A study to assess the effectiveness of Soya milk administration on Degree of Malnutrition among Malnourished Children in selected Anganwadi Centers at Seliamedu.

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Abstract:

Objectives: Effectiveness Of Soyamilk Administration on Degree of Malnutrition

Method: Quasi-Experimental Research design with a quantitative research approach was undertaken on 50 children. Results: The findings revealed that the soy milk was effective in decreasing mild and moderate malnutrition as the mean was 11.33 with standard deviation of 0.63 in the experimental group and in the control group the mean was 10.52 with standard deviation of 0.48 in the post test after administration of soya milk which was found statistically highly significant at p<0.001 level. Conclusion: The study concluded that soya supplementation, will bring out better all round development of children and the soy milk was very efficacious in preventing malnutrition.

Key words: Malnutrition, malnourished children, Anganwadi, soya milk.

INTRODUCTION

Children are the wealth of tomorrow. Children are the most important age group in all societies. Health status and health behavior of later life are laid down at this stage. Children are major consumers of health care. Malnutrition is the single most important cause of child mortality and a major cause of most health problems in the developing world. In World 2010, it was estimated that more than 200 million under five children i.e., 30% of the world’s children are malnourished in terms of being underweight and over 2/3rd of malnourished children belong to Asia.¹

India has 440 million children. About 27 million children are born each year in India. But nearly 2 million of them do not live up to the age of five; much of this is due to malnourishment. They are not only large in number but vulnerable to various health problems and considered as special risk group. A 2011 large-scale survey by civil society organizations across 100 districts in India found underweight rates among children to be 42%, similar to what NFHS had recorded and rates of stunting to be 59%, 11% higher compared with NFHS. At least 20,000 children under the age of six in Tamil Nadu are so severely malnourished that their growth will be permanently stunted if immediate action is not taken².

Majority of the childhood sickness and death are preventable by simple low- cost measures. In India's efforts to improve nutritional health, soybeans, a recently
introduced crop, hold a great deal of promise for both the rural and the urban population.

Soya foods help children to meet their 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 the treatment and prevention of malnutrition in under five children.

OBJECTIVES:

1. To assess the nutritional status of children in the experimental and control group during pre and post test.
2. To assess the effectiveness of soya milk on degree of malnutrition among malnourished children between 3-5yrs.
3. To associate the nutritional status of children with selected demographic variables.

METHODOLOGY:

Research approach used for the study was Quantitative Research Approach and the Research design was Quasi-Experimental Research design. The study was conducted in selected Anganwadi centres at Seliamedu, Puducherry.

The Sample size was 50, where 25 belonged to experimental group and 25 belonged to control group. The samples were selected based on the inclusion criteria. Non-probability purposive sampling technique was used to select the samples. pre-test was done to assess the nutritional status by assessing the degree of malnutrition and clinical signs for both group of children in the Anganwadis. Among that 25 malnourished children from Seliamedu Pet Anganwadi was taken as experimental group and 25 from Seliamedu Ooru Anganwadis as control group. The children in the experimental group was administered soya milk (100 ml) for 40 days. After 40 days nutritional assessment for both the experimental group and control group was done.

Results:

1. Socio-demographic variables:

20(80%) belonged to the age group of 3 years, 5(20%) belonged to the age of 4 years in experimental group and 18(72%) belonged to the age group of 3 years, 7(28%) belonged to the age of 4 years in the control group respectively. Majority of the children 20(80%) were females and 5(20%) were male in experimental group and 16(64%) were females and 9(36%) were male in control group respectively.
The above table shows the mean of 10.38 with standard deviation of 0.69 in the pre test was increased to 11.33 in the post test after administration of soya milk. The difference was found statistically highly significant at p<0.001 level and can be attributed to the effectiveness of soya milk administration.

### Effectiveness Of Soya milk Administration on Degree of malnutrition Among Malnourished Children Of 3-5yrs Between The Experimental Group And Control Group

<table>
<thead>
<tr>
<th>SL.NO</th>
<th>GROUP</th>
<th>Test</th>
<th>MEAN+S.D</th>
<th>'t' VALUE</th>
<th>P VALUE</th>
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<tbody>
<tr>
<td>1.</td>
<td>EXPERIMENTAL GROUP</td>
<td>PRE-TEST</td>
<td>10.38 ± 0.69</td>
<td>11.8654</td>
<td>0.0000***</td>
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<tr>
<td></td>
<td>POST-TEST</td>
<td>11.33 ± 0.63</td>
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</table>

***Highly significant at p<0.001 level

The above table shows the mean was of 11.33 with standard deviation of 0.63 in the experimental group and in the control group the mean was 10.52 with standard deviation of 0.48 in the post test after administration of soya milk. The difference was found statistically highly significant at p<0.001 level. The results revealed that there was no significant association between the nutritional status and the demographic variables.

### DISCUSSION

1. First was the assessment of nutritional status of children between 3-5 yrs for experimental and control group before administration of soya milk and it reveals that out of 25 samples in the experimental group 22(88%) belonged to IAP GRADE-I classification and 3(12%) belonged to IAP GRADE-II classification. In control group, out of 25 samples, 22(88%) belonged to IAP GRADE-I classification and 3(12%) belonged to IAP GRADE-II classification. Although the Government has launched many nutritional programmes, the problem of malnutrition is still prevalent in India, especially among the rural community.

After administration of soya milk it revealed that out of 25 samples in the experimental group 12(48%) belonged to IAP GRADE-I classification and 0% belonged to IAP GRADE-II classification and 13(52%) fell in the normal category. In control group out of 25 samples, 22(88%) belonged to IAP GRADE-I classification and 3(12%) belonged to IAP GRADE-II classification and none of them fell in the normal category. So the above findings has proved that the soya milk improves the nutritional status of the children. Thus the Government should take the necessary steps to implement the soy products which is cheaply available.
2. The effectiveness of soya milk administration among malnourished children between 3-5 yrs between the experimental group and control group revealed that the mean of 10.52 with standard deviation of 0.48 in the pre test was increased to 11.33 in the post test after administration of soya milk and the 't' value was 5.1137 which was statistically highly significant at p<0.001 level and this can be attributed to the effectiveness of soya milk administration on malnourished children.

A similar study was conducted to evaluate the effectiveness of soya milk in decreasing mild to moderate malnutrition. The design used for the study was randomized open label, controlled trial. The samples were children’s aged 18-60 months with weight for age <=2SD. The intervention include supplementing soya milk, and current standard of care (teaching caregivers how to make a fortified milk supplement called soya milk from soya beans). The study reveals that the mean (SD) weight gain at 1 month was higher in soy group: soy (n=51): 0.54 kg; (SE= 0.05; 95% cl= 0.25-0.51) Vs control group with calorie food (n=45): 0.38 kg; SE=0.06;95% cl=0.25-0.51), P=0.047. The weight per kilogram of body weight was directly proportion to the severity of malnutrition. The conclusion of the study was community based treatment showed weight gain in both groups, the gain being higher with soy milk.

CONCLUSION:

The study concluded that soya supplementation, will bring out better all round development of children and the soy milk was very efficacious in preventing malnutrition.

REFERENCES:


