



Effectiveness of Structured Information Booklet on Knowledge Regarding Prevention of Pneumonia by Vitamin-D Among Mothers of Children 0-5 Years Admitted in Pediatric Ward S.V.S Hospital, Mahabubnagar, Telangana, India

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ABSTRACT

An pre Experimental Study was carried out on “Effectiveness of Structured Information Booklet on knowledge regarding Prevention of Pneumonia by Vitamin-D among mothers of children 0-5 years admitted in pediatric ward S.V.S hospital, Mahabubnagar, Telangana, India”

Objectives of the study

- ✦ Assess the existing knowledge on use of vitamin-D in prevention of pneumonia among mothers of by conducting pre-test admitted at S.V.S hospital, Mahabubnagar.
- ✦ Develop and implement information booklet on knowledge regarding use of vitamin –D in prevention of pneumonia among mothers of children.
- ✦ Evaluate the effectiveness of information booklet on knowledge regarding use of vitamin-D in prevention of pneumonia among mothers of children by conducting post-test admitted at S.V.S hospital, Mahabubnagar.
- ✦ Determine the association between pre-test and post-test knowledge scores regarding use of vitamin - D in prevention of pneumonia among mothers of children with their selected demographic variable.

INTRODUCTION

“I like a teacher who gives you something to take home to think about besides homework”.

- Luis bunuel

Vitamin D is important for good overall health and strong and healthy bones. It’s also an important factor in making muscles, heart, lungs and brain work well and that body can fight infection. Today, vitamin D is seen as a vital part of good health and it’s important not just for the health of bones. Recent research is now showing that vitamin D may be important in preventing and treating a number of serious long term health problems. What makes vitamin D unique compared to other vitamins, is that when body gets its vitamin D, it turns vitamin D into a hormone. This hormone is sometimes called “activated vitamin D” or “calcitriol.” getting the right amount of vitamin D doesn’t depend on the foods you eat. Calcium and phosphorus are essential for developing the structure and strength of bones, and you need vitamin D to absorb these minerals. Under normal conditions of sunlight exposure, no dietary supplementation is necessary because sunlight promotes adequate vitamin D synthesis in the skin. Vitamin D comes from the diet sources such as eggs, fish, and dairy product.

Pneumonia is an infection that inflames the air sacs in one or both lungs. The air sacs may fill with fluid (purulent material), causing cough with phlegm, fever, chills, and difficulty breathing. A variety of organisms, including bacteria, viruses and fungi, can cause pneumonia. Signs and symptoms of pneumonia may include: Chest pain when you breath or cough, Cough, which may produce phlegm, Fatigue, Fever, sweating and shaking chills, Nausea, vomiting or diarrhea and Shortness of breath. Vitamin D is an important part of the immune system. Vitamin D can help to increase the amount of good immune proteins that fight and destroy bacteria. Children with low levels of vitamin D are more likely to develop pneumonia, and are also more likely to have worse outcomes and longer recoveries from pneumonia. Having high levels of vitamin D may be a way to help prevent pneumonia.

Methodology

The research design adopted for the study was one group pre test and post test, which belongs to pre experimental design. 30 mothers were selected by using simple random sampling technique of probability sampling technique method. A structured self administered questionnaire was used for data collection which consisted of two Sections. Section-I consisting of 10 demographic data of the mothers and section- II consisting of 40 items regarding prevention of pneumonia by vitamin d among mothers of children with pneumonia in pediatric OPD SVS Hospital, Mahabubnagar. A pilot study was conducted from 16/5/22 to 22/05/22 in Pediatric Ward, SVS Hospital, Mahabubnagar, Telangana, after obtaining formal permission from Residential Director, SVS Hospital, to assess the feasibility and reliability of the tool. The obtained value of Karl Pearson correlation of coefficient was $r = 0.92$, which infers the tool as reliable. The main study was conducted in admitted in pediatric ward SVS Hospital Mahabubnagar, Telangana from 01/06/2022 to 30/06/2022. The collected data was analyzed by using both descriptive and inferential statistics such as frequency and percentage distribution, Mean, standard deviation, paired' test and chi square test at 0.01 level of significance with 29 df.

Results

Findings of the study were discussed under section - A, B, C.

Section A: Frequency and percentage distribution of Mothers of children 0-5 years according to their selected demographic variables.

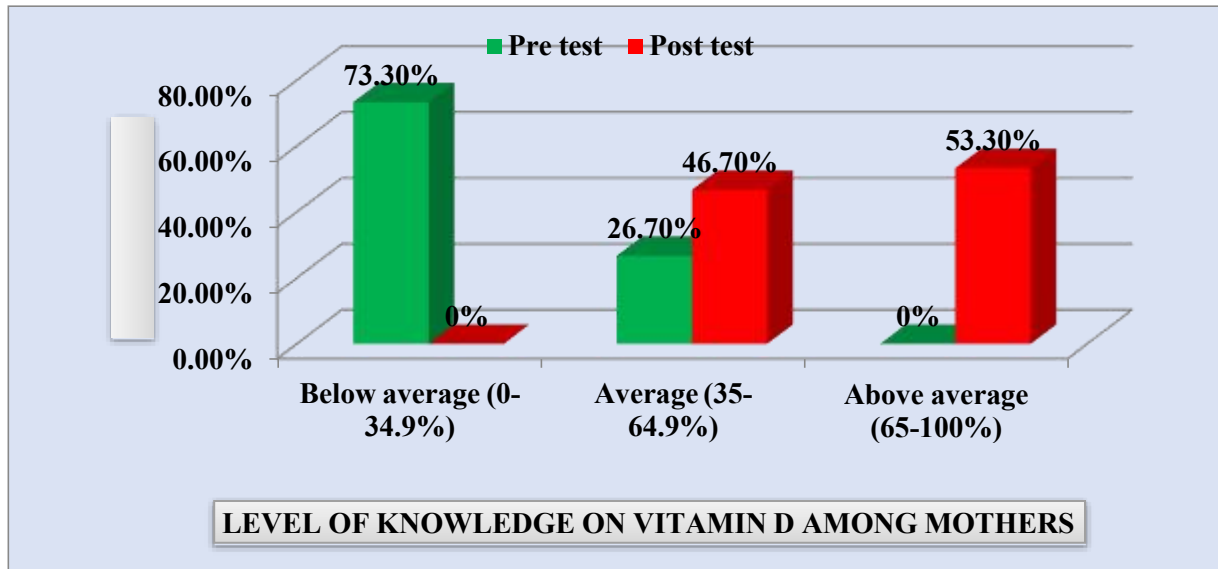
The majority of children 12 (40%) were with 2-3 years, Regarding education, majority 14 (46.7%) of the sample were with SSLC education religion among Mothers of children 0-5 years 9 (30%) were Muslims, in regard to type of family among Mothers of children 0-5 years, majority 15 (50%) In respect of occupation among Mothers of children 0-5 years, majority 10 (33.3%), family income per month, majority 11 (36.7%) were getting Rs.5000-10000/- per month, number of children, majority 15 (50%) were with one child, in regard to child receiving vitamin D supplementation among Mothers of children 0-5 years, majority of the Mothers of children 0-5 years 20 (66.7%). knowledge on vitamin D among Mothers of children 0-5 years, majority 21 (70%) not had knowledge on vitamin D, In regard to source of information among Mothers of children 0-5 years, majority 19 (63.3%).

Section B: Frequency and percentage of knowledge scores of Mothers of children 0-5 years on Prevention of pneumonia by Vitamin-D according to the level of knowledge scores in pre test and post test.

The frequency and percentage based on knowledge scores of the Mothers of children 0-5 years about Prevention of pneumonia by Vitamin D, Below average (0-34.9%) indicates the scores in between 0 to 10, Average (35-64.9%) indicates the score between 11-19 and Above average (65-100%) indicates the scores between 20-30. 22 (73.3%) were under below average knowledge level in pretest whereas in post test were found nil, 8 (26.7%) were under average knowledge level in pretest whereas 14 (46.7%), were average knowledge level in post test, above average knowledge level in pretest were found nil whereas 16 (53.3%) were under above average knowledge level in post test. These differences indicate that structured information booklet was highly affected in Mothers of children 0-5 years.

Frequency and percentage of distribution of knowledge score of Mothers of children 0-5 years according to level in pre test and post test on knowledge regarding overall Prevention of pneumonia by Vitamin D(n=30)

Categorization	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Below average (0-34.9%)	22	73.3%	0	0%
Average (35-64.9%)	8	26.7%	14	46.7%
Above average (65-100%)	0	0%	16	53.3%



Section C: Paired t test of significance for knowledge scores of Mothers of children 0-5 years on Prevention of pneumonia by Vitamin Din pre test and post test and comparing pre test and post test knowledge scores.

Pre test and post test mean knowledge scores and paired t-test of significance on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years.

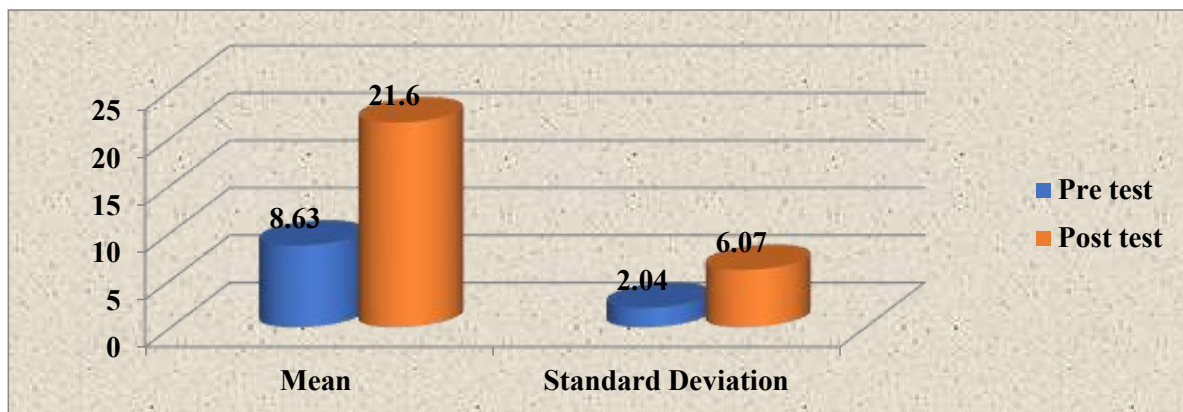
(n=30)

Knowledge scores	Pre test	Post test
Mean	8.63	21.60
Standard Deviation	2.04	6.07
Paired t-test	10.87	

29df

Table t-value 3.65

P<0.001



The pre test mean was 8.63 with 2.04 standard deviation and that of post test was 21.60 with 6.07 standard deviation. The calculated 't' value was 10.87, which is higher than the table 't' value 3.65 at 29df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pre test and post test knowledge scores.

The calculated 't' value was 8.54, which is higher than the table 't' value 3.65 at 29df with 0.001 level of significance. The pre test mean for knowledge on food sources of vitamin-D, supplements, and causes of vitamin-D deficiency was 2.03 with 1.33 standard deviation and that of post test was 6.77 with 2.18 standard deviation. The calculated 't' value was 9.05, which is higher than the table 't' value 3.65 at 29df with 0.001 level of significance. The pre test mean for knowledge on daily recommended vitamin -d, pneumonia, causes, symptoms, diagnosis, treatment, association between vitamin-D and pneumonia was 2.97 with 1.54 standard deviation and that of post test was 7.43 with 2.28 standard deviation. The calculated 't' value was 8.55, which is higher than the table 't' value 3.65 at 29df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pre test and post test knowledge scores.

Section D: Association between knowledge scores of Mothers of children 0-5 years on Prevention of pneumonia by Vitamin D in accordance with selected demographic variables.

Mothers of children 0-5 years with Age of child. For pre test the table value of χ^2 at 0.05 level of significance with 2df is 5.99, as the calculated value of χ^2 (7.72) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with Age of child. For post test the table value of χ^2 at 0.05 level of significance with 2df is 5.99, as the calculated value of χ^2 (8.18) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with Age of child.

Education of mother. For pre test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (9.98) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with Education of mother. For post test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (9.84) was more than the table value that shows there was significant association.

Type of family. For pre test the table value of χ^2 at 0.05 level of significance with 2df is 5.99, as the calculated value of χ^2 (6.19) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with type of family. For post test the table value of χ^2 at 0.05 level of significance with 2df is 5.99, as the calculated value of χ^2 (6.58) was more than the table value that shows there was significant association.

Occupation of mother. For pre test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (8.37) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with occupation of mother. For post test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (8.55) was more than the table value that shows there was significant association.

Child receiving vitamin D. For pre test the table value of χ^2 at 0.05 level of significance with 1df is 3.84, as the calculated value of χ^2 (4.34) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with child receiving vitamin D. For post test the table value of χ^2 at 0.05 level of significance with 1df is 3.84, as the calculated value of χ^2 (4.07) was more than the table value that shows there was significant association.

Knowledge on vitamin D. For pre test the table value of χ^2 at 0.05 level of significance with 1df is 3.84, as the calculated value of χ^2 (5.49) was more than the table value that shows there was significant association between the level of knowledge on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years with knowledge on vitamin D. For post test the table value of χ^2 at 0.05 level of significance with 1df is 3.84, as the calculated value of χ^2 (4.14) was more than the table value that shows there was significant association.

Hence it is concluded that after giving structured information booklet on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years the knowledge scores of have been increased. The formulated hypothesis for the present study "there will be significant difference in the pre test and post test knowledge scores of Mothers of children 0-5 years on Prevention of pneumonia by Vitamin D" has been accepted because of the significant difference in the pre test and post test knowledge scores which is evident by the 't' values. Hence H_1 is accepted.

Interpretation and Conclusion

The study has showed that there was an overall improvement in the knowledge of the mothers after implementation of structured information booklet, further more knowledge has to be improved regarding prevention of pneumonia by vitamin - d among mothers of children with pneumonia at different hospitals by conducting various educational programmes.

CONCLUSION

Hence it is concluded that after giving structured information booklet on Prevention of pneumonia by Vitamin D among Mothers of children 0-5 years the knowledge scores of have been increased. The formulated hypothesis for the present study "there will be significant difference in the pre test and post test knowledge scores of Mothers of children 0-5 years on Prevention of pneumonia by Vitamin D" has been accepted because of the significant difference in the pre test and post test knowledge scores which is evident by the 't' values. Hence H_1 is accepted.

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