

A STUDY ON ASSESSMENT OF KNOWLEDGE AND PRACTICE REGARDING CALCIUM INTAKE AMONG YOUNG ADULTS IN A SELECTED COLLEGE AT BANGALORE

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Abstract: The average nutritional requirements of groups of people are fixed and depend on such measurable characteristics as age, sex, height, weight, degree of activity and rate of growth. A recent National Survey indicates that 85 % of young adults do not consume the Recommended Daily Allowance of calcium.

Objectives- To assess the level of knowledge regarding calcium intake among young adults, to elicit the level of practice regarding calcium intake among young adults.

Hypothesis-H₁- significant relationship between the level of knowledge and practice regarding calcium intake among young adults,

H₂- significant association between the level of knowledge and socio demographic variables

H₃- significant association between the level of practice and socio demographic variables.

Methodology- descriptive research design was used. 100 samples was selected with convenient sampling. Data was collected by structured questionnaire and analysed with descriptive and inferential statistics.

Results- overall mean score was 11.76 and mean % 47.04 which is shows that knowledge was inadequate. Out of 100 samples 61% were having inadequate knowledge, 37% were having moderately adequate knowledge and 2% were having adequate knowledge 95 peoples was practiced inadequately only 5 % people practice adequately.

Conclusion- adults have inadequate knowledge and practice and required training and teaching programme.

Keywords: Assessment, Knowledge, Practice, Calcium Intake Young Adults

1. INTRODUCTION

“No matter how old you are however, taking care of your bones is must”

Nutrition is the science that deals with all the various factors of which food is composed and the way in which proper nourishment is brought about. Today we spend millions of money in India each year to investigate the many aspects of nutrition¹

Calcium is the most abundant mineral in the human body. About 99% of the body's calcium is stored in the bones and teeth (National Research Council, 1989; Whitney et al, 1996) with the remaining 1 % in the soft tissues and watery parts of the body The recommended level of calcium for adult who are in the age group between 19 -30 years is 800 - 1000 mg per day Over the last three to four decades, the clinical implications of calcium deficiency are being recognized, the economic burden of osteoporosis increasing².

Need for the study:-

A recent National Survey indicates that 85 % of young adults do not consume the Recommended Daily Allowance of calcium. Because of the perception that all dairy products are fat-laden foods. Majority of the young adults are not aware of the serious, long-lasting implications of inadequate calcium consumption and do not think they will ever become one of the 26 million women that suffer from osteoporosis today. Therefore to ensure, young adults can avoid bone-crippling disease by conducting research on the calcium crisis and developing a public health campaign to get female young adults out of their calcium conundrum³

According to Dr. Hemant Kalyan, consultant orthopedic surgeon of Manipal Hospital, there is a 4 to 5 percent increase in the occurrence of osteoporosis among young adults due to less intake of calcium foods..

Nurses can influence and educate young adults about the calcium intake and identify the signs and symptoms of calcium deficiency and to create awareness regarding the management of problems.

Objectives

1. To assess the level of knowledge and level of practice regarding calcium intake among young adults.
2. To correlate the relationship between knowledge and practice regarding calcium intake among young adults.

3. To determine the association between the socio-demographic variables and knowledge regarding calcium intake among young adults.
4. To find out the association between the socio-demographic variables and practice regarding calcium intake among young adults.

Hypothesis

H₁: There is a significant relationship between the level of knowledge and practice regarding calcium intake among young adults.

H₂: There is a significant association between the level of knowledge and socio demographic variables among young adults.

H₃: There is a significant association between the level of practice and socio demographic variables among young adults.

2. Methodology-

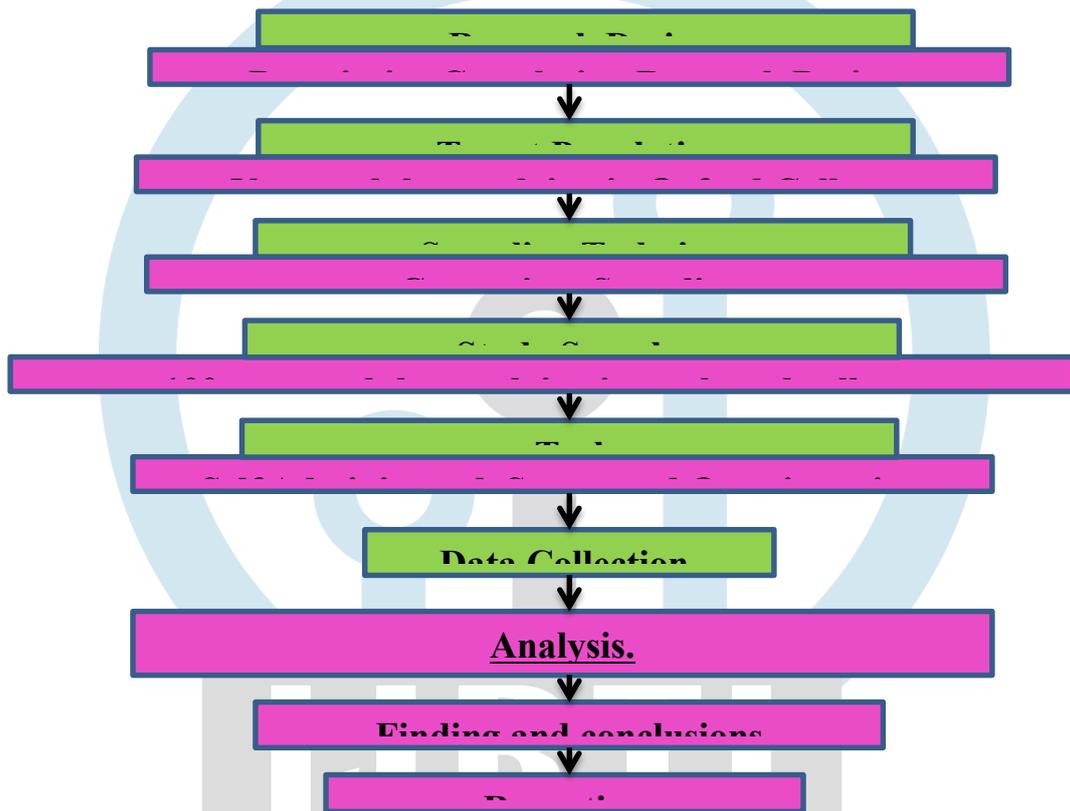


Figure 1

3. RESULTS

TABLE 1: FREQUENCY DISTRIBUTION OF SOCIO DEMOGRAPHIC VARIABLES

SI No.	Variable	Characteristics	Frequency(no)	Percentage(%)
1.	Age in years	20	10	10
		21	38	38
		22	31	31
		23	21	21
2.	Educational status	B.com	100	100
3.	Religion	Hindu	77	77
		Muslim	14	14
		Christian	9	9
		Others	0	0
4.	Mother's education	No formal education	10	10
		Primary education	20	20
		Middle school	13	13
		High school	28	28

		Pre university certificate	11	11
		Graduate and above	18	18
5	Occupational status of the mother	Unemployed	12	12
		Home Maker	70	70
		Self Employed	3	3
		Private Employee	5	5
		Government Employee	9	9
		Retired	1	1
		6	Family monthly income	Less than 5000/-
5001- 10000/	19			19
10,001- 20,000/-	29			29
Above 20,000/-	36			36
7	Type of family	Nuclear	80	80
		Joint	20	20
8	Domicile	Urban	77	77
		Rural	23	23
9	Dietary pattern	Vegetarian	25	25
		Non Vegetarian	75	75
10	Exposure of health information	Yes	40	40
		No	60	60
11	If yes	Nil	60	60
		Health personnel	14	14
		Mass media	10	10
		Family members	10	10
		Friends and relatives	6	6

Out of 100 young adults, majority of young adults were in the age group of 21-22 years (38%), 31%. Educational status representing 100 per cent graduates. Predominantly, (77%) were Hindus who were residing in urban areas (77%), with respect to educational status of majority 28% with high school. More than half of the mothers respectively were homemakers (70%). Regarding family monthly income, data reveals that, majority 36% of the family had income of 20000 per month. Most samples (80%) were living in the nuclear family and few were living in the joint family. Predominantly majority of young adults non-vegetarians (75%) and 25% were vegetarians. Regarding previous exposure to health information on calcium intake, 60% did not received health information (60%).

SECTION-2

TABLE 2: KNOWLEDGE SCORE ON SUB SCALE AMONG YOUNG ADULTS

Sl.no.	Variables	No of items	Mean	S.D	Mean%
1	Concept of Calcium	2	1.5400	0.68785	77.00
2	Functions of Calcium	3	1.8600	0.92135	62.00
3	Recommended dietary allowance	1	0.4600	0.50091	46.00
4	Sources of calcium	9	3.3300	1.36371	37.00
5	Calcium deficiency	4	1.7500	1.18386	43.75
6	Sign and symptoms	2	1.0000	0.73855	50.00
7	Calcium supplement	1	0.7400	0.44084	74.00
8	Health risk	1	0.3100	0.46482	31.00
9	Treatment	2	0.7700	0.72272	38.50
	Overall knowledge	25	11.7600	3.13701	47.04

The table 2 revealed that 77 mean percentages of young adults were having the knowledge about general aspect of calcium , 62 mean percentages of the young adults were having the knowledge regarding functions of calcium, 46 mean percentages of young adults know the recommended dietary allowance, 37 mean percentages of young adults were having the knowledge about sources of calcium, 43.75 mean percentages of young adults responded correctly about the calcium deficiency, 50 mean percentages of young adults know the calcium supplement, 74 mean percentages of young adults know the calcium supplement, 31 mean percentages of young adults were having the knowledge about health risks, 38.50 mean percentages of young adults answered correctly about treatment of calcium deficiency, and 47.4 mean percentages of the young adults had overall knowledge on calcium intake.

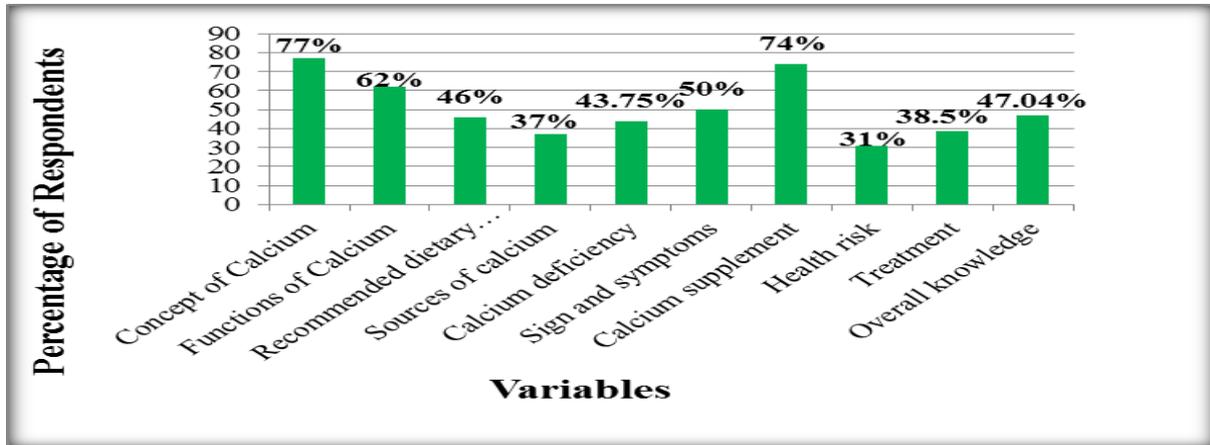


Figure 2

TABLE3: DISTRIBUTION OF YOUNG ADULTS ACCORDING TO THE LEVEL OF KNOWLEDGE REGARDING CALCIUM INTAKE

Sl no.	Level of knowledge	Level	
		Frequency	Percentage
1	Inadequate knowledge (<50%)	61	61
2	Moderately adequate knowledge (50-75%)	37	37
3	Adequate knowledge (>75%)	2	2
Total		100	100

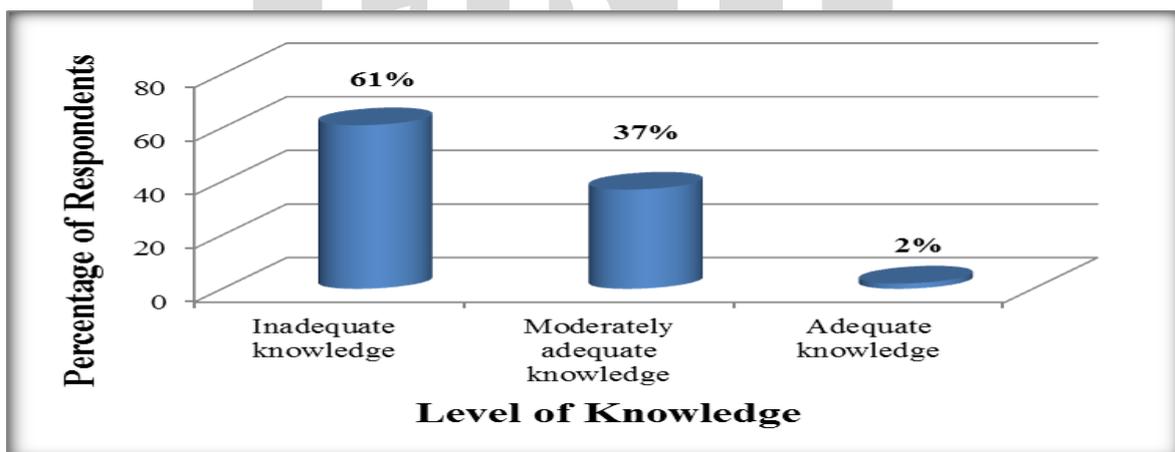


Figure 3

TABLE 4: DISTRIBUTION OF YOUNG ADULTS ACCORDING TO THE LEVEL OF PRACTICE.

Sl .no	Level of practice	Level	
		Frequency	Percentage
1	Inadequate practice (<50%)	95	95
2	Moderately adequate practice (50-75%)	5	5
Total		100	100

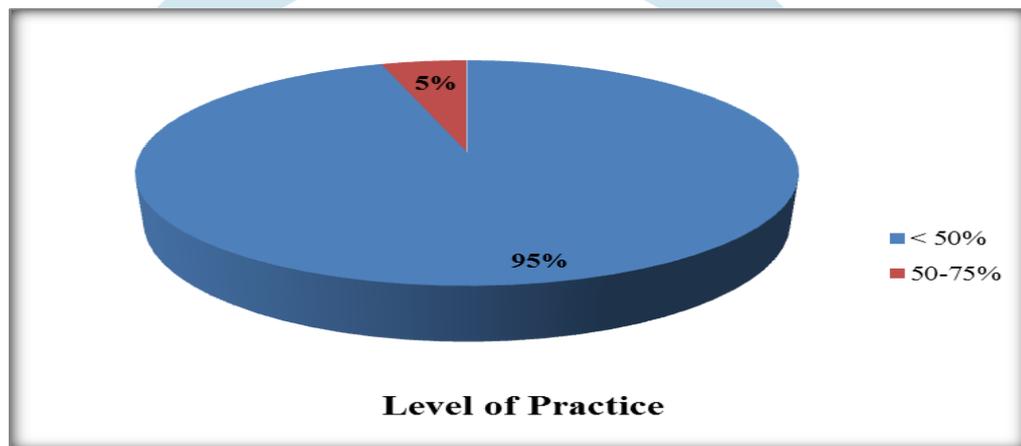


Figure 4

TABLE 5: SHOWING CORRELATION OF KNOWLEDGE AND PRACTICE AMONG YOUNG ADULTS REGARDING CALCIUM INTAKE

	Correlation	Knowledge	Practice
Knowledge	Spearman's significant. (2-tailed) N	1 100	0.199
Practice	Spearman's significant (2-tailed)	0.199	1 100

Correlation is significant at the $P < 0.05$ level (2-tailed)

The above table illustrates that the Spearman's correlation coefficient value $r = 0.199$ which indicates as the knowledge increases their practice also increases and vice-versa. This confirms positive correlation between knowledge and practice among young adults regarding calcium intake and statistically significant at **$P < 0.05$ LEVEL.**

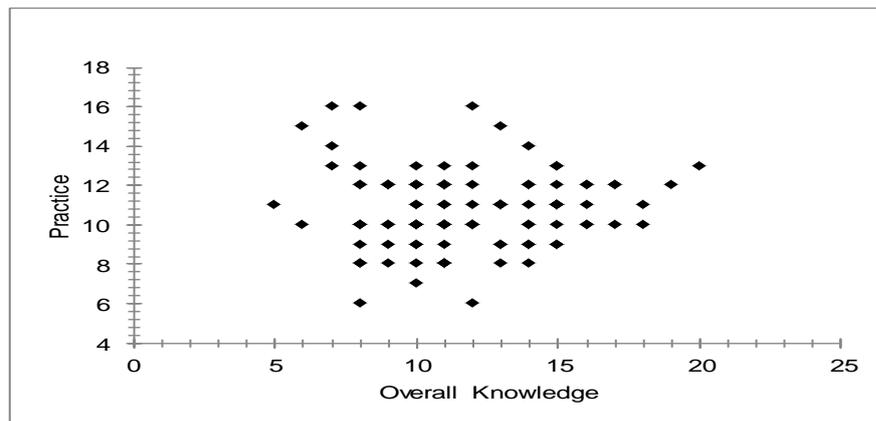


Figure 5

The study revealed that there is a relationship between level of knowledge and exposure to the association between the socio demographic variables and practice regarding calcium intake among young adults..

All the selected variables were not statistically significant with socio demographic variables. Among socio demographic variables exposure to the health information was found to be significant.

The assessment of knowledge is analysed and depicted in table 2 and table 3. In this, it highlights that knowledge score mean is 47.04 with standard deviation of 3.13701. Out of 100 samples 61% were having inadequate knowledge, 37% were having moderately adequate knowledge and 2% were having adequate knowledge.

This finding supported by a cross sectional study conducted among 100 young adult women regarding calcium intake which contains 18 items, each question has four options. The study finding showed that 58% of participants did not have knowledge, 36% of the participants had moderately knowledge and 6% of the participants were having adequate knowledge about calcium and its benefits. This finding is similar to the present study.

The second objective is to elicit the level of practice regarding calcium intake among young adults

The scores of practice was assessed and depicted in table 4 and table 5. The practice score mean percentage is 35.9, standard deviation is 1.985. Out of 100 samples 95% were having inadequate practice and 5% were having moderate practice.

This study is supported by a survey which was conducted to assess the practices of calcium among seventy female graduate students aged between 18- 21 years at Health Campus, University Science Malaysia. It is found that almost all subjects (98.6%) were having inadequate practice and about 1.4% of them were having moderately practice. Thus, the present finding highlights the need of formulating health education programs on calcium deficiency among young adults.

The third objective is to correlate the relationship between knowledge and practice regarding calcium intake among young adults.

The correlation between the level of knowledge and practice regarding calcium intake among young adults. The Karl Pearson's coefficient correlation formula as used and it showed that there was a positive correlation between knowledge and practice. The Correlation value is 0.199 that is significant at $p < 0.05$.

A correlation value is -0.07 confirmed negative correlation between knowledge and practice among young adult women and was not statistically significant .this might be as the effect of poor understanding of young adult women regarding calcium due to various socio-economic and cultural reasons ,young adult women could have failed to identify bone health problems and vice-versa.

The correlation value of 0.419 denoted positive correlation between knowledge and practice on calcium and its benefits among young women which was statistically significant at $p < 0.05$ level. As the women understanding level increases on calcium and its benefits as a result of better education, socio- economic status etc., they were able to appreciate the health problems related to calcium deficiency and bone health changes and vice-versa:

The fourth objective is to determine the association between the socio-demographic variables and knowledge regarding calcium intake among young adults.

The association between level of knowledge and socio-demographic variables was done using chi-square formula. All the selected variables were not statistically significant with socio demographic variables. Among socio demographic variables exposure to the health information was found to be significant.

The fifth objective is to find out the association between the socio-demographic variables and practice regarding calcium intake among young adults.

The association between level of practice and socio demographic variables was identified using chi square test. Among the socio demographic variables such as dietary pattern and level of practice was found to be having significant association.

IMPLICATIONS OF NURSING

In nursing implication the main aim of the study is to assess the level of knowledge and practice regarding calcium intake among young adults. The results obtained for the study help the researcher to derive certain implications for nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE

Nursing profession has been developing fast in recent years in a unique way. The major change that has occurred in the profession is expansion in the roles of nurses. Nurses play an imperative and crucial role in creating major impact on the awareness regarding calcium intake.

Present study will indirectly help nurses to understand the knowledge and practice of respondent regarding calcium intake. Nurses should try to identify the problems of young adults and offer supportive and educative service to overcome the situation which helps them to create health conscious and assist them to promote good health and prevent from calcium deficiency

NURSING EDUCATION

The educational background of a nurse should equip her with the knowledge necessary to function as a health educator. Health education is the major key to improve knowledge as well as modify practices among general population especially today's youths.

To provide more knowledge to the young adults, nurses should have knowledge regarding calcium intake and how to educate to the young adults. Nursing education programme should incorporate these factors in the nursing curriculum. Nursing curriculum should provide an opportunity to plan and conduct teaching programmes in a variety of settings viz. family, community, schools, colleges, and hospital and other health care agencies.

NURSING ADMINISTRATION

Nurse administrators are the backbone for providing facilities to improve the knowledge and practice regarding young adults calcium intake. There should be a provision for nurses to devote time for giving health education regarding calcium intake in the community. Administrative support should be provided to conduct health education in any setting as required. Cost effective health education material should be encouraged. Health education materials such as leaflets and pamphlets should be made available to the public.

NURSING RESEARCH

Nurses being the largest group in the health care delivery system and being more close to clients should take initiative to conduct further research regarding calcium intake and provide correct information to improve knowledge and practice regarding calcium. So nursing students must be motivated and guided to conduct research studies.

The present study reveals that young adults are lacking knowledge regarding calcium intake. So nurses especially those who work in community should take initiative in conducting applied research studies in the community.

RECOMMENDATIONS

Based on the findings of study, it is recommended that;

- A similar study can be conducted among male young adults.
- A replication of present study can be conducted with a large population and wider area.
- A comparative study can be conducted to compare the findings between rural and urban areas
- A comparative study can be conducted in male and female young adults.
- A study can be conducted on calcium nutritional knowledge, attitude and practice of medical students.
- An experimental study can be done by providing structured teaching programme.

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