1: Frequency and Distribution Percentage of Demographic Variables

S.No.	Sample characteristics	Frequency	Percentage
1	**Age of child**		
	1-2 years	42	60%
	2-3 years	28	40%
2	**Sex of child**		
	Male	39	55.7%
	Female	31	44.2%
3	**Birth order**		
	1	41	58.5%
	2	17	24.2%
	3	11	15.7%
	4 or more	01	1.42%
4	**Maternal marital status**		
	Married	70	100%
	Separated	00	00
	Divorced	00	00
	Widow	00	00
5	**Mothers education**		
	Illiterate	10	14.2%
	Up to class 5	25	35.7%
	Up to class 12	29	41.4%
	Graduate and above	06	8.5%
6	**Maternal occupation**		
	Unemployed	60	85.7%
	Business	03	4.2%
	Job(govt. /private)	07	10%
	Ex-service man/retired	00	00
7	**Father's education**		
	illiterate	06	8.4%
	Up to class 5	26	37.15%
	Up to class 12	27	38%
	Graduate and above	11	15.4%
8	**Father's occupation**		
	Unemployed	04	5.7%
	Business	31	44.2%

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	Job(govt. /private)	35	50%
	Ex-service man/retired	00	00
9	**Family size**		
	<_4	26	37.1%
	5-8	35	50%
	9-12	09	12.8%
	12 and above	00	00
10	**Type of family**		
	Nuclear	39	55.7%
	Joint	31	44.2%
	Extended	00	00
11	**Source of drinking water**		
	Public pipe/tap	20	28.58%
	Hand pump	00	00
	Well	00	00
	Govt supply/tap at home	50	71.42%
12	**Type of latrine**		
	Open defecation	00	00
	Public toilet	02	2.85%
	Toilet at home	68	97.14%
13	**Number of meals**		
	2	13	18.57%
	3	34	48.57%
	4 OR MORE	23	32.85%
14	**Immunization status**		
	Not at all immunized	00	00
	Incompletely immunized	02	02.85%
	Full immunized to date	68	97.14%
15	**Duration of breastfeeding**		
	Never	2	2.85%
	Upto six month	12	17.14%
	Upto 1 year	30	42.85%
	Above 1 year	26	37.14%
16	**Place of delivery**		
	Hospital/ health centre	62	88.57%
	Home	08	11.4%
17	**History of disease in child in last one month**		
	Yes	07	10%
	No	63	90%
18	**Antenatal checkups**		
	Yes	64	91.42%
	No	06	8.57%
19	**Family planning method**		

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Yes	18	25.7%
No	52	74.28%

Table 2: Frequency and Distribution Percentage of BMI of Toddlers

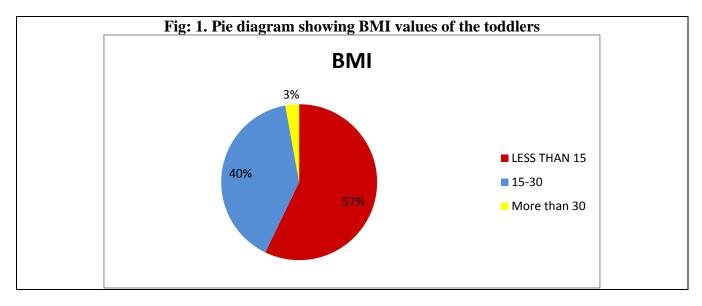| S.No.	BMI of child	Frequency	Percentage
1.	Less than 15 (Malnourished)	40	57.14%
2.	15-30 (Normal)	28	40%
3.	More than 30 (Over nourished)	02	2.85

Fig: 1. Pie diagram showing BMI values of the toddlers

Table 3: Chi square values to find the association between Malnutrition (BMI) and the selected demographic factors.

Gender of the child	BMI		x^2 Cal	df	Table value
	Above median	Below median	3.26	01	3.84
Male	13	26			
Female	17	14			
Mother's education	**BMI**		x^2 Cal	df	Table value
	Above median	Below median	1.25	03	7.81
Illiterate	5	5			
Upto class 5	9	16			
Upto class 12	14	15			
Graduate and above	2	4			

Family size	BMI		x^2 Cal	df	Table value
	13			03	7.81
	Above median	Below median			
Less than 4	10	17	0.89		

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5-8	16	18			
9-12	03	06			
12 and above	00	00			

Type of family	BMI		x^2 Cal	df	Table value
	Above median	Below median			
Nuclear	16	23	0.37	02	5.9
Joint	15	16			
Extended	00	00			
Drinking water	BMI		x^2 Cal	df	Table value
	Above median	Below median			
Public pipe/tap	07	12			
Hand pump	00	00			
Wells	00	00	0.38	03	7.81
Govt.Supply/tap	23	28			
No. of meals	BMI		x^2 Cal	df	Table value
	Above median	Below median			
02	08	05	5.17	02	
03	10	24			5.9
04 or more	12	11			
Breast feeding	BMI		x^2 Cal	df	Table value
	Above median	Below median			
Never	01	01			
Upto 6 month	05	06		03	7.81
Upto 1 year	08	23	7.45		
Above 1 year	16	10			

DISCUSSION AND CONCLUSION

Children are future of the country. Healthy children are important for healthy nation. India remains one of the highest-ranking countries in the world in terms of the number of children suffering from malnutrition.it is more important to create awareness among the community about malnutrition. The community people should be taught about the importance of balanced diet and breastfeeding and prevention of malnutrition in under five children. The awareness should be created to the community about mid-day meal program and other nutrition related programs.

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