ORIGINAL RESEARCH PAPER
Volume - 15 | Issue - 03 | March - 2026 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

RELATIONSHIP BETWEEN NUTRITIONAL LITERACY AND DIETARY HABITS AMONG B.Sc. NURSING STUDENTS, GANGTOK, SIKKIM: A DESCRIPTIVE STUDY

Nursing

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ABSTRACT

Food and nutritional literacy are concept that has been a growing focus in recent years. Nutritional literacy empowers individuals to take informed decisions about their nutrition and also helps to take control of their dietary habits. The aim of the study was to investigate the relationship between nutritional literacy and dietary habits among B.Sc. Nursing Students, Gangtok, Sikkim. A descriptive study was conducted among 306 B.Sc. Nursing students of Nursing Institute of Gangtok, Sikkim. The students were selected through consecutive sampling technique and the tools used were demographic Proforma, standardized tool: Nutrition Literacy-Short Form (NL-SF 12) and Self- structured tool on dietary habits. Result shows that among 306 students, 13 (4.2%) had moderately low, 267(87.3%) had moderate while 26 (8.5%) had high level of nutritional literacy. With regard to level of dietary habits, 2(0.7%) had poor dietary habits, 300(98%) had average dietary habits and 4(1.3%) had good level of dietary habits. The study revealed that there was a significant association between the semester and nutritional literacy and a weak positive correlation between nutritional literacy and dietary habits (r= 0.029). The study concluded that out of 306 students, 87.3% students had moderate level of nutritional literacy and 98% students had average level of dietary habits. Therefore, the findings emphasized the enhancement of nutritional education within nursing profession as strengthening students' nutritional literacy can improve dietary habits, crucially not only for their personal well-being but also for their future role in delivering comprehensive patient care.

KEYWORDS

Dietary habits, Nutritional literacy, Nursing Students

INTRODUCTION

Nutrition literacy, the ability to understand, absorb and comprehend the basic dietetic information and services to make healthy food choices that enhance personal health and support sustainable food systems plays a vital role in promoting public health.[1]

As future healthcare professionals nursing students' nutritional literacy and dietary habits can significantly impact in their own well-being and patient care.

Therefore, identifying their nutritional literacy and dietary habits can help prevent any ailments or conditions related to unhealthy dietary habits. This study therefore aims to explore the relationship between nutritional literacy and dietary habits in nursing students of Gangtok, Sikkim.

MATERIALS AND METHODS:

Study design and setting:

A Descriptive study was conducted among B.Sc. Nursing students of Nursing Institute of Gangtok, Sikkim from 5th January to 1st February 2025

Study Population And Sampling:

Using Consecutive sampling technique (Complete enumeration) a total of 306 students participated in the study. Inclusion criteria encompassed students who were willing to give the consent. Exclusion criteria comprised individuals who were absent at the time of data collection.

Data Collection Tools:

After taking informed consent, data were collected. Questionnaire method was used for the data collection. NL-SF12 (Nutrition Literacy-Short Form 12) was used to assess the nutritional literacy and self-structured questionnaire on dietary habits were used to assess the dietary habits.

Statistical Analysis:

Statistical analysis was carried out using Statistical Package for the Social Sciences (SPSS) 24. Descriptive statistics (Frequency, Percentage, mean, median and SD) were used to assess the nutritional literacy and dietary habits. Karl Pearson coefficient correlation evaluated the relationship between nutritional literacy and dietary habits. Fisher's exact test assessed the association between nutritional literacy and dietary habits with demographic variables.

RESULTS:

In this study, majority of the students 195(63.7%) were aged between 21-24 years. 198(64.7%) students had height between 151-160 cm and weight 187(61.1%) between 51-60 kg. Majority 241(78.8%) had BMI between 18.5-24.9 kg/m^2. 209(68.3%) students consumed non-vegetarian diet. 151(49.3%) were occasionally active in physical activities. 86(28.1%) belonged to 1st Semester. Moreover, 130(42.5%) consumed outside food 4-6 times a week. As per income, 94(30.7%) had monthly family income of □40,001-50,000. 111(36.3%) were Buddhist. Majority 158(51.6%) were day scholars (Table 1)

Table 1. Characteristics Of Demographic Variables N=306

Demographic Variables	Frequency	Percentage
Age in years		
18-20	109	35.6
21-24	195	63.7
25-28	2	0.7
Height (in cm)		
140-150	66	21.6
150-160	198	64.7
160-170	42	13.7
Weight (in kg)		
40-50	93	30.4
51-60	187	61.1
61-70	20	6.5
71-80	6	2
BMI (kg/m^2)		
< 18.5	9	2.9
18.5 – 24.9	241	78.8
25 -29.9	50	16.3
30 and above	6	2
Dietary pattern		
Vegetarian	97	31.7
Non vegetarian	209	68.3
How often do you do physical activity like gym, walking, yoga, home work out etc?		
Everyday	71	23.2
Occasionally	151	49.3
Never	84	27.5

Semester		
1st semester	86	28.1
3rd semester	73	23.9
5th semester	83	27.1
7th semester	64	20.9
Frequency of eating out		
1-3 meals per week	129	42.2
4-6 meals per week	130	42.5
Rarely	47	15.3
Family income (per month)		
≤ □ 20,000	24	7.84
□ 20,001 -30,000	56	18.30
□30,001 – 40,000	86	28.11
□40,001 – 50,000	94	30.72
≥ □50,001	46	15.03
Religion		
Christian	74	24.1
Hindu	104	34
Muslim	15	4.9
Buddhist	111	36.3
Others*	2	0.7
Place of residence		
Hostel	148	48.4
Day scholar	158	51.6

Note: * Others: Donyi-Polo, atheist

The level of nutritional literacy was assessed in the study. As illustrated by the bar graph (Figure 1), the majority (87.3%) of participants fall within the moderate category. This is followed by the high (8.5%) and moderately low (4.2%) categories, with the low category (0%) having the lowest representation.

N=306

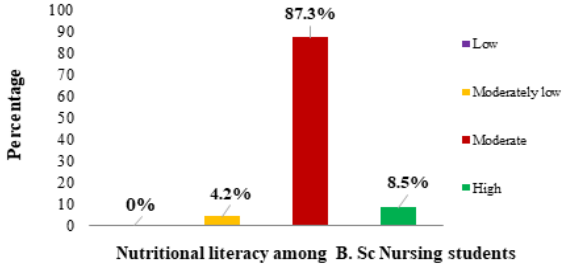

Fig 1 Bar Graph representing distribution level of nutritional literacy among B. Sc Nursing Students, Gangtok, Sikkim

Figure 2 depicts the distribution of level of dietary habits among the study participants where, majority of the students 300(98%) had average level of dietary habits while only 4(1.3%) had good level and 2(0.7%) had poor level of dietary habits.

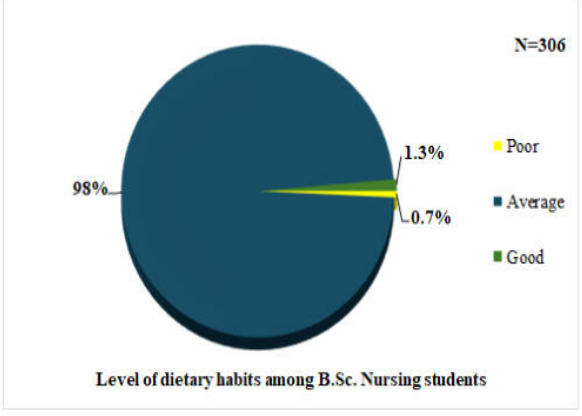

Fig 2. Pie chart representing distribution of level of dietary habits among B. Sc Nursing Students, Gangtok, Sikkim

The Correlation between nutritional literacy and dietary habits among B. Sc Nursing Students, Gangtok, Sikkim was obtained where the r value is 0.029 and p value= 0.611 showing a weak positive correlation between nutritional literacy and dietary habits (Table 2).

Table 2: Correlation Between Nutritional Literacy And Dietary Habits Among B. Sc Nursing Students, Gangtok, Sikkim

Correlation	Mean	SD	r value	p value	Remarks
Nutritional literacy	61.4	5.34	0.029	0.611	NS
Dietary habits	42.0	4.42			

N=306*P<0.05 level of significance
NS=Non significant

A significant association was found between semester of students with nutritional literacy at p=0.026 but other demographic variables such as age, height, weight, dietary pattern, physical activities, frequency of eating outside, family income, religion and place of residence were found non-significant (p>0.05), as illustrated in table 3. The study revealed that there was no association between dietary habits with demographic variables.

Table 3: Association Between Nutritional Literacy With Demographic Variables

Demographic Variables	Nutritional literacy			f-test	df	p value
	Moderately low	Moderate	High			
Semester				13.42	6	0.026*
1st semester	3	80	3			
3rd semester	2	62	9			
5th semester	5	75	3			
7th semester	3	50	11			

N=306 *P<0.05 level of significance
NS= Nonsignificant

DISCUSSION:

The findings of this study shed light on the relationship between nutritional literacy and dietary habits. The analysis revealed several key insights that warrant discussion.

Firstly, the results indicate that 267(87.3%) had moderate nutritional literacy followed by 26(8.5%) and 13(4.2%) with high and moderately low nutritional literacy respectively. The finding in the study was congruent with a study conducted by Bahramfard, et. al. on nutritional literacy status and its related factors which revealed that, 1% of students struggled with poor nutritional literacy and 50.9% and 48.12% of students had borderline and adequate nutritional literacy, respectively.[2]

Regarding dietary habits, majority of the students 300(98%) had average level of dietary habits while only 4(1.3%) had good level and 2(0.7%) had poor level of dietary habits. Similar findings were found in a cross-sectional study conducted by Bashatah and Adel on nutritional habits among nursing students in Saudi Arabia which revealed that most students 120 (85.7%) had fair nutritional habits, 11 (7.9%) had good nutritional habits and 9 (7.9%) had poor nutritional habits.[3]

Secondly, a weak positive correlation between nutritional literacy and dietary habits among B.Sc. Nursing students, Gangtok, Sikkim was found. Similar result was reported in a cross-sectional study conducted by Mostafahzadeh et.al. on assessing the relationship between nutritional literacy and eating behaviors among nursing students which revealed that there was a significant relationship between nutritional literacy and eating behavior among nursing students.[4]

Furthermore, the study shows a significant association between semester of students with nutritional literacy at p=0.026 but other demographic variables were found non-significant (p=> 0.05) and there was no association between dietary habits with demographic variables.

The present study findings were consistent with the study that was conducted by Noviandevi W T and Djaya N P on relationship of nutrition literacy, eating pattern and nutritional status among medical students where the main purpose was to determine the association between nutrition literacy, eating pattern and nutritional status among medical students at Atma Jaya Catholic University of Indonesia. They concluded that there was no association between nutrition literacy, eating pattern and nutritional status among medical students at Atma Jaya Catholic University of Indonesia.[5]

It is worth noting that the study has limitations. As this study was

conducted on B.Sc. Nursing students and on small sample size (N=306) therefore generalization of the findings cannot be done, and as it is carried out in a single educational institution, it could limit how broadly the results can be applied.

Therefore, future studies can be conducted on large sample size in different institutions. Also, a comparative study can be done to determine the nutritional literacy and dietary habits between nursing students and other healthcare professionals.

These limitations should therefore be considered when interpreting the findings of the study and designing future research studies to address these shortcomings.

CONCLUSIONS

In conclusion, the study provides valuable insights into the relationship between nutritional literacy and dietary habits. This study revealed that out of 306 students, majority 267(87.3%) had moderate level of nutritional literacy and 300(98%) of the students had average level of dietary habits. The findings of the study therefore emphasizes the need for enhancing interventions to enhance their nutritional knowledge and dietary practices. Embedding comprehensive nutritional education andpromoting evidence- based practice can improve nutritional literacy among the students to make informed decisions about their own health and also bring impact to the patients' health

Acknowledgment: The authors express gratitude to all the participants involved in the study.

Source(s) of support: The study received no financial support from any agency in any form

Conflicting Interest: There is no conflict of interest

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