International Journal of Applied Research

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Assessment of nutritional status among pre-school children with a view to develop an informational booklet

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Abstract
A descriptive study conducted to assess the nutritional status among preschool children & determine the level of association of nutritional status among preschool children with selected sample characteristics in Small Wonder Pre-School, Nilokheri, District Karnal, Haryana. Descriptive cross sectional (non experimental) research design was used and 50 preschool children were selected by purposive sampling technique. Nutritional status of children was categorized after taking their anthropometric measurement (weight, height, mid arm circumference & body mass index) and the level of nutritional status was assessed by using World Health Organization (WHO) growth charts for under five children i.e. Growth Chart for Body Mass Index (BMI). The obtained t-test value of sample characteristics i.e. age, gender, religion, area of residency and education was 0.468, 0.448, 0.089, 0.507 and 0.59 respectively. The results showed that 86% children were well nourished, 8% were undernourished and remaining 6% were over nourished.

Keywords: Assess, nutritional status, pre-school children, information booklet

1. Introduction
Nutrition is a core pillar of human development and concrete large scale programming not only can reduce the burden of under nutrition and deprivation but also advances the progress of nations. The World Health Organization estimates that by the year 2015, the prevalence of malnutrition will be 17.6% globally, with 113.4 million children younger than 5 years affected as measured by low weight for age. India, Bangladesh and Pakistan alone account for half the world's total underweight children. These three countries are home to just 29% of the developing world's under-five population. In India the percentage of children affected with malnutrition in various states were Madhya Pradesh (55%), Orissa (54%), Utter Pradesh (52%) and Rajasthan (51%). Global Hunger Index (GHI); 2015, Report ranked India 20th amongst leading countries with a serious hunger situation. Amongst South Asian nations, it ranks third behind only Afghanistan and Pakistan with a GHI score of 29.0 ("serious situation") at or below the poverty line. United Nations Children's Emergency Fund (UNICEF); 2015, nearly half of all deaths in children under 5 are attributable to undernutrition. This translates into the unnecessary loss of about 3 million young lives a year.

2. Material and Methods
Quantitative research approach with descriptive cross sectional research design was used and 50 preschool children were selected by non – probability purposive sampling techniques from Small Wonder Preschool. The content of tools was validated by obtaining valuable opinions and suggestions from experts. The reliability of tool was obtained by Inter Rator technique i.e. 0.92. Tool has four parts that included Sample characteristics, anthropometric measurement (weight, height, mid arm circumference and body mass index) and World Health Organization growth charts (BMI- Body Mass Index for boys and girls). Weighing Machine was used to measure weight and inch- tape was used to measure both height & mid arm circumference. BMI was calculated by using formula (weight in kg) / (height in meters) [2]. Criterion measure was used in the study as for under-nourished (< 3 percentile), normal (3-97 percentile) & over-nourished (> 97 percentile).

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3. Data collection procedure
Data was collected using sample characteristics Performa, anthropometric measurements i.e. height, weight, mid arm circumference to assess the nutritional status of Pre-school Children. After collecting this data, Body mass index was calculated to assess the level of nutritional status of preschool children. After that with the help of WHO growth chart for BMI (girls and boys) was used to categorized the nutritional status of 50 preschool children.

4. Result and Discussion
The result of current study indicated that the mean of nutritional status was 55.84, 107.8, 17.13, 16.12 & 14.78 for age, height, weight, mid arm circumference & body mass index respectively. These finding showed that according to WHO Growth Chart for BMI 86% of preschool children were normal, 8% of them were undernourished and only 6% were over nourished. This finding is consistent with the findings of the study conducted by Caroline Priya K., Seenivasan P, Praveen H., Amala Grace M., Annapoorani V., Shruthi Devi R.S. (2014) in which they found that out of 300, 67.33% of children were underweight, of which 29.67% were from rural areas; 6% were found to be overweight or obese, of which 4.67% were from urban areas.

5. Table and Figures
Majority of preschool children were of age group 51-60 months 43 (86%) and majority of them were from Hindu religion 46 (96%). Majority of them were living in urban area 45 (90%). Regarding the level of BMI on nutritional status among pre-school children, the majority had normal BMI 43 (86%), 8% of them were undernourished and only 6% were over nourished. There was no significant association between the assessment of nutritional status among pre-school children with their selected sample characteristics i.e. age, gender, religion, area of residency and education. Mean, median and standard deviation of the BMI were: 14.78, 14.41 and 1.412 respectively.

Table 1: Frequency and Percentage Distribution of BMI Category among Pre-School Children, N=50

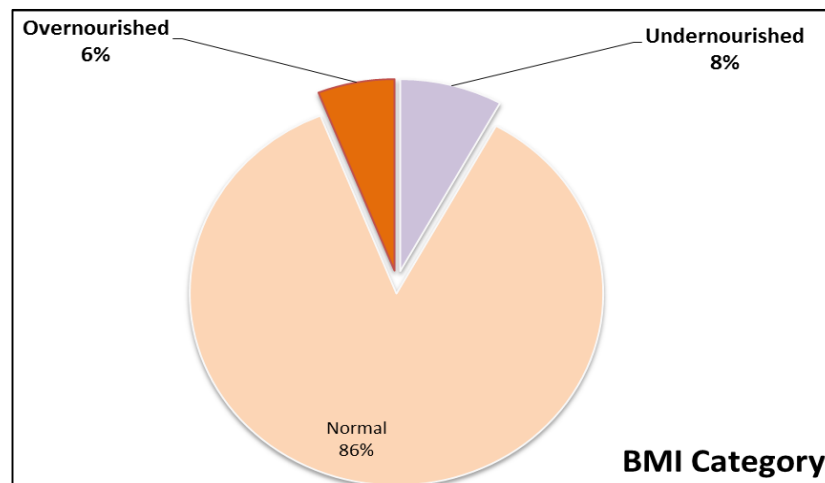| Variable	Options	Percentage	Frequency
BMI Category	Undernourished	08	04
	Normal	86	43
	Over nourished	06	03

Table 2: Area wise Mean, Standard deviation (SD), Median, Range and P value of nutritional status of preschool children, N =50

S. No.	Area	Mean	SD	Median	Range	P value
1.	Age	55.84	4.22	57	17	0.464
2.	Height	107.8	63.71	106.68	33.02	0.448
3.	Weight	17.13	2.74	17	14	0089
4.	Mid arm circumference	16.12	1.76	16.51	7.62	0.507
5.	Body mass index (BMI)	14.78	1.41	14.41	7.3	0.59

The data presented in this table 2 indicates that the obtained 't' values in each areas were not significant at 0.05 level. Because the calculated value for each area is less than their table value.

6. Conclusion
Nutritional status was almost normal in varying age groups from 40-60 months & only 14% of preschool children were either under-nourished or over-nourished. An informational booklet was prepared and used to elevate the nutritional status of pre-school children who were malnourished.

7. Recommendation
Study should be replicated on large sample to validate and generalize its findings. Study can be conducted to evaluate the effectiveness of information booklet regarding nutritional status. The study can be done on school going children aged in between 6-12 years and among community. A comparative study can be done among rural and urban preschool children. Descriptive study can be done among preschool children by involving their parents for more information about their dietary habits, play habits etc. An experimental study can be conducted with control group and experiment group.

8. References
1. Pandve Harshal T, Singru Samir A. Various Anthropometric Method ofs of assessment of nutritional status in under five children. Indian Medical Gazette. 2012, 349-352. Available From:-
   medind.nic.in/ice/t12/i9/icet12i9p349.pdf
2. Lodhi Saqib Hassam, Rehman- Ur- Mahmood, Lodhi Saqib Fahd, Wazir Salim, Jadoon Huma. Assessment of Nutritional status of 1-5 years old children in an urban union council of Abbottabad. J Ayub Med coll Abbottabad. 2010; 22(3):124-127. Available From:-
   http://ayubmed.edu.pk/JAMC/PAST/22-3/Hassam.pdf
3. Malnutrition in India [INTERNET] 2012 Nov. Available From:-
   https://en.wikipedia.org/wiki/Malnutrition_in_India
4. http://data.unicef.org/nutrition/malnutrition.html
5. Willium Roseline F, Joel Bijou, Ali Mohamad, Velan Vinayaka. Nutritional assessment of age group in Karaikal District, Paidhucherry. Nat. J. Res.com. Med. April-June 2012; 1(2):61-65. Available From:-
   http://www.commedjournal.in/article/Volume1issue2April-
   June2012/fulltext/1.Editorial%20Dr.Roseline%20Madam.pdf
6. Caroline Priya K, Seenivasan P, Praveen H, Amala Grace M, Annapoorani V, Shruthi Devi RS. A study on nutritional status of school children in rural, semi urban and urban areas of Tamil Nadu. Stanely Medical Journal. 2014; 1(1):1-9.
   Available From:- http://smj.org.in/article/pdf/66.pdf