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A Study to Assess the Effectiveness of Soya Milk on Degree of Malnutrition among Pre-School Children (3-6 Years) in Anakaputhur at Chennai-43

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Abstract:

Child health is the foundation of the family and wealth of a nation. Good nutrition is the basic component of growth and development for maintenance of health throughout life. "Nutrition is defined as combination of dynamic process by which the consumed food is utilized for nourishment, structural and functional efficiency of every cell of the body." Under five children require balanced nutrition to become healthy for national growth and economic development. Malnutrition, insufficient consumption of protein and micronutrients exacerbated by frequent disease and infection (WHO, 2003), is a severe and widespread problem. Soya foods help children meet the dietary guidelines and that supports the normal Growth and development of children and it also improve growth when substituted in the diet of malnourished under five children. Thus soya foods can play an important part in treatment and prevention of malnutrition in fewer than five children. It meets the normal nutritional status in fewer than five children.

Keywords: Assess, Effectiveness, Soya milk, Malnutrition, Malnourished under five children

1. Introduction

Children are the wealth of tomorrow. Children are the most important age group in all societies. Children are major consumers of health care. In India, about 35% of total population is children below 15 years of ages. They are not only large in number but vulnerable to various health problems and considered as special risk group. Majority of the child hood sickness and death are preventable by simple low- cost measures. Children always need special care to survive and thrive. Good health of these precious members of the society should be ensured as prime importance in all countries. Malnutrition is most widespread condition affecting health of the children. In availability and scarcity of suitable food, lack of money for purchasing food, traditional beliefs and taboos about child's diet and insufficient balanced diet are resulting in malnutrition. The underlying and associated cause of childhood illness and death makes the child susceptible to infection, slowed recovery from illness and higher mortality¹

Malnutrition implies imperfect assimilation or nutrition or both. It has been defined as "any disorders of nutrition caused by deficiency of proper food substances. It may be due to deficient break down assimilation or utilization of the food."² The effects of malnutrition are more serious during the formative period of life. Malnutrition in childhood leads to growth retardation. The undernourished children do not grow to their full potential of physical and mental abilities. The frequent nutritional states are protein – energy malnutrition, vitamin A deficiency, nutritional anaemia, iodine deficiency etc. these and other nutritional disorders may also serve as predisposing factors for several chronic and crippling diet related to non –communicable diseases including Diabetes mellitus, cardio vascular diseases, cancers etc. in later life.³

2. Objectives

To assess degree of malnutrition among pre-school children(3-6 years) before administration of soya milk.To assess degree of malnutrition among pre-school children (3-6 years) after administration of soya milk.To assess the effectiveness of soya milk among malnourished pre-school children (3-6 years). To assess the association between malnutrition among pre school children (3-6 years) and selected demographic variables.

3. Hypothesis

- H₁- There is a significant difference on degree of malnutrition before and after administration of soyamilk among pre-school children (3-6 years)
- H₂- There will be significant association between degree of malnutrition among pre-school children (3-6 years) regarding soyamilk and selected demographic variables.

4. Methodology

Evaluate research approach and a pre experimental (one group pre test post test design) was used. Non Randomized purposive sampling technique was used to select the sample for the study. The total study sample consisted of 60 Pre School children (3-6 years) .Setting of the study refers to the area where the study was conducted. The study was conducted in urban area at Chennai. The name of the urban area selected was Anakaputhur. This is situated six kilometres away from the SreeBalaji College of Nursing. The total numbers of mothers those who having children between 3 to 6years are about 60. This village has the facilities like school, church, market, balwadi and private hospital.

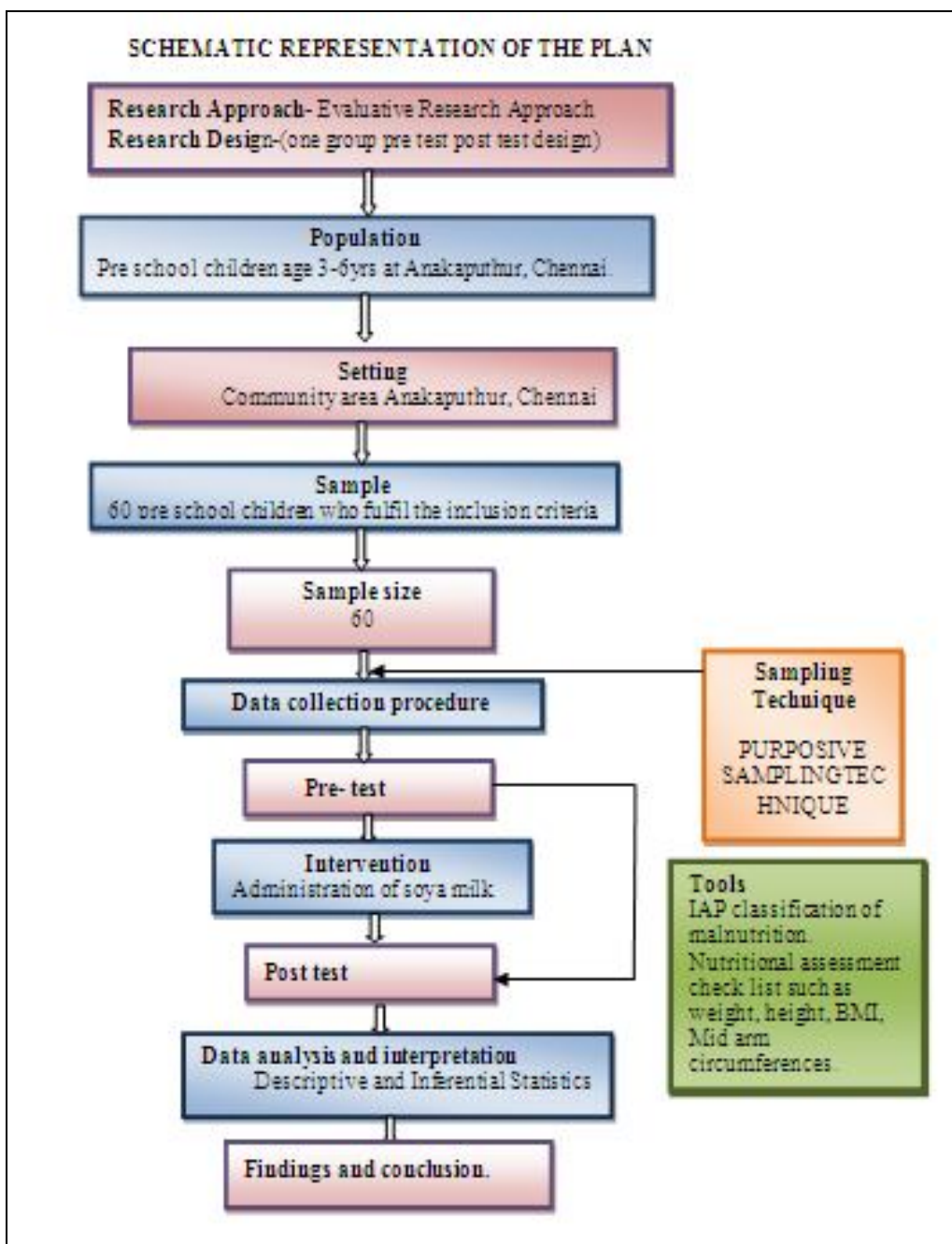


Figure 1

- The Degree of Malnutrition by Using IAP Scale
1st Degree 80 – 70%, 2nd Degree 70 – 60 %, 3rd Degree 60 – 50 %, 4th Degree < 50% of Expected
- Nutritional Assessment Checklist
Weight of the Child, Height of the Child, Mid-arm Circumference, Body Mass Index

5. Results

The pre-test assessment of malnutrition, majority of children’s 60(100%) were grade 1 malnutrition and none of them were in grade II malnutrition and none of them were in grade III malnutrition and none of them were in grade IV malnutrition and none of them in normal. It denotes that majority of children were grade 1 malnutrition. None of them had normal. None of them had grade II, grade III, grade IV malnutrition.

PRE-TEST SCORE N=60		
GRADE	F	%
NORMAL	-	-
GRADE I	60	100%
GRADE II	-	-
GRADE III	-	-
GRADE IV	-	-
TOTAL	60	100%

Table 1

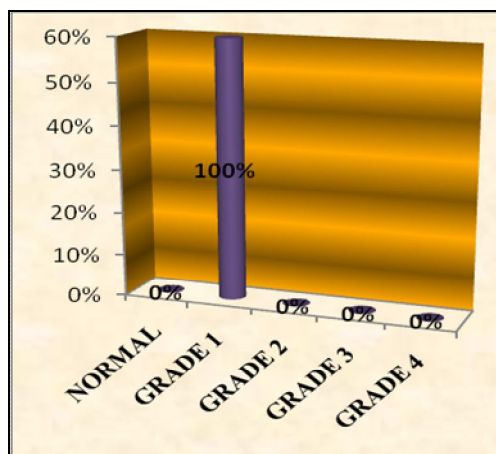


Figure 2

5.1. Post Test Assessment of Malnutrition

The post test assessment of malnutrition, majority of children 60(100%) were normal and none of them were in grade 1 malnutrition and none of them were in grade II malnutrition, grade III and grade IV malnutrition. Statistical analysis shows there is significant improvement ($p < 0.001$) between the pre test and post test grade of malnourished children after having soya milk. Statistical significance was calculated using MC Nemer chi square test, the value is 60. Thus, the study is effective.

POST TEST SCORE N=60		
GRADE	F	%
NORMAL	60	100%
GRADE I	-	-
GRADE II	-	-
GRADE III	-	-
GRADE IV	-	-
TOTAL	60	100%

Table 2

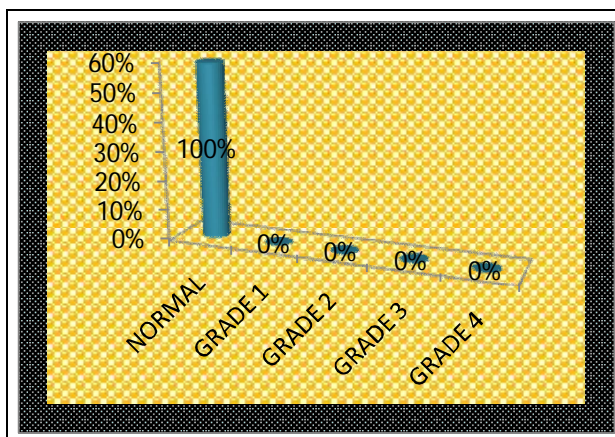


Figure 3: Post-test assessment of malnutrition among pre school children (3-6 years)

Over All Grade	Experimental group N=60				Chi square 60.0 (S) P<0.01
	Pre test		Post test		
	F	%	F	%	
Normal	-	-	60	100%	
Grade I	60	100%	-	-	
Grade II	-	-	-	-	
Grade III	-	-	-	-	
Grade IV	-	-	-	-	
Total	60	100%	60	100%	

Table 3: The effectiveness of pre test and post test level on degree of malnutrition among pre school children (3-6 years).

The effectiveness of pre test and post test level on degree of malnutrition reveals that the children were normal 60(100%), none of them had grade I malnutrition, and none of them had grade II malnutrition and none of them had grade III malnutrition and none of them had grade IV malnutrition. Statistical analysis shows there is significant improvement ($p < 0.001$) between the pre test and post test grade of malnourished children after having soya milk. Statistical significance was calculated using MC Nemer chi square test, the value is 60. Thus, the study is effective.

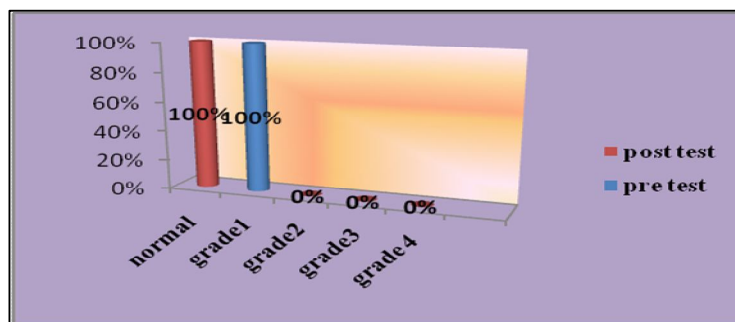


Figure 4: Effectiveness of pre test and post test level on degree of malnutrition among pre school children (3-6 years)

6. Conclusion

Based on the finding, the study concluded that **there is an improvement of nutritional status after receiving the soya milk.** Therefore the study were effective, the nutritional status of children had improved and prevents the malnutrition.

7. Recommendations

The study recommends the following for further research.

- A similar experimental design can be done with more samples and also for a larger period of time.
- A study can be conducted to find out the knowledge of mothers regarding malnutrition and prevention in under five children.
- A comparative study can be undertaken to find out the risk factors of malnutrition in under five children.
- A comparative study can be conducted to assess knowledge regarding the prevention of malnutrition among mothers in rural area.

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