EFFECTIVENESS OF GROUND NUT CHIKKI IN IMPROVING THE LEVEL OF NUTRITIONAL STATUS AMONG SCHOOL CHILDREN IN SELECTED HOSTELS AT TIRUNELVELI, TAMIL NADU

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ABSTRACT:

Quasi experimental design was utilized for resolving this problem statement. Purposive sampling technique was used for sample selection. The population of the study was 60 female children in age group 10 to 12 years, 30 samples in control and 30 samples in experimental group. The tool used for the study consists of demographic variables, physiological parameters and an observational checklist for nutritional assessment. The conceptual framework was formulated according to BERTALANTY J.Y. KENNY open system model (1969). The findings of the study revealed that majority of the samples improvident weight gain and improved haemoglobin level in post-test of the experimental group. Experimental group shows effectiveness of ground nut chikki in improving weight with 't' value 3.372 which is greater than the table value (2.462) at 0.05 levels also experimental group shows effectiveness of ground nut chikki in improving HB with 't' value 2.592 which is greater than the table value (2.462) at 0.05 levels. The result shows that there is a significant association between the post-test weight score experimental and control group and their selected demographic variables. In this study, experimental group shows effectiveness of groundnut chikki in improving the level of nutritional status, such as weight and haemoglobin. Thus, groundnut chikki is more effective in improving levels of nutritional status among school children in Hostel girls.

Key Words: Nutrition, Haemoglobin & Weight gain.

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INTRODUCTION

Let food be thy medicine, thy medicine shall be thy food

-Hippocrates

Nutrition is an organic process of nourishing or being nourished; the process by which an organism assimilates food and uses it for growth and maintenance [1, 2]. It is a source of material to nourish the body, the scientific study of food and drink in humans. Nutrition is the provision, to cells and organism of the material necessary (in the form of food) to support life. Many common health problems can be prevented or alleviated with good nutrition [3].

School children form an important vulnerable segment of the population and constitute about 20 percent of the total population of India school age is a dynamic period of growth and development as children undergo physical, mental, emotional and social changes during this stage [4,5]. Malnutrition, in its various forms, is a very depression health problem of today affecting over half of the world population. Malnutrition leads not only to stunting of physical growth but also to suboptimal intellectual development [6-9]. It is a valid point to be noted that a number of papers were published to eradicate malnutrition [10, 11].

COVID-19 at the peak in the current scenario the need of the hour is immunity, which can be achieved only through good nutrition. Nutrition in the sense it refers to micronutrients. To attain this objective at low cost groundnut is one best option. With this view only the researcher took up this study. Also children are much attracted by the snacks, that why the idea of integrating a snack with nutrition evolved.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of groundnut chikki on improving the level of nutritional status among School children in a selected hostel at Tirunelveli.

OBJECTIVES

1. To assess the pre-test and post-test level of Nutritional status among school children of experimental and Control group.
2. To find out the effectiveness of groundnut chikki in improving nutritional status among experimental group of school children.
3. To find out the association between the post-test weight score of experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.
4. To find out the association between the post-test of hemoglobin level in experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.
5. To find out the association between the post test score check list of experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.

HYPOTHESES

H_1- There is a significant difference between mean pre-test and post test score of an experimental group of children in improving the level of nutritional status after groundnut chikki.

H_2 - There is a significant difference between a mean post test score of the experimental group and mean post test score of the control group of school children in improving the level of nutritional status.

H_3- There is a significant Association between mean post-test weight score of experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.

H_4 -There is a significant Association between the post-test of hemoglobin level in experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.

H_5- There is a significant Association between post test score check list of experimental and control group with their selected demographic variables such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.

METHODOLOGY

A Quantitative research approach was adopted for this study. Quasi experimental Design was used for this study. 30 samples in control and 30 samples in experimental group. The study was conducted in Child Jesus Girls Higher secondary school, Tirunelveli. Purposive sampling technique was used for this study.

Development of the tool:

Section A: Demographic variables

Deals with demographic data on girls such as age, religion, education, occupation, income of parents, number of children in the family, birth order, history of previous illness, history of deworming and history of diet.

Section B

Weighing machine – Checking weight

Hemoglobin is measured by sahils hemoglobin meter scale.

Section C

Observational checklist for clinical examination to identify girl's nutritional status.

DATA ANALYSIS

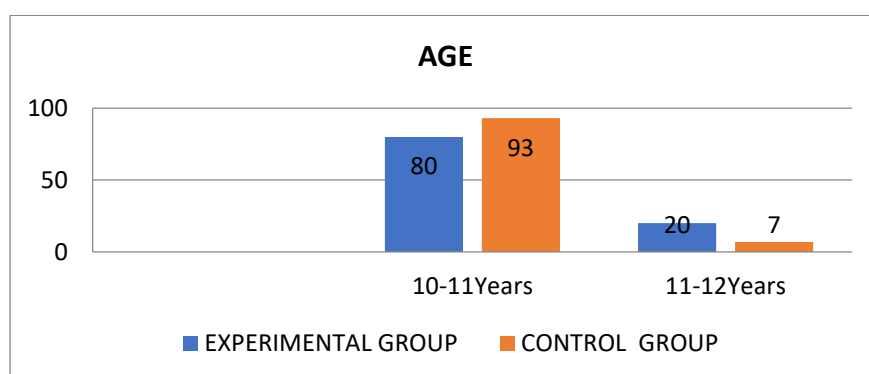A detailed distribution of the demo-graphic variables is presented in the form of graph.

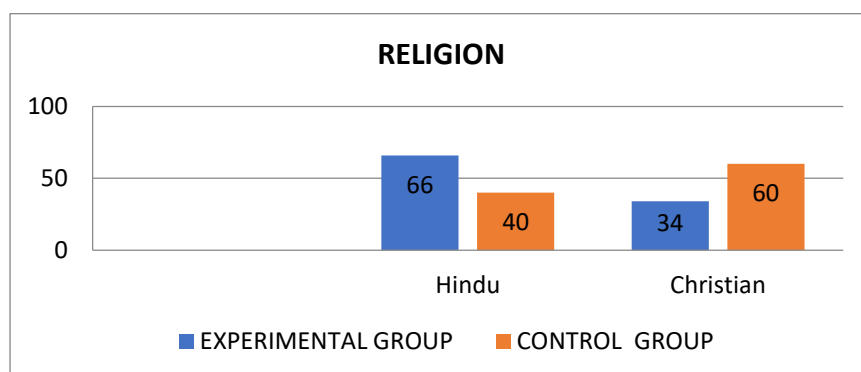Fig-1: Distribution of samples based on Age of Children

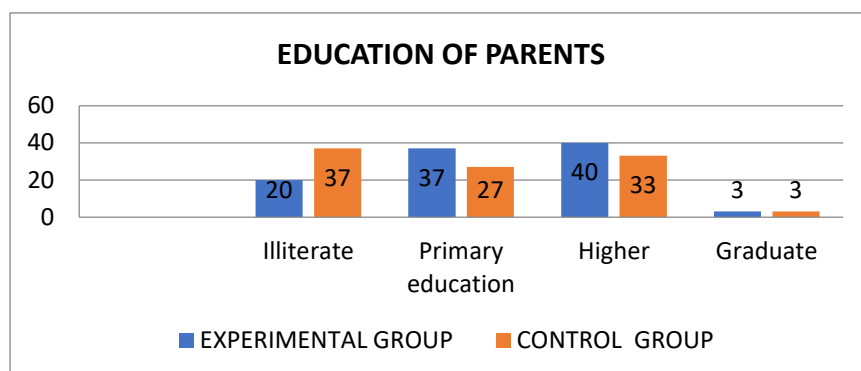Fig-2: Distribution of samples based on Religion of Children

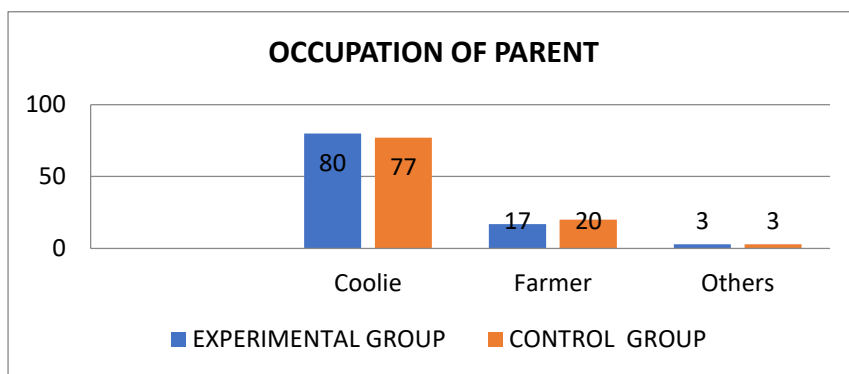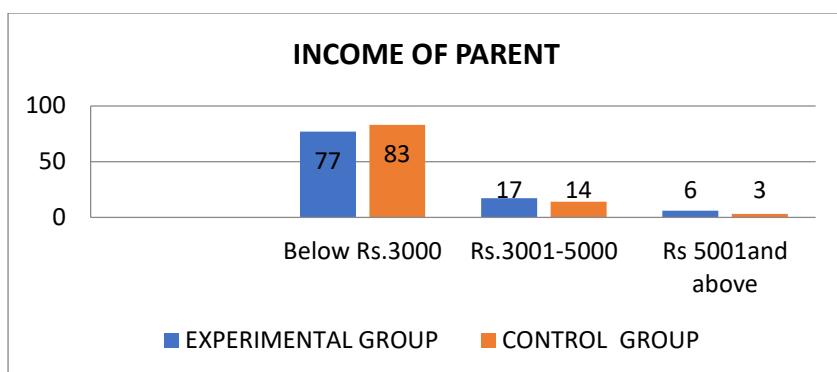Fig-3: Distribution of samples based on Education of parents

OCCUPATION OF PARENT

Coolie: EXPERIMENTAL GROUP 80, CONTROL GROUP 77
Farmer: EXPERIMENTAL GROUP 17, CONTROL GROUP 20
Others: EXPERIMENTAL GROUP 3, CONTROL GROUP 3

Fig-4: Distribution of samples based on Occupation of parent

INCOME OF PARENT

Below Rs.3000: EXPERIMENTAL GROUP 77, CONTROL GROUP 83
Rs.3001-5000: EXPERIMENTAL GROUP 17, CONTROL GROUP 14
Rs 5001and above: EXPERIMENTAL GROUP 6, CONTROL GROUP 3

Fig-5: Distribution of samples based on Income of parents

NUMBER OF CHILDREN

One: EXPERIMENTAL GROUP 0, CONTROL GROUP 87
Two: EXPERIMENTAL GROUP 43, CONTROL GROUP 13
Three: EXPERIMENTAL GROUP 27, CONTROL GROUP 0
Four and above: EXPERIMENTAL GROUP 30, CONTROL GROUP 0

Fig-6: Distribution of samples based on Number of Children

BIRTH ORDER

First child: EXPERIMENTAL GROUP 6, CONTROL GROUP 33
Second child: EXPERIMENTAL GROUP 37, CONTROL GROUP 53
Third child: EXPERIMENTAL GROUP 27, CONTROL GROUP 7
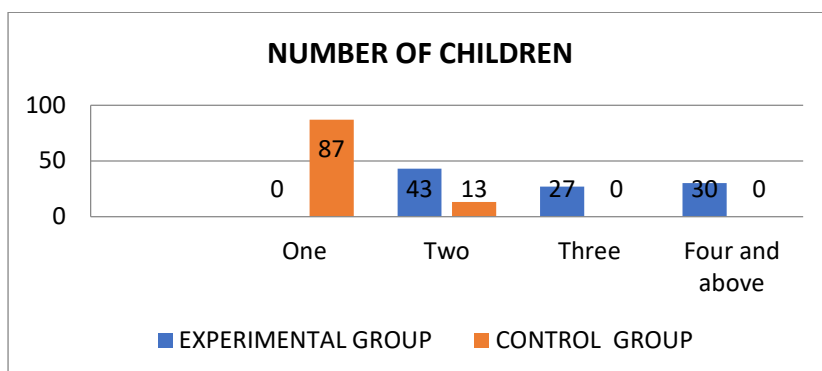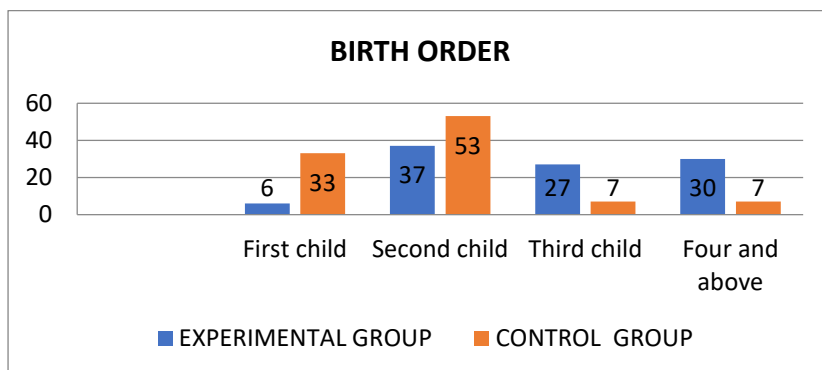Four and above: EXPERIMENTAL GROUP 30, CONTROL GROUP 7

Fig-7: Distribution of samples based on Birth order
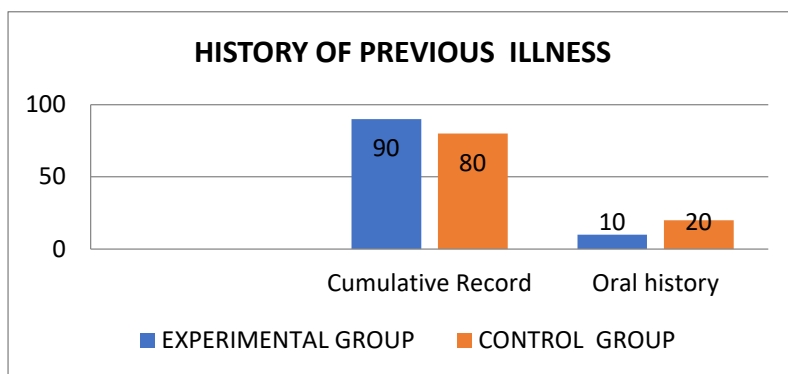
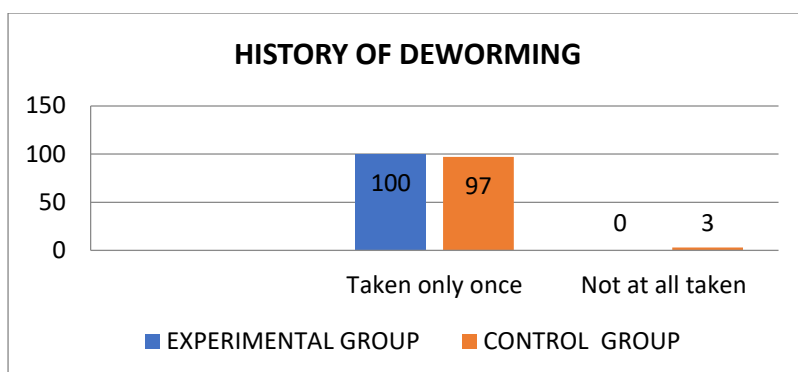Fig-8: Distribution of samples based on History of illness

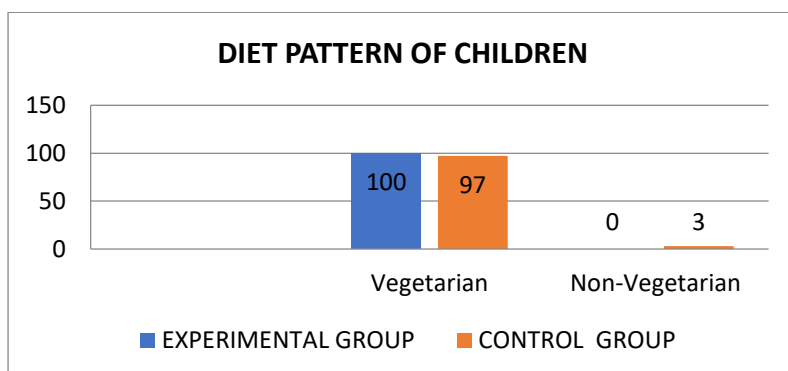Fig-9: Distribution of samples based on History of deworming

Fig-10: Distribution of samples based on Diet pattern of children

RESULTS

Regarding the age majority of the children 24 (80%) were between 10-11 years in the experimental group and 28 (93%) were between 10-11 years in the control group. Regarding Religion majority of the children 20 (66%) were Hindu in the experimental group and 18 (60%) were Christian in the control group. About education of parents 11 (37%) of them were primary education in the experimental group whereas 11 (37%) were illiterate in the control group. Regarding the occupation of parents' coolie had shown higher frequency 24 (80%) in the experimental group and 23 (77%) in the control group. About 23 (77%) had a monthly Income below (Rupees) 3000 in the experimental group, and in control group 25 (83%) had a monthly income below (Rupees) 3000.With regard numbers of children in the family were two had shown the highest frequency 13 (43%) in the experimental group and in control group highest frequency is 26 (87%) were one Number of children in the family. About birth order majority of the children were second child 11 (37%) in experimental and 16 (53%) control group. Regarding the History of Deworming majority of children taken only once 30 (100%) in the experimental group whereas 29 (97%) in the control group. Regarding the history of the diet pattern majority of children were vegetarian 30 (100%) in the experimental group whereas 29 (97%) in the control group. The majority of the samples 19 (63%) had inadequate weight in experimental pre-test, but this has improved to 14 (46%) adequate and 8 (27%) inadequate weight in post-test of the experimental group. The

weight of control group samples similar in pre-test and post pre-test considering the hemoglobin, 4 (14%) had severe anemia. 19 (63%) had moderate anemia in experimental group pre-test but these samples have moved to mild anemia 28 (14%) is a post-test of the experimental group. The control group pre-test and post-test level of hemoglobin was same. With regard to check list the experimental group pre-test shows that 26 (86%) were in moderate category and 4 (14%) in poor category but after the intervention they have moved to 11 (37%) moderate and 19 (63%) good nutritional status in the post test. The control group pre-test and post-test were almost similar. Experimental group shows effectiveness of ground nut chikki in improving weight with 't' value 3.372 which is greater than the table value (2.462) at 0.05 levels and Control group does not show effectiveness of weight with 't" value is 0.029 which is lesser than the table value (2.462) at 0.05 levels. Experimental group shows effectiveness of ground nut chikki in improving HB with 't' value 2.592 which is greater than the table value (2.462) at 0.05 levels and Control group does not show effectiveness of weight with 't" value is -2.995 which is lesser than the table value (2.462) at 0.05 levels. Experimental group shows effectiveness of ground nut chikki in improving checklist score with 't' value 14.37 which is greater than the table value (2.462) at 0.05 levels and Control group does not show effectiveness of weight with 't" value is 2.34 which is lesser than the table value (2.462) at 0.05 levels. The result shows that there is a significant association between the post-test weight score experimental and control group and their selected demographic variables. The calculated chi-square value for the History of Deworming and diet pattern of control group and occupation of parents in the experimental group was higher than the tabulated value.

The result shows that there is the association between the post-test checklist score of experimental and control group with their selected demographic variables. The calculated chi-square value for Religion of children and education of parents of the experimental group was higher than the tabulated value. The calculated chi-square value for religion of children, Education of parents, Income of parents, Number of children history of Deworming and history of Diet pattern of control group was higher than the tabulated value at p< 0.05 level of significance.
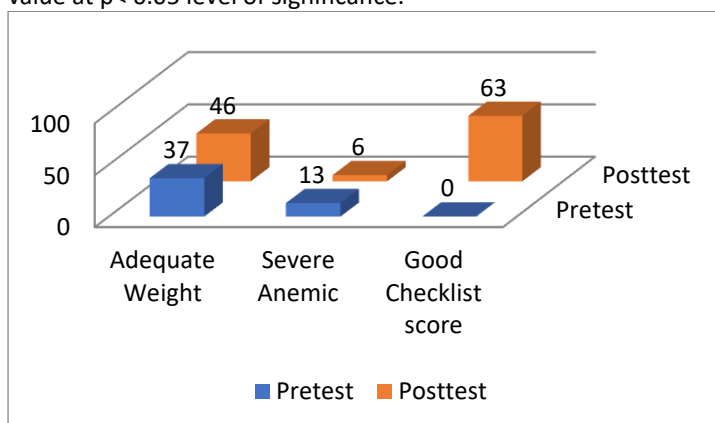

Fig-11: Graph showing the comparison of pre-test and post-test values on weight, Hb and checklist.

RECOMMENDATION

A similar study can be conducted by using a large sample to generalize findings.

Comparative study can be conducted among private and Govt. School children.

A study can be conducted to identify the factors influencing nutritional deficiency among school children.

A qualitative study could be carried out to explore in depth in improving levels of Nutritional status by groundnut chikki.

A same study can be conducted in community settings.

Educational programs can be devised to create awareness among the mother to promote the nutritional status of school children.

Comparative study can be conducted among the Government and private school hostel girls.

CONCLUSION

In this study, experimental group shows effectiveness of groundnut chikki in improving the level of nutritional status, such as weight, hemoglobin, and checklist. But in the control group, no improvement is seen in weight hemoglobin and checklist. Groundnut chikki is more effective in improving levels of nutritional status among school children in Hostel girls. As a pediatric nurse we have the responsibility of creating awareness about various nutritional deficiency disorders and measures to improve nutritional status. Also, the government can launch nutritional programs to improve nutritional status of school children.

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