Effectiveness Of Structured Teaching Programme On Knowledge Regarding Hypovitaminosis (D) Among Adults In Olapalayam Area At Namakkal District

Section A-Research paper

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HYPOVITAMINOSIS (D) AMONG ADULTS IN OLAPALAYAM AREA AT NAMAKKAL DISTRICT

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Abstract

Vitamin D testing and the use of vitamin D supplements have increased substantially in recent years. Currently, the role of vitamin D supplementation, and the optimal vitamin D dose and status, is a subject of debate, because large interventional studies have been unable to show a clear benefit (in mostly vitamin D replete populations). This may be attributed to limitations in trial design, as most studies did not meet the basic requirements of a nutrient intervention study, including vitamin D-replete populations, too small sample sizes, and inconsistent intervention methods regarding dose and metabolites. .

Methods: Research approach: Quantitative approach,

Sampling technique: Probability Convenient Sampling Technique.

Research Design: Pre experimental one group pretest & posttest design. The present study was conducted in olapalayam at Namakkal District, Tamilnadu. The participants are adults from olapalayam. The total participants of 50 adults were from olapalayam at Namakkal district.

Results: The level of knowledge among adults in pretest, among the adults 32(64%) of them had inadequate knowledge, 16(32%) of them had moderate knowledge and 2(4%) in adequate knowledge regarding Hypovitaminosis. During the level of knowledge among adults in post-test, among the adults, none of them had inadequate knowledge in posttest, 14(28%) of them had moderate knowledge and 36 (72%) of them adequate knowledge regarding Hypovitaminosis. During pretest mean value was 15.46 and standard deviation was 3.98, in posttest mean value was 22.31 and standard deviation was 43.32. The calculated value of t was 8.42 which is greater than table value, it is noted that there was a highly significant between pre and post test score, so there is effectiveness on structured teaching problem regarding Hypovitaminosis. It shows that, association between level of knowledge with selected demographic variables for considering the variables age, education status, occupation, dietary pattern, work, knowledge regarding Hypovitaminosis (D), exposure of sunlight had no association between levels of knowledge, type of residence, sunlight knowledge about vitamin D had association with level of knowledge. The Chi – square values as followed: Chi – square value of age in years was 3.13 (Df = 6, NS).Chi – square value of educational status was 4.19 (DF = 6, NS)Chi – square value of residence was 6.89 (DF = 2, NS)Chi – square value of occupation 1.36 (DF = 2, NS)Chi – square value of dietary pattern was 3.56 (DF = 2, NS)Chi – square value of types of work was 1.83 (DF = 2, NS)Chi – square value of knowledge regarding Hypovitaminosis (D) was 1.83 (DF = 2, NS)Chi – square value of how got knowledge of Hypovitaminosis (D) was 1.83 (DF = 2, NS)Chi – square value of exposure of sunlight was 4.13 (DF = 2, NS)Chi – square value of sunlight can give Vitamin D was 8.43 (DF = 2, NS)

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1. INTRODUCTION

A child is a precious gift, who has lots of potential within, who can be the best resource of the nation if raised and molded in a good manner. The parents concern is great towards the health of a growing child. The physical health of a child is associated with the mental and social development. Most of the children have not been protected over years and they remain as a group that is now most vulnerable, dependent and least powerful in India. Vitamin D is a vitamin that is important for good health. Like other vitamins we do get vitamin D from food. Vitamin D is mostly made in the skin by exposure to sunlight. Sufficiency of vitamin D is necessary not only for bone health but for a variety of other metabolic and immune processes including effects mediated through vitamin D receptors distributed ubiquitously in the body. In the present study we identify associations of lifestyle and cultural practices with vitamin D status. The newly identified interaction between circulating vitamin D, vitamin D receptors in the gut and the gut micro biome underscores the emerging importance of vitamin D in human physiology and its role in the maintenance of health. It is very likely that poor or marginal vitamin D nutrition is an important determinant of ill health at both population and individual level in this population. Limitations of the present study include that we did not consider a design effect in the initial sample size calculation, and that we did not assess the gut micro biome. The latter is a complex and sometimes unrewarding exercise, but could potentially have thrown light on the relationship between hygiene parameters and serum 25OHD concentrations.

2. BACKGROUND / NEEDS OF THE STUDY

Vieth R, Bishoff FH, 2007: Karnataka has a population of 45 million, the state has a literacy rate of (56%). The food consumption patterns reveal that cereals and millets are the main food items. The protective foods are consumed in less amounts. When compared with the Indian recommended dietary intake (RDI), the intake of energy in adults was found to be higher in the form of protein. The intake of vitamins was (50%) less than the recommended dietary intake.

Parul data, 2007: Nutritional Factors play a vital role in the bone homeostasis. Adequate calcium intake along with Vitamin D helps to maintain bone mineral mass attained at the period of growth. During infancy, childhood and adolescents, vitamin D and calcium status co-relate with increased bone mineral density and have the potential to increase the peak bone mass. Vitamin D deficiency in children is common and represents a global health problem.

The deficiency of vitamin D causes Rickets in fewer than five children. It reduces calcification of bones which affect the growth of bones and causes deformity of bones, such as- Curved legs, Pigeon chest, Rickets rosary and deformed pelvis.

And also delay in teething, walking and standing. The term Rickets is thought to be derived from either the English word Wrick meaning to twist or from the Greek word Rachitic. The essential lesion is an excess of osteoid tissue, which lacks mineralization in growing bones.

The two main factors that are responsible for causing rickets- (Vitamin-D and Non-vitamin deficiency rickets).

Wagner CL. Greer FR,2008 : From last 20 years nutritional rickets has been described in at least 59 countries. It causes spectrum change in different regions of the world. A systematic review of articles on nutritional rickets from various geographical regions published in the last 20 years. The information about prevalence and causes of rickets were extracted. Calcium deficiency is the major cause of rickets in Africa and parts of Asia.

Statement of the problem:
A Study to assess the effectiveness of structured teaching programme on knowledge regarding Hypovitaminosis (D) among adults in olapalayam area at Namakkal District.

Objectives of the study:
1) To assess the pretest level of knowledge regarding Hypovitaminosis (D) among adults in olapalayam area at namakkal.
2) To determine the effectiveness of structured teaching programme on knowledge regarding Hypovitaminosis (D) among adults.
3) To find out the association between the posttest knowledge score with their selected socio-demographic variables.

Hypothesis:
H_1 – There is a significant difference between pretest and posttest knowledge scores regarding Hypovitaminosis (D).
H_2 – There is a significant association between posttest knowledge score regarding

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Hypovitaminosis (D) selected demographic variables.

3. RESEARCH METHODOLOGY

The quantitative study was conducted at olapalayam namakkal district, by using convenient sampling technique with the sample size of 50 adults those who fulfilled the inclusion criteria after obtaining the ethical concert and formal approval from study setting the data collection was done by using structured questionnaire on hypovitaminosis(D)after it was followed by the intervention on education about causes, signs and symptoms,complication,management on hypovitaminosis(D)after the post test was conducted after seven days
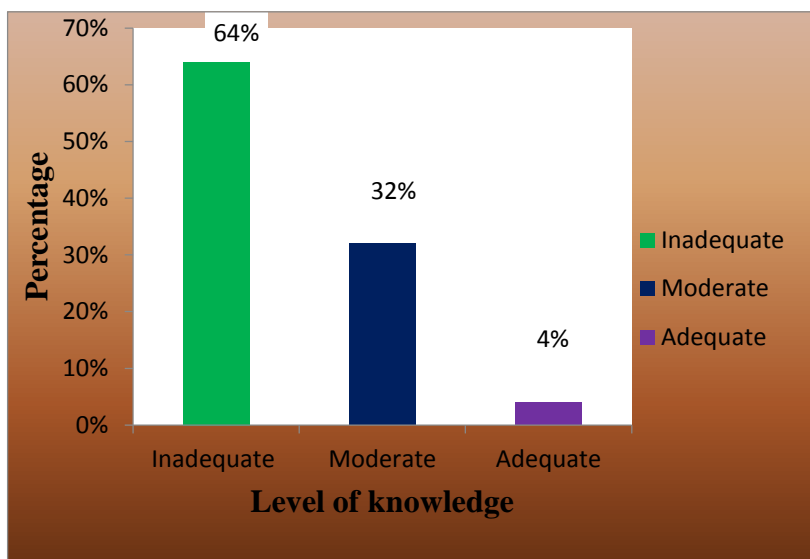
Distribution of Socio Demography Variables According To Adults in Olapalayam Area at Namakkal

N=50

S.No	Demography variables	Frequency	Percentage
1	Age in years a)18-25 years b)26-30years c)31-35years d)36 years above	29 21 0 0	58 42 0 0
2	Educational status a)Literate b)Primary education c)Higher education d)Degree	5 20 19 6	10 40 38 12
3	Residence a)Urban area b)Rural area	32 18	64 36
4	Occupation a)Agriculture b)Non-Agriculture	17 33	34 66
5	Dietary pattern a)Vegetarian b)Non- vegetarian	12 38	24 76
6	Do you work mainly a)Indoor b)Outdoor	19 31	38 62
7	Knowledge regarding Hypovitaminosis (D)? a)Yes b) No	17 37	34 76
8	How you got knowledge of Hypovitaminosis (D) a) From Media / Social Network b)From Friends / Family c)From Health Professionals d) No knowledge about Hypovitaminosis (D)	6 4 7 33	12 8 14 66
9	Have exposure of sunlight? a)Yes b) No	19 31	38 62
10	Do you know that sunlight can give you Vitamin D? a)Yes b) No	29 21	58 42

Distribution of Adults According To Level Of Knowledge Regarding Hypovitaminosis (D) In Pre Test
Frequency And Percentage Distribution Of Adults According To Level Of Knowledge In Pre Test.

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that level of knowledge among adults in pretest, among the adults 32(64%) of them had inadequate knowledge, 16(32%) of them had moderate knowledge and 2(4%) has adequate knowledge regarding Hypovitaminosis (D).

.**Distribution Of Adults According To Level Of Knowledge Regarding Hypovitaminosis (D) In Post Test**
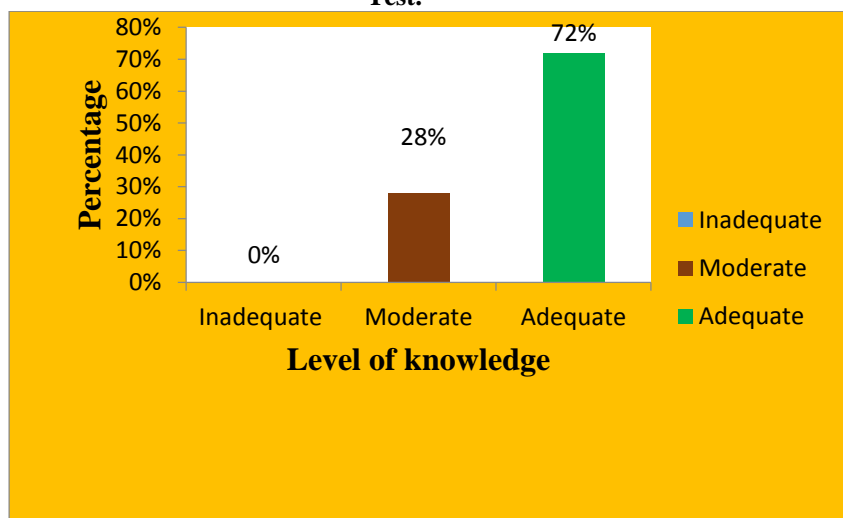
Frequency And Percentage Distribution Of Adults According To Level Of Knowledge In Post Test.

That level of knowledge among adults in posttest , among the adults ,none of them had inadequate knowledge in posttest, 14(28%) of them had moderate knowledge and 36(72%) of them adequate knowledge regarding Hypovitaminosis.

Comparision Of Pre And Post Level Of Knowledge Among Adults

S No	Level of knowledge	Pre test		Post test	
		F	%	F	%
1	Inadequate	32	64%	0	0%
2	Moderate	16	32%	14	28%

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3	Adequate	2	4%	36	72%

It is shows that level of knowledge among adults in pretest, 32(64%) of them had inadequate knowledge, 16(32%) of them had moderate knowledge and 2(4%) are adequate knowledge regarding Hypovitaminosis.

Among the adults, none of them had inadequate knowledge in posttest, 14(28%) of them had moderate knowledge and 36(72%) of them adequate knowledge regarding Hypovitaminosis.

.Comparision Of Pre And Post Level Of Knowledge With Mean, Standard Deviation Among Adults
Mean And Standard Deviation With Pre And Post Test Level Of Knowledge On Adults

S.No	Test	Mean	SD	't'	Table value
1	Pre test	15.46	3.98	8.42**	1.96
2	Post test	22.31	4.32		

During pretest mean value was 15.46 and standard deviation was 3.98, in posttest mean value was 22.31 and standard deviation was 43.32. The calculated value of t was 8.42 which is greater than table value, it is noted that there was a highly significant between pre and post test score, so there is effectiveness on structured teaching programme regarding Hypovitaminosis (D).

Association Between Post Test Levels Of Knowledge   With Selected Demography Variables Among Adults

S. No	Demography variables	Level of knowledge			Chi square value
		Inadequate	Moderate	Adequate	
1	What is your age? a. 18 to 25 years b. 26 to 30 years c. 31 to 35 years d. 36 & above	0 0 0 0	8 6 0 0	21 15 0 0	3.13 DF=6,NS
2	What is your Education Status? a. Illustrate b. Primary Education c. Higher Education d. Degree	0 0 0 0	2 7 5 0	3 13 14 6	4.19 Df=6,NS
3	3. What is your Residence? a. Urban Area b. Rural Area	0 0	5 9	27 9	6.89 Df=2,S

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4	What is your Occupation? a. Agriculture b. Non-Agriculture	0 0	6 8	11 25	1.36 Df=2,NS
5	Dietary Pattern a. Vegetarian b. Non Vegetarian	0 0	7 7	5 31	3.56 Df=2,NS
6	Do you work mainly a. Indoor b. Outdoor	0 0	6 8	13 23	1.83 Df=2,NS
7	Do you have knowledge regarding Hypovitaminosis (D)? a. Yes b. No	0 0	4 10	13 23	1.83 Df=2,NS
8	If yes, how you got knowledge of Hypovitaminosis (D) a. From Media / Social Network b. From Friends / Family c. From Health Professionals d. No knowledge about Hypovitaminosis (D)	0 0 0 0	2 1 3 8	4 3 4 25	7.83 Df=6,NS
9	Do you like to have exposure of sunlight? a. Yes b. No	0 0	5 9	14 22	4.13 Df=2,NS
10	Do you know that sunlight can give you Vitamin D? a. Yes b. No	0 0	8 6	21 15	8.43 Df=2,S

that association between level of knowledge with selected demographic variables, for considering the variables age, education status, occupation, dietary pattern, work, knowledge regarding Hypovitaminosis (D), got knowledge of Hypovitaminosis (D), exposure of sunlight had no association between level of knowledge & type of residence, sunlight knowledge about vitamin D had association with level of knowledge.

4. DISCUSSION AND CONCLUTION

In the view of the distribution of adults according to age, among them 29(58%) of age were between 18-25 years, 21(42%) of them age were between 26-30 years and none them in the age group of 31 to 35 years and 36 & above.

The distribution of adults according to education status, among the adults 5(10%)

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of them were illiterate, 20(40%) of them were had primary education, 19(38%) of them completed higher education and 6(12%) of them were completed degree.

It implicit that distribution of adults according to residence, among the adults 32(64%) of were living in urban area and 18(36%) of them were living in urban area.

The distribution of adults according to occupation, among them 17(34%) of them had Agriculture work and 33(66%) of them had Non Agriculture Work.

In accordance with that distribution of adults according to dietary pattern, among the adults 12 (24%) of them were vegetarian 38(76%) of them non-vegetarian.

It shows that distribution of adults according to work on mainly, among the adults 19(38%) of them were indoor work and 31(62%) of them were outdoor work.

The distribution of knowledge regarding Hypovitaminosis, among them 17(34%) of them have knowledge, 33(66%) of them have no knowledge on Hypovitaminosis.

It reveals that distribution of adults according to source of knowledge 6(12%) of them had knowledge from media, 4(8%) of them had knowledge from friends /family 7(14%) of had knowledge from health professions of them and 33(66%) of them were no knowledge of Hypovitaminosis (D).

It shows that distribution of adults according to Hypovitaminosis, among the adults 19(38%) of them had exposure of sunlight, 31(62%) of them had no exposure of sunlight.

The distribution of adults according to information on sunlight given vitamin D, among the adults 29(58%) of them were known information about vitamin D and 21(42%) of them were unknown about the vitamin D.

To Assess The Level Of Knowledge Among The Adults:

The level of knowledge among adults in pretest, among the adults 32(64%) of them had inadequate knowledge, 16(32%) of them had moderate knowledge and 2(4%) in adequate knowledge regarding Hypovitaminosis.

During the level of knowledge among adults in post-test, among the adults, none of them had inadequate knowledge in posttest, 14(28%) of them had moderate knowledge and 36 (72%) of them adequate knowledge regarding Hypovitaminosis.

During pretest mean value was 15.46 and standard deviation was 3.98, in posttest mean value was 22.31 and standard deviation was 43.32. The calculated value of t was 8.42 which is greater than table value, it is noted that there was a highly significant between pre and post test score, so there is effectiveness on structured teaching problem regarding Hypovitaminosis.

To Find Out The Association Between Demographical Variable With Level Of Knowledge Among Adults.

It shows that, association between level of knowledge with selected demographic variables for considering the variables age, education status, occupation, dietary pattern, work, knowledge regarding Hypovitaminosis (D), exposure of sunlight had no association between levels of knowledge, type of residence, sunlight knowledge about vitamin D had association with level of knowledge.

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