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RESEARCH ARTICLE

KNOWLEDGE OF PARENTS ABOUT THE NUTRITIONAL STATUS OF THEIR CHILDREN UNDER 6 ATTENDING THE URBAN SLUMS ANGANWADI CENTRES OF AMBALA CITY, NORTH INDIA

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ABSTRACT

Background: Preschool children undergo rapid growth & development and as such their nutritional status is considered to be one of the most important areas of concern. Nutrition plays a key role in physical and mental development of children as well as prevention of disease or illness. In modern life, excessive use of junk foods in daily life, especially among children leads to various illnesses and poor health status. **Objectives:** 1. To assess the level of knowledge of parents regarding nutrition of under 6 years children. 2. To determine the practices of parents regarding food habits of children. **Methodology:** A descriptive cross-sectional study was conducted in20 Anganwadi Centres (AWCs) of urban slums of Jandli block of Ambala City, Haryana, in January-February 2018. Convenient sampling technique was used and 198 parents/guardians of children of age under six (excluding parents of below 8 months children), who accompanied the children to the AWCs were involved in face to face interview using a structured questionnaire. **Results**: Study shows that most of the children were in the age group of 28-37 months. The sex ratio of the children was almost equal. Most of the mothers were home-makers. The monthly income of the families ranged between INR.10,110 to INR.40,430. More than half of the parents (52.5%) had their family income ranged between INR20,210 to 40,429. Study shows that 45.7% families were vegetarian and 31.8% children had 2-3 meals a day. Almost 40% children liked fruits and 33.7% were fond of spicy things. Furthermore, study showed that 67.5% children were consuming milk and out of them 36% children were in regular habit of milk consumption. The study also showed that the association between the education of mothers with nutrition and malnutrition was highly significant. **Conclusion:** Based on the findings it could be concluded that majority of the respondents were in the age group of 2-4 years, with equal number of male and female children. To prevent or reduce the problem of malnutrition, various nutrition intervention programmes have been introduced, from time to time in India. Changes need to be made in the understanding and utilization of the services. More nutritious food material should be provided in AWCs.

INTRODUCTION

Proper nutrition is the basic need of every human being. Nutrition plays a key role in physical, social, mental and emotional development of the children. Enough emphasis has been laid down to provide good nutrition to the growing populations, especially in the early years of life. Good nutrition means maintaining a nutritional status that enables us to grow well and enjoy good health. Nutrition may be defined as the science of food and its relationship with health (Park, 2017) Today, the need for upgrading health and nutritional status of children is an essential prerequisite for the development of the society and the nation. The nutritional status and educational attainments of pre-school children determine the quality status of our nation. Therefore it should be the prime interest to take care of their health and the nutritional status. [(1)] Nutrition status means a state of health of an individual and as it is affected by the intake and utilization of nutrients. Excessive use of junk foods in routine leads to decrease of quality of nutrition and poor health status. Measurements like height and weight reflect the nutritional status. The children population in India is 39% which is a vital segment of the entire population. The pre-school age represents marked nutritional and emotional change for acquiring communicable disease and involvement in the accidents. Food habits include information regarding the child being vegetarian or non-vegetarian and number of times the child takes meals (Sood, 2017; Khokhar, 2000). Malnutrition in children is a silent emergency leading to almost seven million children deaths (approximately 55% of all children deaths) annually. [(4)]Globally, 26% of children are moderately to severely underweight, 10% moderately to severely wasted, and 31% are moderately to severely stunted.

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In India, 48% of children under 5 years are stunted and 43% are underweight and 20% of children under 5 years in the country are wasted (International Institute for Population Sciences, 2007) Failing to deal effectively with the malnutrition problem in India has severe consequences for children's development (International Institute for Population Sciences, 2007**).** Food habits also play important role in nutritional status. If nutrition is good, it helps to improve child's life, to promote healthy growth and development and also promote better mental and economic development. The nutritional status of children can be evaluated by their growth. Children with poor nutrition as one form of malnutrition are being recognized as a vulnerable category for focused action (Silva, 2015).

Good nutrition also reduces morbidity and mortality rate, and the risk of various chronic diseases such as cardiovascular disease, diabetes, kwashiorkor, marasmus and hypertension (Dongre, 2008) Although food is essential, it has often been lacking, both in quality and the quantity resulting in malnutrition. It generally affects everybody in a community, but infants and children are the most vulnerable because of their high nutritional needs for growth and the development. Child malnutrition is the biggest contributor to under-five mortality due to the greater susceptibility to infections and slow recovery from the illness.

The child malnutrition in India is mostly the result of the high levels of exposure to infections and the inappropriate infant and young child feeding and caring practices. [8]The National Family Health Survey-3 findings showed that 45% of less than 3 years old children were malnourished. India would be raising a generation which is debilitated and unable to contribute effectively to the productivity of the country. To tackle the problem of malnutrition and the ill health of mothers and children, the Government of India has launched the Integrated Child Development Services (ICDS) program; it is the world's largest early child development program[9].

METHODOLOGY

A descriptive cross-sectional study was conducted in the urban slum Jandli block, Ambala city. The study period was January-February 2018.The sample was selected as per convenience in the urban slum Anganwadi centres of Jandli block. In total, 20 Anganwadi centres were covered under this survey.

Data collection tools and technique: A self-structured questionnaire was developed by taking references from various research papers relevant to the study and the same was validated by the experts of the University. It had 2 sections, A and B. Section A consists of Socio-Demographic characteristics while Section B included questions on knowledge, nutrition, malnutrition and practices regarding the food habits.

Respondents were the parents or guardians of the children and the technique used for the data collection was the interpersonal interview. Furthermore, anthropometric measures as height, weight and BMI were recorded. Data entry and analysis were done in statistical package for social sciences (SPSS version 23). Descriptive statistics, such as, frequency distribution and cross tabulation between dependent and independent variables were applied to describe and summarize the results.

RESULTS

Based on the results, it was concluded that, most of the children were in the age group 28-37 months with nearly equal number of male and female children. Majority of the fathers and mothers were matric pass. Study also shows that 52.5% participants had monthly income between INR. 20,210-40,429, followed by (23.7%) income range of INR15,160-20,209. Majority of the mothers were home-makers and fathers had services in private sector. Using $\chi 2$ test the association between education of mothers and the knowledge regarding nutrition and malnutrition comes out to be highly significant. The above table shows that, out of all parents, 79.8% and 73.7% had heard about nutrition and malnutrition respectively. Also, 71.7% of the parents scored 7 points which is a good score. The Likert scale was used for calculating the score. The table above shows that, 74.2% of the parents had a good level of knowledge about nutrition and malnutrition.

Practice: Study shows that 45.7% families were vegetarian, 31.8% children used to take their meal 2-3 times a day. About 40% children liked fruits and 33.7% were fond of spicy things. About half of the children used to take 1-2 glass of water a day, majority of the children liked fast foods and subsequently, its consumption was also found to be high. About 44.5% of them used to take fast food at least once a month. 67.5% of the children were in the habit of consuming milk daily and out of them 36.0% children were regularly drinking milk. Study also found that, 130 children (65.7%) were taking regular supplementary food. There was significant association between occupations of mothers with supplementary foods being given to the children.

DISCUSSION

The present study was conducted to assess the knowledge of parents regarding nutritional status of their children under 6 year of age attending the AWC inurban slums Jandli block, Ambala city. A self-structured and validated tool was used to collect the data from 198 participants. It was found that children in majorities were brought to the AWCs. Most of the parents were educated and had fair knowledge about nutrition and malnutrition. This shows that higher the education, more the knowledge about nutrition. In the present study, it was found that the overall heights and weights of the children with respect to their age were normal. Here, it was found that there was no significant association between the income of the parents and the consumption of supplementary food and fast food. It was also found that most of the children consumed fast food either monthly or weekly and most children did not drink milk regularly. According to Nidhivaid and Sumativaid (2005)[11], it was found that children who attended AWCs had good health appearance as compared to their counterparts, which is in consonance with the present study. According to National Family Health Survey-3 in (2005-06) (National Family Health Survey, 2005), 62.7% children, under the age of 5 years were under weight. In another study, by National Institute of Nutrition (ICMR Hyderabad) (National Institute of Nutrition, 2011), conducted during 2011 in Madhya Pradesh, the prevalence of under nutrition was found to be as high as 57%.Present study shows that the under nutrition prevalence among male and female children was more or less the same.

Table 1. Socio-demographic characteristics of children (n=198)

Variables		Frequency	Percentage
Age (months)	8-17	43	21.7%
	18-27	49	24.7%
	28-37	57	28.8%
	38-47	22	11.1%
	48-57	20	10.1%
	>58	7	3.5%
Gender	Male	100	50.5%
	Female	98	49.5%
Education of Father	Illiterate	6	3.0%
	Up to class 5	31	15.7%
	Up to class 10	87	43.9%
	Graduation	65	32.8%
	PG & Above	9	4.5%
Education of Mother	Illiterate	24	12.1%
	Up to class 5	48	24.2%
	Up to class 10	88	44.4%
	Graduation	36	18.2%
	PG & Above	2	1.0%
Occupation of Mother	Housewife	71	35.9%
	Government	7	3.5%
	Private	42	21.2%
	Animal husbandry	24	12.1%
	Self-business	53	26.8%
	Agriculture	1	.5%
Occupation of Father	Government	24	12.1%
	Private	65	32.8%
	Animal husbandry	9	4.5%
	Self-business	37	18.7%
	Daily waged	46	23.2%
	Agriculture	17	8.6%
Income of Parents(Rs:)	>40,430	41	20.7%
	20210 – 40429	104	52.5%
	15160 – 20209	47	23.7%
	10110 – 15159	6	3.0%

Table 2. Knowledge about Nutrition and malnutrition

Variable		Frequency	Percentage
Knowledge about Nutrition	Heard about	158	79.8%
	Good mental health	9	4.5%
	Good physical health	16	8.1%
	Activeness	21	10.6%
	All above	162	81.8%
Knowledge about malnutrition	Heard about	146	73.7%
	Weakness	165	83.3%
	Less physical activities	155	78.3%
	Tiredness	165	83.3%
Knowledge score	2	27	13.6%
	3	15	7.6%
	4	9	4.5%
	5	5	2.5%
	7	142	71.7%

Table 3. Knowledge Level

Variable		Frequency	Percentage
Knowledge level	Good	147	74.2%
	Poor	51	25.8%

Adequate food and proper feeding practices are essential for the normal growth of the young children. Studies conducted by Alhaji et al. (2002) show that 150 million children (26.6%) were underweight, while 182 million children (32.5%) were stunted all worldwide and in India alone, more than half of the population is undernourished (Alhaji, 2002) Vanita G Pinto Silva, (2015) (Silva, 2015) conducted a study among 782 children aged 6 to72 months in 16 AWCs. 64% of the study population comprised of children aged 6-36 months, and 36% were between the ages of 37 to 72 months with almost equal distribution of male and female child.

It was found that the overall prevalence of underweight, wasting, and stunting in the study population was 33.4%, 24%, and 31.5%, respectively. Severe malnutrition (below -3 SD) was found in the study population, with 9.2% of children being underweight, 10.4% with severe wasting and 8.7% of children being severely stunted. Several studies in various states of India have reported different rates of malnutrition which in turn, depends on various developmental conditions of that region. Garget al. (1997)[16] in Ghaziabad, Bhandari et al. (1993) in Rajasthan, found that prevalence of malnutrition

Table 4. Practice regarding Food habits

Variable		Frequency	Percentage
Type of diet	Vegetarian	90	45.7%
	Non-vegetarian	23	11.7%
	Egg-tarian	28	14.2%
	Mixed	56	28.4%
Time of diet	2_3times/day	63	31.8%
	3-4 times/day	60	30.3%
	4-5times/day	40	20.2%
	more than 5 times	35	17.7%
Things liked to eat	Fruits	74	39.2%
	Vegetables	43	23.0%
	Sweets	59	31.6%
	Spicy	63	33.7%
Water drinking	1-2 glasses/day	88	50.3%
	2-3 glasses/day	42	24.0%
	3-4 glasses/day	28	16.0%
	4-5 glasses/day	17	9.7%
Fast food	Daily	22	12.6%
	2-3day/week	21	12.1%
	Weekly	52	29.9%
	Monthly	79	45.4%
Milk intake regularly	Yes	133	67.5%
	No	64	32.5%
Milk time intake	Daily	62	36.0%
	Sometime	53	30.8%
	Morning	32	18.6%
	Evening	25	14.5%
Kind of diet	Solid	30	15.2%
	Liquid	60	30.3%
	Mixed	49	24.7%
	Any type	59	29.8%
Supplementary food	Yes	130	65.7%
	No	68	34.3%
Suggestions of parents	Fruits	94	51.1%
	Milk	68	37.2%
	Vegetables	47	26.0%
	Others	57	31.0%

Table 5. Associations between Mothers' Educations with Knowledge of Nutrition

Know-ledge of Nutri-tion ⇩	Mothers' education with nutrition knowledge					$\chi 2$	Df	p-value
	Illiterate	Up to 5th	Up to 10th	Graduate	Above			
No	20	19	1	0	0	99.983	4	0.001**
Yes	4	29	87	36	2			

** The association between education of mother with the knowledge regarding nutrition was highly significant.

Table-6:Association between Mother's Educations with knowledge of Malnutrition

Know-ledge of Malnutri-tion ⇩	Mother's education with malnutrition knowledge (Nos. ⇨)					$\chi 2$	df	p-value
	Illiterate	Up to 5th	Up to 10th	Gradu-ate	Abo-ve			
No	21	27	4	0	0	103.73	4	0.001**
Yes	3	21	84	36	2			

** The association between education of mother with the knowledge regarding malnutrition was highly significant

Table 7. Association between Age of child and intake of milk regularly

Association ⇩	Association of milkintake with age (in months⇨)						$\chi 2$	df	p-value
	8-17	18-27	28-37	38-47	48-57	>58			
Yes	40	39	31	13	8	2	32.244	5	.001**
No	3	10	25	9	12	5			

Table-8. Association between mother's occupations and supplementary food

Association ⇩	Association between mother's occupations with supplementary food (Nos. ⇨)						$\chi 2$	df	p-value
	Housewife	Governmen t	Private	Animal husbandry	Self business	Agricultu re	14.04	5	0.015*
Yes	38	6	35	13	37	1			
No	33	1	7	11	16	0			

among children below the age of five years was higher in spite of the fact that these populations were being served by ICDS. This study shows that malnutrition rate was high in preschool children under five year of age even served by the ICDS (Silva, 2015).

Conclusion

It could be concluded that majority of the respondents were in the Age group 2-4 years, with almost equal proportion of male and female children. To prevent or reduce the problem of malnutrition, various intervention programmes have been introduced, from time to time in India. Changes need to be made in the understanding and the utilization of the services. Appropriate dietary modifications have to be done in AWC's to ensure the increase in the calorie and protein intake. The present study shows that there are still many children who are undernourished, so there is a dire need to use WHO standards at the grass route levels to accurately identify the burden of the under-nutrition.

Recommendation:

Following are the recommendations from the present study:

- Even though all parents had knowledge about the ill effects of junk food, but they still allow their children to consume it daily. So, it needs to be intervened for effective behavior change using various available health promotion strategies.
- Milk must be made compulsory for every child for their proper growth and development, so it must be provided by government in AWC so that every child consumes it regularly.
- Anganwadi supplementary food was good W.R.T. Graded Exercise Testing (Gxt), taste and appearance as well as hygienic but instead of only food the children should be given nutritious food materials and should be taught to avoid oily meals.
- Every parent should encourage their children to go to Anganwadi until & unless they attain the age to attend the school. Motivational actions are required by ASHAs and AWWs.

Limitation

One of the limitations was that only AWCs children were enrolled for the study. No, objective measure was taken to assess the nutritional status of the children to validate the findings from the personal interviews.

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