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Effectiveness of nutritive balls for weight gain among preschool children at selected school

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ABSTRACT

A study was done to assess the effectiveness of nutritive balls for weight gain among preschool children at selected School, Perambalur. Quasi experimental design was adopted for the study. 30 samples were selected from School through convenient sampling technique & divided into experimental and control group. The demographic data were collected from the preschool children. Weighing machine were used to assess the level of weight gain in preschool children. Significant difference was found between pretest and posttest levels of weight among preschool children in experimental group at <0.001 level. The comparison between experimental group and control group posttest shows that the intervention is effective. There was no significant association between the posttest value of weight and their selected demographic variable.

Keywords: Weight, Nutritive balls & Preschool children

INTRODUCTION

Of all nature's gift to race what is sweeter to man than his children. The healthy population is the wealth of the nation. Children are the most vital human resources for a country possess. Children hold the potential and the limit of future development of any country. Better the nutritional status of the children, higher will be the nation rise. Today's children are tomorrow citizen who should be healthy. Therefore their nutritional status is of great significant good nutrition is basic component of healthy growth development and for maintaining health throughout life.

Malnutrition is a silent emergency. It is frequently part of a vicious cycle that include poverty and disease. These three factors are inter

linked in such a way that each contributes to the presents and permanence of the others. Socio economic and political changes that improve health and nutrition can break the cycle. As can specific nutrition and health intervention. The health and social consequences of the current high prevalence of impaired child growth in developing countries are severe. The major outcome of malnutrition during childhood maybe classified in terms of morbidity, mortality and psychological and intellectual development, these also important consequence in adult life in term of body size work and reproductive performance and risk of chronic disease.

The three main indicators used to define under nutrition i.e. underweight, shunting and wasting

represent different histories of nutritional insult to the child. Occurring primarily in the first 2-3 years of life linear growth retardation [stunting] is frequently with repeated exposure to adverse economic poor energy and nutrient intake and infection. Low weight for age indicates a history of poor health or nutritional insult to the child, including recurrent illness and / or starvation while a low weight for height is an indicators of wasting [i.e thinness] and is generally with recent and failure gain weight or loss of weight.

It constitutes a major public health problem in developing world and serves has the most important risk factor for the burden of disease especially among preschool children. Though the united nation has also adopted the millennium development goals seen to have childhood malnutrition indicators by 2015 yet malnutrition still contributes significant morbidity and mortality among preschool children.

In 2014 globally, 50 million children under 5 were wasted and 16 million were severely wasted. This translates into a prevalence of almost 8 percent, respectively. In 2014, almost all wasted children lived in Asia [69 percent] and Africa [29 percent], with similar proportion for severely wasted children. At 14.9 percent, South Asia's wasting prevalence is close to becoming a 'critical' public health problem :that of west and central Africa represents a 'serious' need for intervention with appropriate treatment programme. Under 5 wasting and severe wasting are highly sensitive to change. Thus estimates for these indicators are only reported from current levels.

The World Bank estimates that India is one of the highest ranking countries in the world for the number of children suffering from malnutrition. The prevalence of underweight children in India is among the highest in the world, and is nearly double that of sub Saharan Africa with dire consequences for mobility, productivity and economic growth.

Malnutrition is major contributory factor in majority of their childhood morbidities and mortalities. Thus the investigators were interested to assess the effectiveness of nutritive balls for weight gain and felt the need to provide accurate information about management and prevention of malnutrition among preschool children.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of nutritive balls for weight gain among preschool children at Selected School, Perambalur.

Objectives of the study

- To assess the pretest and posttest level of weight among preschool children at Selected School.
- To evaluate the effectiveness of nutritive balls for weight gain among preschool children at Selected School.
- To associate the posttest level of weight with their selected demographic variables for experimental & control group.

Hypothesis

H₁: There will be a significant difference between the levels of weight among preschool children at Selected School.

H₂: There will be a significant association between posttest score with selected demographic variables for experimental & control group.

Methodology

The research approach adopted for this study was quantitative approach. Quasi experimental research design was used in this study. The study was conducted at Selected School, Perambalur. The target population of study was preschool children. The accessible population of the study was preschool children at Selected School, Perambalur. The sample size was 30 preschool children (15 experimental group & 15 control group) selected using non probability convenient sampling technique.

DESCRIPTION OF TOOLS

Section A: Demographic variables

This section consist of demographic variables of subjects which includes age, religion, type of family, number of children in the family, parental education, family income per month, food pattern, sex of the child, birth order, exclusive breast feeding, source of knowledge, and number of children.

Section-B: Assessment tool

Weighing Machine.

Interpretation

Formula to assess the expected weight of the baby:

3-6years=Age in yearsx2+8.

SCORING

Gomez classification

- Grade 0: 90-100% of Expected Weight
- Grade I: 90-75% of Expected Weight
- Grade II: 75-60% of Expected Weight
- Grade III: Less than 60% Expected Weight

DATA COLLECTION PROCEDURE

The study was conducted with 30 preschool children were selected by non-probability convenient sampling technique and were divided in experimental group [15] and control group [15]. Informed oral consent was obtained from the Principal of the School prior to the collection of the data. Informed oral consent was obtained from the preschool children. The demographic data were collected from the preschool children. Weight of the preschool children were assessed using weighing machine and recorded the values. Nutritive balls were provided only for the experimental group for about 25 days. Post weight were assessed for both experimental and control group.

Data analysis & interpretation

Section I

Regarding age, in experimental group 20% subject were in 3 years, 47% subject were in 4 years, 33% subject were in 5 years and none of them 6 years. In control group 5% subject were in 3 years, 60% subjects were in 4 years 7% subject were in 5 years and none of them 6 years.

In experimental group according to sex 53% subject were in male and 47% subject were in female. In control group 47% subject were in male and 53% subject were in female.

According to birth order, in experimental group 27% subject were in 1st child, 60% subject were in 2nd child, 13% subject were in 3rd child and none of them 4th child. In control group 60% subject were in 1st child, 33% subject were in 2nd child, 7% subject were in 3rd child and none of them 4th child.

Regarding number of children in family, in experimental group 20% subject were in one child,

53% subject were in two child, 27% subject were in three children and none of them above four child. In control group 47% subject were in one child, 40% subject were in two child, 13% subject were in three children and none of them above four child.

Regarding food pattern. In experimental group 93% subject were in vegetarian and 7% subject were in non-vegetarian. In control group 93% subject were in vegetarian and 7% subject were in non-vegetarian.

Regarding family income per month. In experimental group none of them less than Rs.500, 40% subject were in Rs.500 to 1000 and 60% subject were in above Rs.1000. In control group none of them less than Rs.500, 33% subject were in Rs.500 to 1000 and 67% subject were in above Rs. 1000.

Regarding parental education. In experimental group none of them illiterate, 40% subject parents were in primary education and 60% subject parent's secondary education and none of them graduates. In control group 33% subject parents were in primary education, 67% subject parents were in secondary education and none of them illiterate and graduates.

Regarding parental occupation. In experimental group 13% subject parents were in coolie, 40% subject parents were in farmer, 47% subject parents were in private sector and none of them government sector. In control group 7% subject parents were in coolie, 87% subject parents were in farmer, 7% subject parents were in private sector and none of them government sector.

Regarding religion. In experimental group 93% subject were in Hindu and 7% subject were in Christian and none of them Muslim. In control group 100% subject were in Hindu and none of them Muslim and Christian.

Regarding type of family. In experimental group 73% subject were in nuclear family and 27% subject were in joint family. In control group 80% subject were in nuclear family and 20% subject were in joint family.

Regarding source of knowledge. In experimental group 20% subject were in newspaper, 27% subject were in mass media and 53% subject were in friends and neighbors. In control group 53% subject were in newspaper, 47% subject were in friends and neighbors and none of them mass media.

Section II

Distribution of children according to their level of weight					
		GRADE 0	GRADE I	GRADE II	GRADE III
EXPERIMENTAL GROUP	PRETEST	0	8	7	0
	POSTTEST	9	5	1	0
CONTROL GROUP	PRETEST	0	7	8	0
	POSTTEST	2	8	5	0

Section III

Effectiveness of nutritive balls on weight gain among preschool children

Group	Test	Mean	Standard deviation	Mean difference	't' value	Table value	Inference
Experimental Group	Pretest	15.4	1.88	3.13	4.89	4.14	Significant
	posttest	18.53	1.68				
Control Group	Pretest	15.06	1.83	0.40	0.31	4.14	Not significant
	posttest	15.46	1.97				

P>0.001

Test	Group	Mean	Standard deviation	Mean difference	't' value	Table value	Inference
Posttest	Experimental Group	18.53	1.68	3.1	4.76	3.66	Significant
	Control Group	15.46	1.97				

The comparison between experimental group and control group posttest shows that the intervention is effective.

Section IV

There is no significant association between the posttest level of weight with their selected

demographic variable for experimental & control group

CONCLUSION

The study concludes that nutritive balls are effective in increasing weight among preschool children & thus prevents the rate of malnutrition in our nation.

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