JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING INTERNET ADDICTION AND ITS PREVENTIVE MEASURES AMONG NURSING STUDENTS OF KMCT NURSING COLLEGE MANASSERY, KOZHIKODE.

Asif Muhammed[1], Arya M[2], Diya Fathima P[3], Ashitha Vasu[4], Mohammed Shamseer C[5], Mrs. Jyothi Martin K[6], Prof. R. Mageswari[7]

[1 2 3 4 5]BSc Nursing students, KMCT College of Nursing, Kozhikode, Kerala, India

[6] Associate Professor Medical Surgical Nursing of KMCT college of nursing, Kozhikode, Kerala, India

[7] Professor, Principal, KMCT College of Nursing, Kozhikode, Kerala, India

ABSTRACT

Internet addiction is an emerging behavioral problem among students that can adversely affect their academic performance, mental health, and social life. Nursing students, as future healthcare professionals, need adequate knowledge regarding internet addiction and its preventive measures. With this perspective, the present study was conducted to assess the effectiveness of a structured teaching programme (STP) on knowledge regarding internet addiction and its preventive measures among nursing students of KMCT Nursing College, Manassery, Kozhikode. The objectives of the study were to assess the pre-test knowledge, evaluate the effectiveness of the structured teaching programme, and compare the pre-test and post-test knowledge scores. A quantitative research approach with a pre-experimental one group pre-test post-test design was adopted. The sample consisted of 60 first-semester B.Sc. nursing students selected using convenient sampling technique. Data were collected using a structured knowledge questionnaire. The pre-test was conducted to assess baseline knowledge, followed by the administration of the structured teaching programme. A post-test was conducted after the intervention using the same tool. The findings revealed that in the pre-test, most students had good (41.6%) and excellent (46.7%) knowledge, whereas in the post-test, the majority (73.3%) achieved excellent knowledge, with no students remaining in the poor category. The mean pre-test knowledge score of the participants was 7.9 (SD = 2.0), which increased to 9.2 (SD = 1.2) in the post-test after the Structured Teaching Programme (STP). The obtained paired t value was 4.3, indicating a statistically significant difference between the pre-test and post-test scores. Therefore, the Structured Teaching Programme was effective in improving the knowledge of the participants The study concluded that the structured teaching programme significantly improved the knowledge of nursing students regarding internet addiction and its preventive measures.

KEYWORDS: internet addiction, preventive measures, structured teaching programme, nursing students.

INTRODUCTION

The rapid advancement of information and communication technology has transformed the way individuals access information, communicate, and learn. The internet has become an indispensable part of academic life, especially among students in professional courses such as nursing. While appropriate internet use enhances learning, research, and clinical knowledge while, excessive and uncontrolled use can lead to internet addiction, which negatively affects physical health, mental well-being, academic performance, and social relationships. Nursing students are particularly vulnerable to internet addiction due to academic stress, long study hours, online learning platforms, and easy access to smartphones and internet services. Internet addiction can result in sleep disturbances, anxiety, depression, poor concentration, and reduced academic efficiency. Therefore, it is essential to educate nursing students regarding healthy internet usage and effective prevention strategies. Through structured teaching programme (STP) an organized educational approach can improve knowledge and awareness regarding internet addiction and its preventive measures. This study aims to assess the effectiveness of the structured teaching programme on knowledge regarding internet addiction and its prevention among nursing students of KMCT Nursing College, Manassery, Kozhikode.

PROBLEM STATEMENT

"A study to assess the effectiveness of structured teaching programme on knowledge regarding internet addiction and its preventive measures among nursing students of KMCT Nursing College, Manassery, Kozhikode."

OBJECTIVES

1. To assess the existing level of knowledge regarding internet addiction and its preventive measures among nursing students before the structured teaching programme.
2. To implement the structured teaching programme on internet addiction and its prevention. 3. To evaluate the effectiveness of the structured teaching programme by comparing pre-test and post-test knowledge scores.
4. To assess the level of improvement in knowledge regarding internet addiction and its preventive measures after the intervention.

HYPOTHESIS

H_0-There is no significant difference between the pre-test and post-test knowledge scores regarding internet addiction and its preventive measures among nursing students after the structured teaching programme.

H_1-There is a significant increase in knowledge regarding internet addiction and its preventive measures among nursing students after the structured teaching programme.

CONCEPTUAL FRAMEWORK

This study is based on the Input–Process–Output (IPO) model, which explains how an intervention brings change in outcomes.

1. Input

The input consists of variables that influence the study before the intervention:

• Socio-demographic variables: o Age o Gender o Year of study o Previous knowledge about internet addiction o Source of information.

• Baseline knowledge (Pre-test score) regarding internet addiction and its preventive measures .

2. Process

The process involves the intervention applied in the study:

• Implementation of the Structured Teaching Programme (STP) on:

- Meaning and causes of internet addiction

- Signs and symptoms
- Effects on physical and mental health
- Preventive measures (time management, healthy habits, etc.)

3. Output

The outcome after the intervention:

• Improved knowledge (Post-test score) regarding internet addiction and its preventive measures

• Difference between pre-test and post-test scores indicating effectiveness

METHODOLOGY

Research Approach: Quantitative Research Approach.

Research Design: Pre- experimental one group Pre-test, Post-test research design.

Population: Population of the study includes nursing students.

Sample size: 60 Bsc Nursing students.

Sampling Technique: Non- probability convenient sampling technique.

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

Demographic variables: Age, Gender, Academic year, Residence, Type of family, Previous source of information regarding internet addiction, Average duration of internet use per day, Purpose of internet use .

TOOL

Part 1-Baseline Proforma

It consists of 7 questions to Age, Gender, Academic year, Residence, Type of family, Previous source of information regarding internet addiction, Average duration of internet use per day, Purpose of internet use.

Part 2–Structured Knowledge Questionnaire

It consists of 10 questions to assess the knowledge of undergraduates students regarding the internet addiction and its preventive measures.

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 I: Socio-demographic Variables of Participants

The socio-demographic variables of the participants provide an understanding of the background characteristics of the study population.

- Age Distribution: The majority of the participants (60%) were in the age group of 17–19 years, while the remaining 40% belonged to the age group of 20–22 years. This indicates that most of the respondents were late adolescents or young adults, a group particularly vulnerable to increased internet usage and potential addiction.

- Gender Distribution: Out of 60 participants, 66.7% were female and 33.3% were male. This reflects the general trend in nursing education where female students constitute the majority.
- Year of Study: All participants (100%) were first-semester B.Sc nursing students. This ensures homogeneity in educational exposure and reduces variability due to academic experience.
- Type of Family: A majority of students (78.3%) belonged to nuclear families, while 21.7% came from joint families. Family structure may influence lifestyle habits, including internet usage patterns and supervision.
- Source of Information: Regarding awareness about internet addiction, 43.3% of participants reported the internet itself as their primary source of information. Teachers contributed to 21.7%, friends/peers 15%, television 11.7%, and other sources 8.3% respectively.
- Duration of Internet Use: More than half of the participants (53.3%) reported using the internet for 1–3 hours per day. About 26.7% used it for 4–6 hours, 11.7% for less than 1 hour, and 8.3% for more than 6 hours daily.

Section II: Pre-test Level of Knowledge

The pre-test was conducted to assess the baseline knowledge of nursing students regarding internet addiction and its preventive measures. The findings revealed that:

• 46.7% had excellent knowledge (score: 9–10)
• 41.6% had good knowledge (score: 6–8)
• 6.7% had average knowledge (score: 3–5)
• 5% had poor knowledge (score: 0–2) These results indicate that although a significant proportion of students already possessed good to excellent knowledge, there remained a small percentage with inadequate understanding.

Section III: Post-test Level of Knowledge

Following the implementation of the structured teaching programme, a post-test was conducted to evaluate changes in knowledge levels. The results showed a marked improvement:

• 73.3% of participants achieved excellent knowledge
• 25% had good knowledge
• 1.7% had average knowledge
• 0% remained in the poor knowledge category This remarks that students belong to average & poor knowledge level were well utilized by the structured teaching programme and showed significant improvement in their knowledge after the intervention.

Section IV: Comparison of Pre-test and Post-test Knowledge Scores

A comparison between pre-test and post-test scores provides a clearer picture of the effectiveness of the intervention.

Pre-test Mean Score: 7.9
Post-test Mean Score: 9.2
Pre-test SD: 2.0
Post-test SD: 1.2

The increase in mean score and the reduction in standard deviation suggest that the teaching programme improved knowledge and reduced variability among students.

Section V: Effectiveness of Structured Teaching Programme

The mean pre-test knowledge score of the participants was 7.9 (SD = 2.0), which increased to 9.2 (SD = 1.2) in the post-test after the Structured Teaching Programme (STP). The obtained paired t value was 4.3, indicating a statistically significant difference between the pre-test and post-test scores. Therefore, the Structured Teaching Programme was effective in improving the knowledge of the participants

• The null hypothesis (H_0) was rejected.
• The research hypothesis (H_1) was accepted.

Overall Findings

• Participants had a relatively good baseline level of knowledge, but not uniformly distributed.

- The structured teaching programme significantly enhanced knowledge levels.
- Notable increase in students with excellent knowledge post-intervention.
- No participants remained in the poor knowledge category.
- Statistical analysis confirmed improvement was significant.

Table 1: Frequency and percentage distribution of sample characteristics.

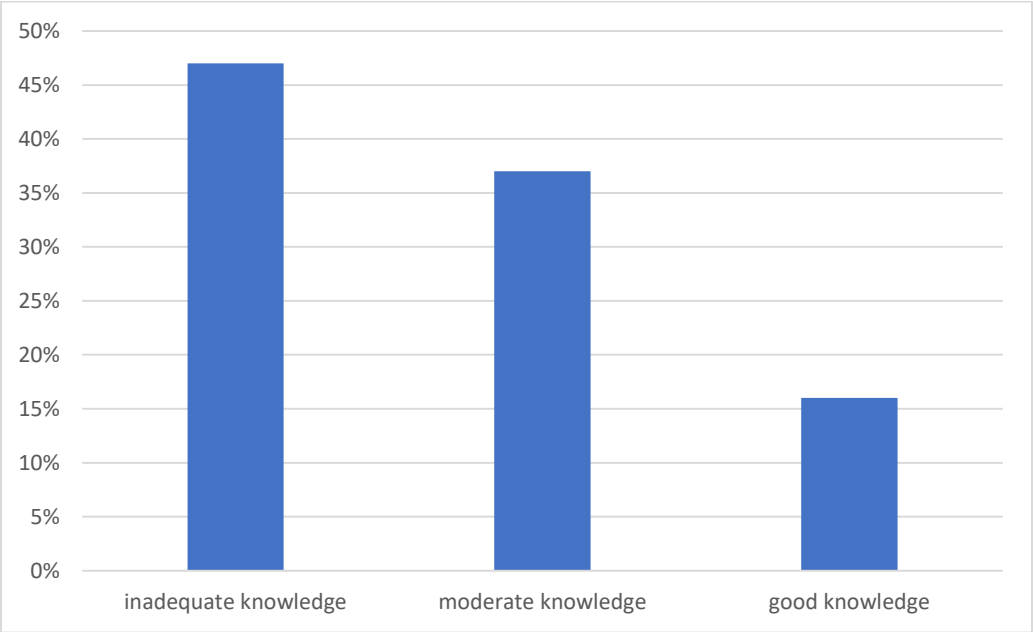
SI NO	DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
1	AGE		
	• 17-19 YEARS	36	60%
	• 20-22 YEARS	24	40%
2	GENDER		
	• MALE	20	33.3%
	• FEMALE	40	66.7%
3	YEAR OF STUDY		
	• FIRST YEAR	60	100%
4	TYPE OF FAMILY		
	• JOINT FAMILY	13	21.7%
	• NUCLEAR FAMILY	47	78.3%
5	SOURCE OF INFORMATION		
	• INTERNET	26	43.3%
	• TEACHERS	13	21.7%
	• FRIENDS/PEERS	9	15%
	• TELEVISION	7	11.7%
	• OTHERS		
6	MONTHLY FAMILY INCOME		
	• 10000-15000	38	38%
	• 15000-20000	19	19%
	• 20000-45000	25	25%
	• ABOVE 45000	18	18%
7	OCCUPATION OF FATHER		
	• BUSINESS	12	12%
	• PROFESSIONAL	18	18%
	• GOVERNMENT EMPLOYEE	16	16%
	• OTHERS	54	54%
8	OCCUPATION OF MOTHER		
	• HOUSE WIFE	35	35%
	• HEALTH DEPARTMENT	22	22%
		5	5%
		38	38%

	• GOVERNMENT EMPLOYEE • OTHERS		

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.

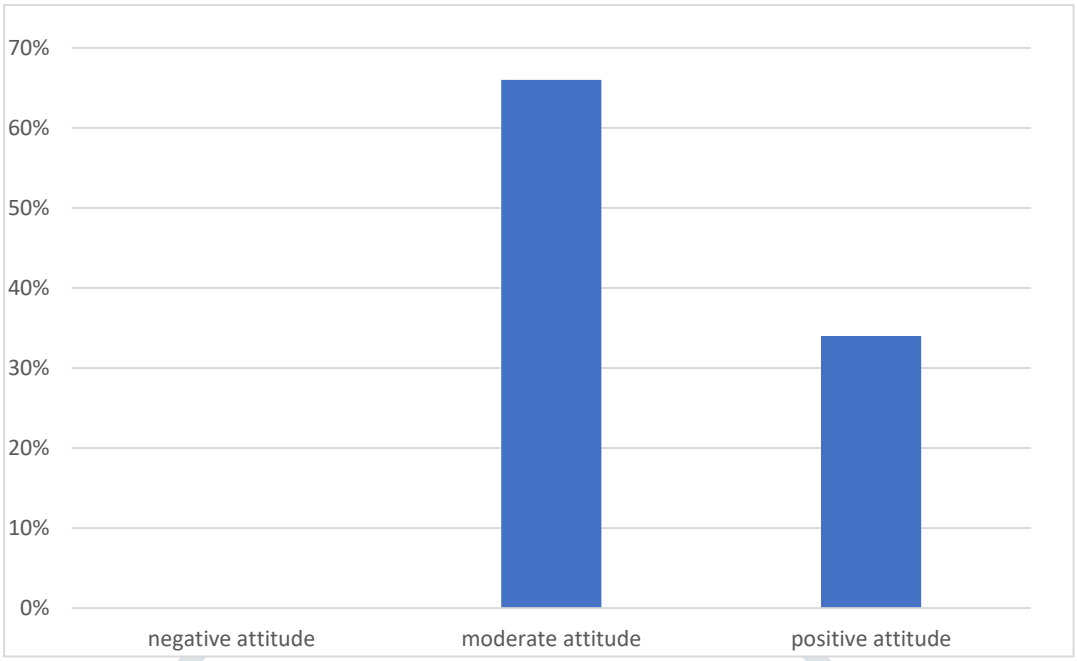
Fig 1: Bar diagram showing distribution of sample according to the knowledge experienced by the undergraduate students.



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.

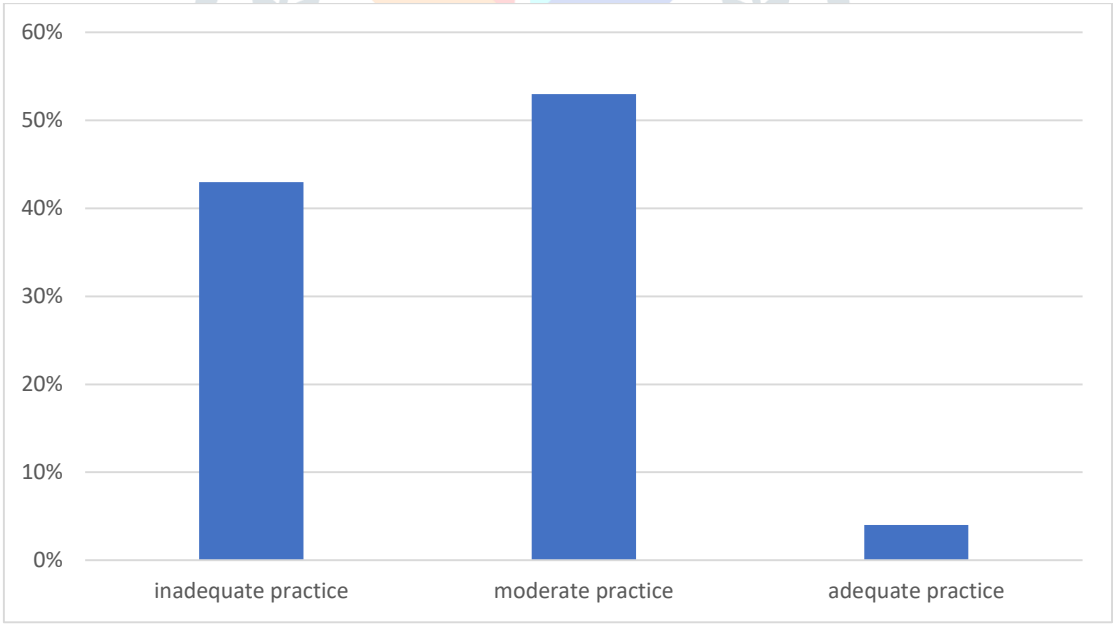
Fig 2: Bar diagram showing distribution of sample according to the attitude experienced by undergraduate students.



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 entrolled 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.

REFERENCE

1. Harding M, Kwong J, Hagler D, Reinisch C. Lewis's Adult Health Nursing II with Integrated Pathophysiology and Geriatric Nursing. 5th South Asia ed. Chintamani, Gopichandran L, Mani M, editors. New Delhi: Elsevier; 2024. Vol. 2.

2. Thomas K. Medical-Surgical Nursing as per the GNM Syllabus. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers;Vol. 2.

3. Sizar O. Vitamin D Deficiency.. Treasure Island (FL): StatPearls Publishing; 2023 [cited 2026 May 5]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532266/

4. Epidemic of Vitamin D Deficiency and Its Management: Awareness among [medical students/colleges]. Wiley Online Library. 2017 Apr 3 [cited 2026 May 5]; [about 1 p.]. Available from: https://onlinelibrary.wiley.com

5. Alkubur A, Boubaid J, Alghazal N, Alharbi O, Aljimayei R, Alharbi A, et al. Knowledge, Attitude and Practice of Vitamin D Deficiency among Adults in Saudi Arabia. J Pioneer Med Sci. 2025;14(6):105-115. Available from: https://jpms.com.pk/index.php/jpms

6. Alzahrani FA, Alghamdi AS, Alqarni AM, et al. Public Knowledge, Attitude, and Practice Toward Vitamin D Deficiency in Al-Qunfudhah Governorate, Saudi Arabia. Cureus. 2023 [cited 2026 May 5]. Available from: https://www.cureus.com/

7. Rebelos E, Tentolouris N, Jude E. The Role of Vitamin D in Health and Disease: A Narrative Review on the Mechanisms Linking Vitamin D with Disease and the Effects of Supplementation. [Journal name not given in screenshot]. 2023 [cited 2026 May 5]. Available from: https://www.ncbi.nlm.nih.gov/

8. Tanna NK, Karki M, Webber I, Alaa A, El-Costa A, Blair M. Knowledge, attitudes, and practices associated with vitamin D supplementation: A cross-sectional online community survey of adults in the UK. [Journal name not given in screenshot]. 2023 [cited 2026 May 5]. Available from: https://www.bmj.com/

9. Kambal N, Abdelwahab S, Albasheer O, Taha S, Abdelrahman N, Bani I, et al. Vitamin D knowledge, awareness and practices of female students in the Southwest of Saudi Arabia: A cross-

sectional study. [Journal name needed]. 2022 [cited 2026 May 5]. Available from: https://www.researchgate.net/

10. Uzrail AH,. Knowledge, Attitude and Practices toward Vitamin D: A Cross Sectional Study from Jordan. [Journal name needed]. 2021 [cited 2026 May 5]. Available from: https://www.hindawi.com/

11. Ali SM, Salih LMA, Saeed E. Awareness of medical students about vitamin D deficiency at Ahfad University for women, Sudan. [Journal name]. 2019 [cited 2026 May 5]. Available from: https://www.sudanjp.org/

12. Lhamo Y, Chugh PK, Gautam SR, Tripathi CD. Epidemic of Vitamin D Deficiency and Its Management: Awareness among Indian Medical Undergraduates. [Journal name]. 2017 [cited 2026 May 5]. Available from: https://onlinelibrary.wiley.com/

13. Lee JH, O'Keefe JH, Bell D, Hensrud DD, Holick MF. Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor? South Med J. 2008;101(6):575-582. Available from: https://journals.lww.com/smajournalonline/

14. Shwetha MN, Chandhra Priya NP. Knowledge regarding vitamin D deficiency among students in selected college. Asian J Nurs Educ Res. 2019 [cited 2026 May 5]. Available from: ajner.com

15. Al Hadhrami RS, Al Kaabi R, Al Shuaibi HJ, Al Abdulsalam RS. Assessment of vitamin D-related knowledge, attitudes and practices among Sultan Qaboos University students in Oman: a cross-sectional study. BMJ Public Health. 2024;2:e000539. doi:10.1136/bmjph-2023-000539. Available from: bmjpublichealth.bmj.com.