

Mineral Deficiency Disorder Among Parents of Preschool Children

Chinnasamy A¹, Balasaheb M Biradar², SS Saravanan³

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Abstract

A study was conducted to assess the effectiveness of STP on terms of knowledge regarding parents of preschool children mineral deficiencies in selected anganwadi at latur district in Maharashtra. *Objectives of the study:* To assess the knowledge among parents of preschool children regarding selected mineral deficiencies to evaluate the effectiveness of STP in terms of gain knowledge of parents of preschool children and to determine the association between the pretest knowledge score and selected demographic variables. *Method and Materials:* A quantitative approach with one group pretest and post test design was selected 60 parents of preschool children were selected by convenient sampling technique. A STP was developed and data was collected from selected anganwadi at latur district by using structured knowledge questionnaire. *Result:* The data was analyzed using (chi-square and paired t test) descriptive and inferential statistics and the finding showed that the means post test knowledge scores (17.91 ± 4.04) was higher than the mean pretest knowledge scores (10.46 ± 4.89) with a mean difference of 7.45. The obtained mean difference was found to be statistically significant as evident from calculated t test value greater than table value at 0.05 level of significance. A significance association was found between pretest knowledge scores and education stream of parents of preschool children. *Conclusion:* It was concluded from the study that the STP on selected mineral deficiencies was effective in enhancing the knowledge of parents of preschool children.

Keywords: Minerals deficiency; Preschool children; Parents.

Introduction

Children represent the future and ensuring their healthy growth and development ought to be a prime concern of all societies.² Good nutrition provides the energy and nutrients essential to sustain life and promotes physical, emotional and cognitive development. Meeting nutritional requirements throughout childhood is essential to full intellectual development.³

Minerals are amongst the most important elements needed by body. They are directly and indirectly involved in every bodily process. Most of the physiological processes of the human body

cannot occur without the presence of minerals. RNA/DNA, which are the blueprints to each cell, do not function properly without certain minerals.⁴

Iodine deficiency is the world's most prevalent, yet easily preventable, cause of brain damage. Iodine deficiency is recognized as the most important preventable cause of mental defect in the world today, It also decreases child survival, causes goiters, and impairs growth and development. Children with IDD can grow up stunted, apathetic, mentally retarded, and incapable of normal movements, speech, or hearing. Globally, 2.2 billion people (38% of the world's population) live in areas with iodine deficiency and risks its complications.⁵

Zinc is an essential mineral of "exceptional biologic and public health importance". Zinc deficiency affects about two billion people in the developing world and is associated with many diseases. In children it causes growth retardation, delayed sexual maturation, infection susceptibility and diarrhea, contributing to the death of about 800,000 children worldwide per year. Enzymes with a zinc atom in the reactive center are widespread in biochemistry, such as alcohol dehydrogenase

Author Affiliation: ¹Associate Professor, ²Assistant Professor, ³Principal, MINS College of Nursing Latur, Maharashtra, 413531, India.

Corresponding Author: Balasaheb M Biradar, Assistant Professor, MINS College of Nursing Latur, Maharashtra, 413531, India.

E-mail: chinnaala@gmail.com

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in humans.⁶ Zinc deficiency can contribute to acne, fatigue, growth impairment, slow wound healing, delayed sexual maturation, hair loss, high cholesterol, and many other health problems. Zinc deficiency can also impair the body's ability to fight infection.⁷

Fluoride or fluorine deficiency is a disorder which may cause increased dental caries and possibly osteoporosis due to a lack of fluoride in the diet. The extent to which the condition truly exists, and its relationship to fluoride poisoning has given rise to some controversy.²² Fluorine is not considered to be an essential nutrient, but the importance of fluorides for preventing tooth decay is well-recognized, although the effect is predominantly topical. Prior to 1981, the effect of fluorides was thought to be largely systemic and presumptive, requiring ingestion.⁸

Materials and Methods

The objective of the study was to assess the knowledge, effectiveness of Structure Teaching Programme and determine the association between level of knowledge with selected socio-demographic variables regarding mineral deficiency among parents of preschool children. Ethical approval was obtained from the appropriate bodies and the study employed a quasi- experimental approach design, Setting for the study parents of preschool children attending selected anganwadi at ratnagiri district the conceptual framework for the study is based on General System Model by Ludwig Von Bertalanffy. The conceptual framework for the study is based on General System Model by Ludwig Von Bertalanffy, A sample size of 60 Parents of preschool children in Ratnagiri and the participants voluntarily consented to participate in the study. Data was collected using a Convenient sampling technique.

Inclusive criteria: Parents of preschool children, who are Able to understand Marathi, available and

willing to participate in the study at the time of data collection.

Exclusive criteria: Parents of preschool children, who are Not able to understand Marathi., not available during the study and not willing to participate in study. Structured knowledge questionnaire were on which included the variables like age, sex, education, type of family, sources of information, family history of mineral deficiency, place of residence, selected mineral deficiency such as general information, importance, deficiency, complication and preventive and curative management.

Problem statement

"A study to assess the effectiveness of structured teaching programme on knowledge regarding selected mineral deficiency among parents of preschool children attending selected anganwadi at Ratnagiri district."

Objectives of the study

1. To assess the knowledge regarding selected mineral deficiency among parents of preschool children.
2. To evaluate the effectiveness of Structure Teaching Programme by comparing pre-test and post-test knowledge scores.
3. To determine the association between level of knowledge with selected socio-demographic variables regarding mineral deficiency.

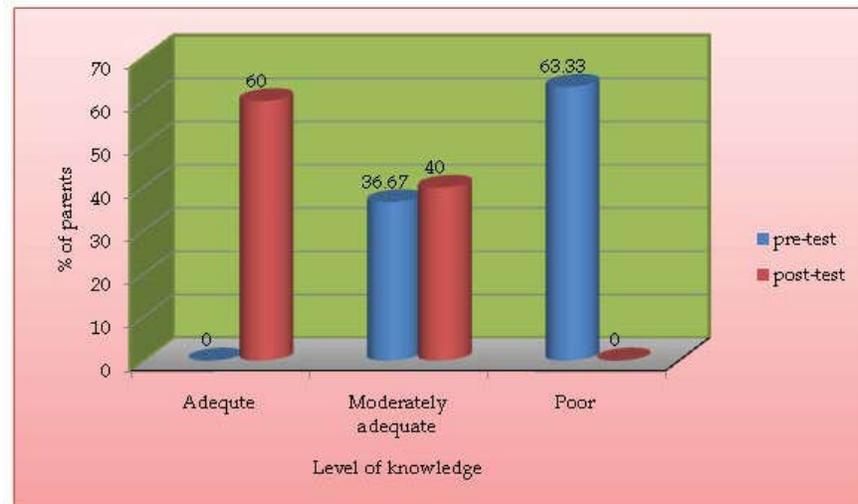
Results

Majority 26 (43.33%) of the subjects belong age group of 26–30 and 31–35 years. 14 (23.4%) of the parents of preschool children were male and 46 (76.33%) of them were females. Majority 20 (33.33%) up to primary education, 28 (46.67%) had secondary education, and remaining 10 (10.67%) had degree and above qualification. After structure teaching

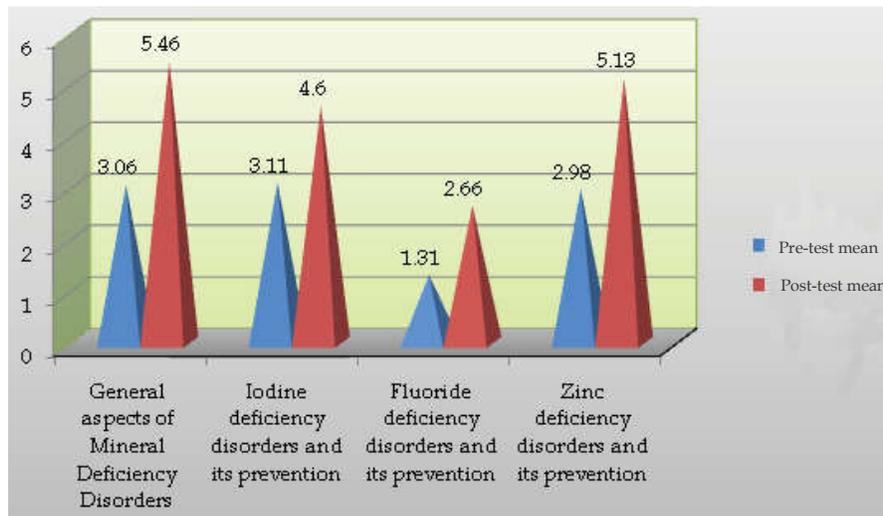
Table 1: Area wise mean, S.D and mean percentage of the knowledge scores in pre-test and post-test.

N = 60

Knowledge area	Max. score	Pre-test (O ₁)		Post-test (O ₂)		Effectiveness (O ₂ -O ₁)	
		Mean ± SD	Mean %	Mean ± SD	Mean %	Mean ± SD	Mean %
General aspects of Mineral Deficiency Disorders	7	3.06 ± 1.61	43.71	5.46 ± 0.93	78	2.4 ± 0.68	3.29
Iodine deficiency disorders and its prevention	6	3.11 ± 0.81	51.83	4.6 ± 0.72	76.6	1.49 ± 0.09	24.77
Fluoride deficiency disorders and its prevention	4	1.31 ± 1.19	32.75	2.66 ± 1.31	66.5	1.35 ± 0.12	33.75
Zinc deficiency disorders and its prevention	7	2.98 ± 1.28	42.57	5.13 ± 1.08	73.28	2.15 ± 0.2	30.71
Total	24	10.46 ± 4.89	43.58	17.91 ± 4.04	74.62	7.45 ± 0.85	31.04



Graph 1: Bar diagram depicting percentage wise comparison of knowledge level of parents of preschool children in pre-test and post-test.



Graph 2: Pyramid diagram depicting percentage wise comparison of mean of Pre-test and post-test knowledge scores of parents of preschool children.

Table 2: Association between pre-test knowledge scores and selected socio demographic variables

Sl. No	Socio demographic variables	Df	Chi-square value	Table value	Level of significance
1.	Age	1	1.94	3.84	0.05
2.	Gender	1	0.05	3.84	0.05
3.	Education	1	4.18*	3.84	0.05
4.	Type of family	1	5.48*	3.84	0.05
5.	Sources of information	1	0.006	3.84	0.05
8.	Place of residence	1	0.014	3.84	0.05
9.	History of mineral deficiency disorders	1	2.71	3.84	0.05

* Significant ($p < 0.05$) $df = 1$

programme (post-test) 36 (60%) subject with adequate knowledge, 24 (40%) subjects with moderately adequate knowledge, findings reveal that the post-test knowledge score (17.91 ± 4.04) was more when compared to the pre-test knowledge score (10.46 ± 4.89) (Tables 1,2 and Graphs 1,2).

Discussion

As the calculated 't' value (-17.35) was much higher than table 't' value (2.00) the hypothesis: H_1 - there will be significant difference between the pre-test knowledge and post-test knowledge

scores of parents of preschool. The overall findings reveal that the post-test knowledge score (17.91 ± 4.04) was more when compared to the pre-test knowledge score (10.46 ± 4.89). Hence it indicates that the STP was effective in enhancing the knowledge of parents of preschool children, and the study recommends similar study can be replicated on large scale, experimental study can be done with control group, comparative study may be conducted between urban and rural settings.

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