



A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING VITAMIN D DEFICIENCY AMONG UNDERGRADUATES IN KMCT SCHOOL OF NURSING MANASSERY, KOZHIKODE

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ABSTRACT

Vitamin D deficiency is a widespread public health issue with significant musculoskeletal and non-skeletal implications. Undergraduates are at risk due to indoor lifestyle, inadequate sun exposure, and poor dietary habits, yet their awareness remains understudied. So it is very important to have adequate knowledge, positive attitude and a good practice of vitamin D deficiency among undergraduates. It becomes necessary to assess the level of knowledge, attitude and practice regarding vitamin D deficiency among undergraduates. Objectives are: ∞ To assess the knowledge, attitude and practice regarding vitamin D deficiency among college students. ∞ To determine the association between knowledge and selected demographic variable regarding vitamin D deficiency among college students. A descriptive research design is considered as suitable to assess the level of knowledge, attitude and practice regarding vitamin D deficiency among undergraduates by using close ended self administered and Likert scale. 100 General Nursing & Midwifery students from KMCT School of Nursing, Manassery, Kozhikode were selected as sample by using non-probability convenient sampling method. Baseline performa consisting of demographic data, close ended self-administered and Likert scale. The knowledge was assessed by self- structured questionnaire, attitude was assessed by Likert scale and practice was assessed by self- structured questionnaire. The data was analysed through descriptive and inferential statistics. The result study revealed that majority of undergraduate students (47%) had inadequate knowledge regarding Vitamin D Deficiency, 66% had moderate attitude towards Vitamin D Deficiency and 53% of them had moderate practice of Vitamin D Deficiency. And also, there is a significant association between the level of knowledge regarding Vitamin D Deficiency and selected demographic variables gender, religion, academic year, previous knowledge regarding Vitamin D Deficiency, monthly family income, occupation of father and mother.

KEYWORDS: Knowledge ,Attitude, Practice ,Vitamin D Deficiency, Undergraduates

INTRODUCTION

“Health is the greatest gift, Contentment the greatest wealth, faithfulness the best relationship” -Buddha

Vitamin D is an essential fat-soluble vitamin that is produced in the skin depending on sunlight and found in different food elements including oily fish, egg yolks, veal, beef, liver, sun-dried mushrooms, offal, milk, and dairy products, as well as nutritional supplements. Since its discovery, the role of vitamin D has gotten extreme attention, from being a simple vitamin to a steroid prohormone. The most established purpose of vitamin D is to help calcium absorption from the gastrointestinal tract, hence ensuring adequate serum calcium and phosphate levels in the blood. It is important in a variety of vital processes, including mineralization and skeleton growth, control of the parathyroid gland's function, and the immune system as a whole. It helps to prevent autoimmune disorders, chronic diseases, and malignancies, additionally, it supports the cardiovascular system's health. The main circulating form of vitamin D is 25-hydroxyvitamin D (25(OH) D). A serum 25(OH) D concentration of less than 25 nmol/L is considered vitamin D deficiency and less than 50 nmol/L reflects inadequacy. On the other side, exogenous hypervitaminosis D (>150 ng/mL) is usually due to the intake of vitamin D supplements in higher doses (excess of 10,000 IU/day) for a prolonged duration (months), which is more than the recommended upper limit (4,000 IU/day). However, this toxicity does not apply with abnormally high exposure of skin to the sun or by eating a diversified diet. Vitamin D deficiency appears widespread among Indian college and non-medical students, primarily due to indoor lifestyles, limited sun exposure, and low dietary intake. Exact nationally pooled prevalence for this specific group is not yet available for 2024–2025, but related population data suggest young adults likely fall within the high deficiency range (often 50–70+ %) seen in adolescents and the general population.³

PROBLEM STATEMENT

A descriptive study to assess the level of knowledge, attitude and practice regarding vitamin D deficiency among undergraduates in KMCT School of Nursing, Manassery, Kozhikode.

OBJECTIVES

- To assess the knowledge, attitude and practice regarding vitamin D deficiency among college students.
- To determine the association between knowledge and selected demographic variable regarding vitamin D deficiency among college students.

HYPOTHESIS

H1: There is a significant association between the level of knowledge regarding vitamin D deficiency and selected demographic variables among undergraduate students

CONCEPTUAL FRAMEWORK

A conceptual framework serves as a guide which in systematically identifying a precisely defined relationship between variables. Conceptualization is a process of forming ideas, which utilizes and forms conceptual framework from development of research design. The KAP model is a widely used behavioural framework in research that helps assess and understand what people know (Knowledge), how they feel (Attitude), and how they act (Practice) regarding a specific topic.

METHODOLOGY

Research Approach: Quantitative research approach.

Research Design: Descriptive research design.

Population: Population of the study includes nursing students.

Sample size: 100 General Nursing and Midwifery students.

Sampling Technique: Non- probability convenient sampling technique.

Setting of the study: KMCT School of Nursing, Manaserry, Kerala.

Demographic variables: Age, Gender, Religion, Academic year, Previous knowledge regarding vitamin d deficiency, monthly family income, occupation of father, occupation of mother.

TOOL

Part 1-Baseline Proforma

It consists of 7 questions to collect age, gender, religion, academic year, previous knowledge regarding vitamin d deficiency, monthly family income, occupation of father and occupation of mother.

Part 2– Self- Structured Questionnaire

It consists of 20 questions to assess the knowledge of undergraduates students regarding the vitamin D deficiency.

Part 3– Likert Scale

It consists of 20 questions to assess the attitude of undergraduate students regarding the vitamin D deficiency.

Part 4– Practice Assessment

It consists of 20 questions to assess the practice of undergraduates students regarding the vitamin D deficiency.

Data collection

Data collection was started after obtaining ethics committee clearance and permission from the concerned authorities. The subjects were selected using non-probability convenience sampling.

Ethical considerations

Ethical clearance was obtained from the Ethics Committee of KMCT College of Nursing. Informed consent was obtained from the subjects before data collection.

RESULTS

Section 1: Description of sample characteristics

Following were the major findings of the study,

Majority of the sample (32%) were in the age group of above 20 years were as (27%) were at the age of 19 years, (21%) in 18 years of age and (20%) in 20 years of age. Majority (85%) are female and (15%) are male. Majority (55%) were in the religion Islam, (40%) were Hindu and (5%) belongs to Christians. With respect to academic year majority (36%) are from second year, (49%) are from first year and (15%) from third year. Regarding previous knowledge on Vitamin D Deficiency, majority (68%) are knowledgeable and (32%) had no knowledge on Vitamin D Deficiency. Majority (38%) monthly family income comes in between 10000-15000, (25%) between 20000-45000, (19%) between 15000-20000 and (18%) are above 45000. Regarding occupation of father, majority (54%) were other occupations, (18%) are medical professionals, (16%) are government employees and (12%) are business men. Regarding occupation of mother, majority (38%) were other occupations, (35%) were house wives, (22%) were medical professionals and (5%) were government employees.

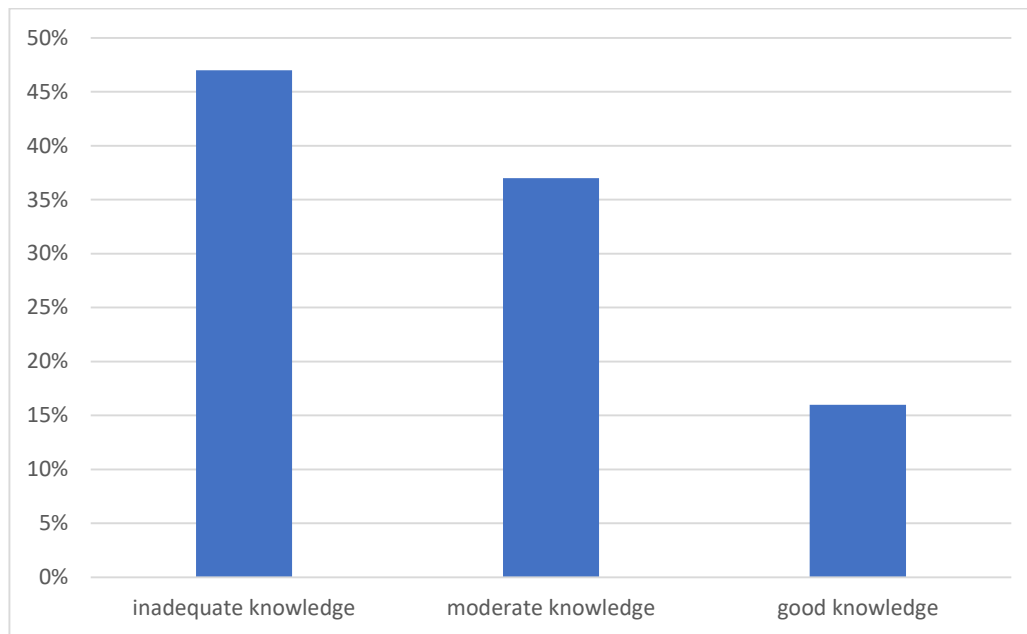
Table 1: Frequency and percentage distribution of sample characteristics.

SI NO	DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
1	AGE 18 YEARS 19 YEARS 20 YEARS - ABOVE 20 YEARS	21 27 20 32	21% 27% 20% 32%
2	GENDER - MALE - FEMALE - PREFER NOT TO SAY	15 85 0	15% 85% 0%
3	RELIGION - HINDU - ISLAM - CHRISTIAN - OTHERS	40 55 5 0	40% 55% 5% 0%
4	ACADEMIC YEAR - FIRST YEAR - SECOND YEAR - THIRD YEAR	49 36 15	49% 36% 15%
5	PREVIOUS KNOWLEDGE REGARDING VITAMIN D DEFICIENCY - YES - NO	68 32	68% 32%
6	MONTHLY FAMILY INCOME 10000-15000 15000-20000 20000-45000 - ABOVE 45000	38 19 25 18	38% 19% 25% 18%
7	OCCUPATION OF FATHER - BUSINESS - PROFESSIONAL - GOVERNMENT EMPLOYEE - OTHERS	12 18 16 54	12% 18% 16% 54%
8	OCCUPATION OF MOTHER - HOUSE WIFE - HEALTH DEPARTMENT - GOVERNMENT EMPLOYEE - OTHERS	35 22 5 38	35% 22% 5% 38%

Section 2: Assessment of knowledge regarding Vitamin D Deficiency among undergraduates

The study shows majority (47%) students have inadequate knowledge regarding Vitamin D Deficiency, (37%) have moderate knowledge and (16%) have good knowledge.

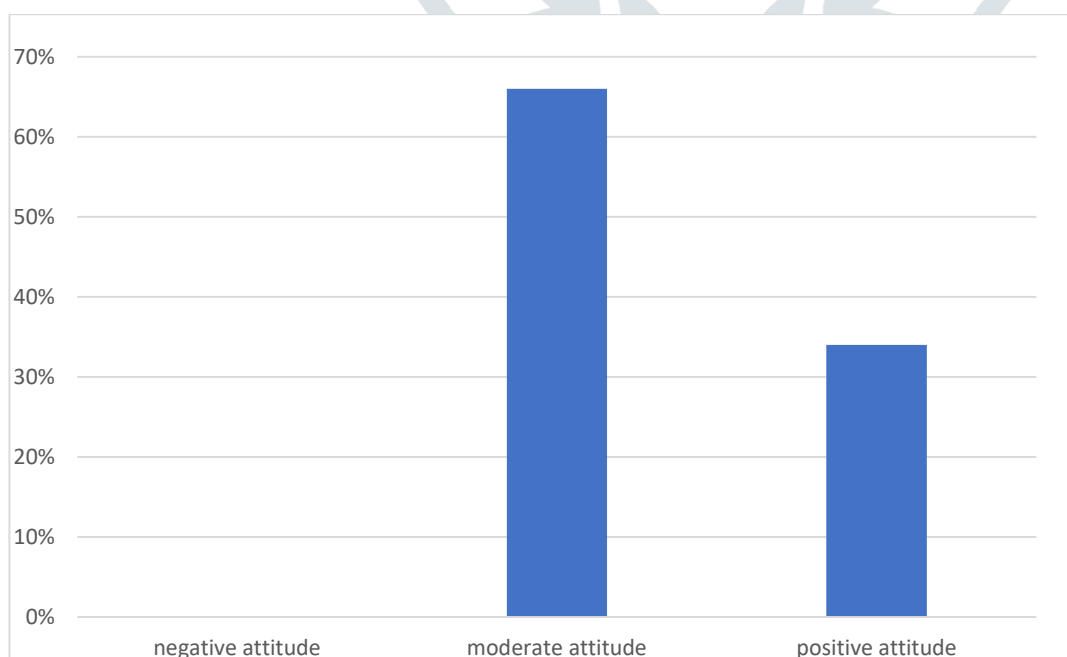
Fig 1: Bar diagram showing distribution of sample according to the knowledge experienced by the undergraduate students.



Section 3: Assessment of attitude regarding Vitamin D Deficiency among undergraduates

The study shows 66% of students have moderate attitude towards Vitamin D Deficiency, 34% have positive attitude and 0% have negative attitude towards Vitamin D Deficiency.

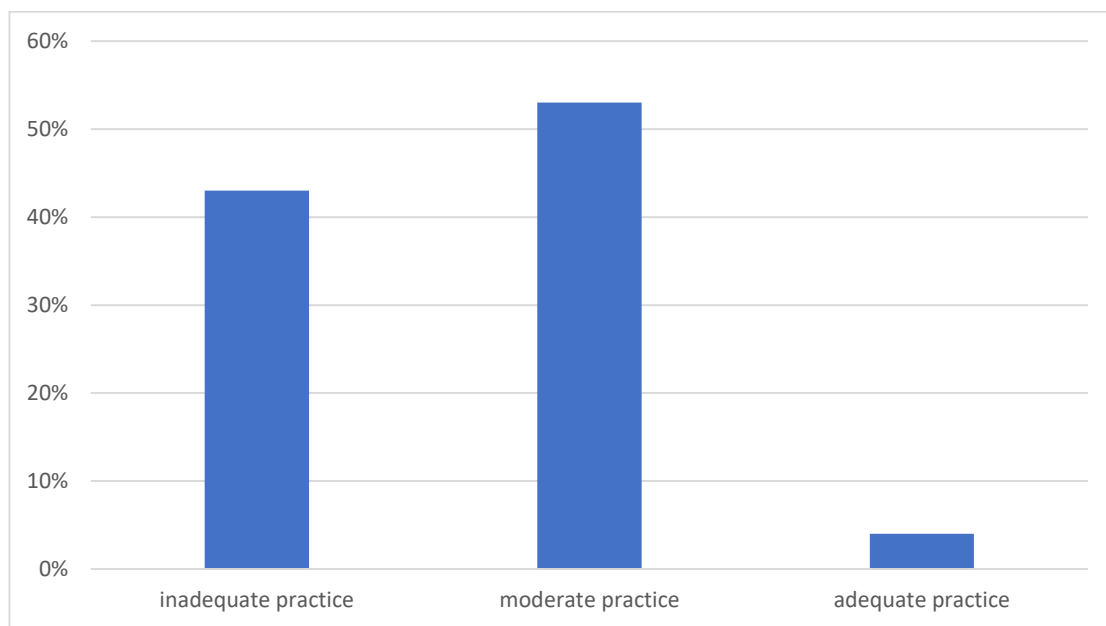
Fig 2: Bar diagram showing distribution of sample according to the attitude experienced by undergraduate students.



Section 4: Assessment of practice regarding Vitamin D Deficiency among undergraduates

53% have moderate practice of Vitamin D Deficiency, 43% have inadequate practice and 4% have adequate practice of Vitamin D Deficiency.

Fig 3: Bar diagram showing distribution of sample according to the practice experienced by undergraduate students.



Section 5: Association between selected demographic variables and knowledge regarding Vitamin D Deficiency among undergraduates

There is a significant association between the level of knowledge regarding Vitamin D Deficiency and selected variables such as gender, religion, academic year, previous knowledge regarding Vitamin D Deficiency, monthly family income, occupation of father and mother. There is no association between the level of knowledge and variable age.

DISCUSSION

The present study aims to assess the level of knowledge, attitude and practice regarding Vitamin D Deficiency among undergraduates. The study results shows that 32% were in the age above 20 were as 27% were at the age of 19 years, 21% were at the age of 18 years and 20% were at the age of 20 years. 85% are female were as 15% are male. Majority (55%) were in the religion Islam, (40%) were Hindu and (5%) belongs to Christians. With respect to academic year majority (36%) are from second year, (49%) are from first year and (15%) from third year. Regarding previous knowledge on Vitamin D Deficiency, majority (68%) are knowledgeable and (32%) had no knowledge on Vitamin D Deficiency. Majority (38%) monthly family income comes in between 10000 -15000, (25%) between 20000 -45000, (19%) between 15000 -20000 and (18%) are above 45000. Regarding occupation of father, majority (54%) were other occupations, (18%) are medical professionals, (16%) are government employees and (12%) are business men. Regarding occupation of mother, majority (38%) were other occupations, (35%) were house wives, (22%) were medical professionals and (5%) were government employees. Majority (47%) students have inadequate knowledge regarding Vitamin D Deficiency, (37%) have moderate knowledge and (16%) have good knowledge. 66% of students have moderate attitude towards Vitamin D Deficiency, 34% have positive 67 attitude and 0% have negative attitude towards Vitamin D Deficiency. 53% have moderate practice of Vitamin D Deficiency, 43% have inadequate practice and 4% have adequate practice of Vitamin D Deficiency.

- Rahma Said Al Hadhrami, Rehab Al Kaabi, Hajer Juma Al Shuaibi, Rawan Salim Al Abdulsalam (2024), conducted a descriptive cross- sectional study titled, “Assessment of Vitamin D-related knowledge, attitude and practice among Sultan Qaboos University students in Oman. A total of

399 students enrolled in various degree programs at the Sultan Qaboos University in Muscat, Oman. Using self-administered 38 item Vitamin D related KAP questionnaire to collect information regarding the participants vitamin D related knowledge, nutritional knowledge, attitudes and practices. The result shows that 384 (96.2%) were Omani nationals, 283 (70.9%) were women and 255 (64.1%) were between age of 20 and 26 years. Overall the participants demonstrated moderate general knowledge (mean score 77.3), poor nutritional knowledge (mean score 45.1), moderate attitudes (mean score 64.4) and average practices (mean score 60). In general female students demonstrated greater general knowledge ($p=0.004$) and more positive attitudes ($p=0.007$) compared with males. However, males more frequently reported better practices ($p<0.001$).¹⁵

- Shwetha M.N, Nancy Chandhra Priya. P (2019), conducted a descriptive study titled, "Knowledge regarding Vitamin D Deficiency among 58 students in St. Martha's College of Nursing, Bengaluru. A self- structured knowledge questionnaire on Vitamin D Deficiency was used to collect data and non-probability purposive sampling technique used for selection of samples and data was analyses and interpreted using descriptive and inferential statistics. An information pamphlet was distributed among students. The result of the study revealed that 41.38% have adequate knowledge, 55.18% have moderate knowledge and 3.44% have inadequate knowledge regarding Vitamin D Deficiency. The data analysis regarding association between level of knowledge and selected baseline variable reveals that there is no association between knowledge level and selected baseline variables such as age, religion, dietary pattern, use of sunscreen and previous history of Vitamin D Deficiency.¹⁴

RECOMMENDATIONS

- ❖ The study can be done on non-medical undergraduates
- ❖ The study can be conducted as quasi-experimental.
- ❖ The study can be replicated on large samples or more generalization.
- ❖ The study can be done on all the age group other than undergraduates

CONCLUSION

Based on the findings following are the conclusion,

- The knowledge regarding Vitamin D Deficiency was inadequate among undergraduates.
- The attitude regarding Vitamin D Deficiency was moderate among undergraduates.
- The practice regarding Vitamin D Deficiency was moderate among undergraduates.
- There is a significant association between the level of knowledge regarding Vitamin D Deficiency and selected demographic variables gender, religion, academic year, previous knowledge regarding Vitamin D Deficiency, monthly family income, occupation of father and mother.

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