



Quality of life of B.Sc. nursing students attending college-based yoga program in a nursing college West Bengal

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Abstract

Background: Yoga is a practice that helps individuals maintain a balance between their various organ systems. It improves strength, boosts mood, attention, and reduces stress, anxiety. Practicing yoga helps to maintain a healthy lifestyle. As a part of the healthcare team, nursing students also faced drastic changes in their daily lifestyle in terms of quality of life.

Objective: The present study aimed to measure the quality of life of B. Sc Nursing students attending ongoing college-based yoga program as stated by themselves in Kolkata, West Bengal.

Method: The conceptual framework was based on “Wilson IB, Cleary PD. Linking clinical variables with health-related quality of life”. The participants of the study were 330 B. Sc Nursing students who were attending ongoing college-based yoga program were included by using purposive sampling technique. Background information was collected by using semi-structured questionnaires, and quality of life was measured by a self-structured 5-point Likert rating scale.

Result: Data were analysed and interpreted using SPSS version 26 software by descriptive and inferential statistics. Findings revealed that 72%, 15% and 13% were average, good, and poor quality of life of B.Sc. Nursing students attending ongoing college-based yoga program. In the domain of physical capacity, psychological, level of Independence, social relationship, environment, and overall quality of life, and general health perception majority of the students had average quality of life (70.9%, 75.8%, 67%, 69.1%, 73.3%, 62.7%) respectively. The study also revealed that there was a significant association between quality of life with height ($\chi^2 = 10.446$, $df=4$, 0.05 level of significance), weight ($\chi^2 = 10.379$, $df=4$, 0.05 level of significance) and frequency of yoga practice ($\chi^2 = 15.061$, $df=6$, 0.05 level of significance).

Conclusion: Hence, based on study findings, it can be concluded that the overall quality of life of B. Sc Nursing students was average regarding the ongoing college-based yoga program.

Keywords: Yoga, quality of life, B.Sc. nursing students, college-based yoga program

Introduction

The term yoga is obtained from the Sanskrit word Yuj, signifying the harmony of mind, body, and spirit [1]. With roots in India, yoga is a comprehensive practice that integrates physical, mental, and spiritual aspects suitable for individuals across all age groups [2]. During this contemporary era, every single human being suffers from various disease conditions like hypertension, diabetes, constipation, migraine, headache, cardiac disorder, anxiety, stress, obesity, nervous problems, and many others due to their sedentary lifestyle. Yoga is an important area for managing a wide range of clinical and mental health-related problems. By incorporating yoga into individuals' lifestyle, individuals can experience significant improvement in their physical, mental, social, and emotional well-being, leading to a better quality of life [1]. In health care settings, nursing is a particularly challenging profession. Every day, nursing students witness challenges in their clinical as well as their academic performances. This adversely affects students' mental and physical health. To make significant progress, the Indian Nursing Council has incorporated yoga in their newly presented ten-hour yoga module under the direction of the Ministry of Health and Family Welfare and the Ministry of AYUSH to help the nursing students with their confronting challenges. Thus, combining yoga practice with meditation and relaxation techniques can significantly

benefit students by reducing stress, anxiety as a burden and enhancing their quality of life.

Objectives

1. To measure the quality of life among B.Sc. Nursing students attending ongoing college-based yoga program, as stated by themselves.
2. To find out the association between quality of life and selected background information. (age, height, weight, BMI, presently living in, history of existing physical diseases condition, history of any illness in family members, involve in any other recreational activity during leisure time, frequency of yoga practice, before attending the college-based yoga program previous experience of yoga practice).

Material and method

Study design: Descriptive survey research design

Study settings: Classroom of Apollo College of Nursing, Kolkata

Study duration: 1st January to 31st January, 2025

Sample size: 330 B. Sc Nursing students of Apollo College of Nursing, Kolkata

Sample selection method: In this study, subjects were selected by non-probability purposive sampling technique.

Inclusion Criteria

The data was collected from the students,

- Who attended a minimum of 12hours of ongoing college-based yoga program within one year. This record had been taken from an institutionally valid yoga attendance register.
[Each student got 2 classes in alternatives on Saturday at the ongoing college-based yoga program. 2×6 = 12 hours was completed within one year.]
- The students who also had previous experience of yoga practice apart from the ongoing college-based yoga program.

Exclusion Criteria

The students,

- Those who were not present at the time of data collection.
- Those who were not willing to participate.

Description of data collection tools

The data were collected using semi-structured questionnaires on background information and a self-structured 5-point Likert rating scale to measure the quality of life of B.Sc. Students. Nursing students attending ongoing college-based yoga program. The semi-structured questionnaires consisted of 13 items to collect the background information. The self-structured 5-point Likert rating scale consisted of 45 items to measure the quality of life of B.Sc. Nursing students. The self-structured 5-point Likert rating scale comprised six domains: physical capacity, psychological, level of independence, social relationships, environment, as well as overall quality of life and general health perceptions, respectively [25]. The domain of physical capacity contained 10 questions, the psychological domain contained 18 questions, the level of independence contained 7 questions, the social relationships contained 4 questions, the domain of environment contained 4 questions, and overall quality of life and general health perception contained 2 questions. The alternatives were arranged in such a way that the scoring system for the items would remain the same on the basis of their acceptability. i.e., 1,2,3,4,5. So if the responder put a tick (√) mark for the first alternative, the score was 1, for the second alternative the score was 2, for the third alternative 3, fourth alternative 4, and for the fifth alternative the score was 5. The tool included a few reverse items from Domain 1(item numbers Q3, Q45), Domain 2(Item numbers Q20, Q34, Q43), and Domain 3(item number Q44). The options for these items were arranged based on their acceptability, i.e., 5, 4, 3, 2, 5,4,3,2,1. If the respondent selected the first option with a tick (√), they received a score of 5; the second option scored 4; the third, 3; the fourth, 2; and the fifth, 1. Hence, the Maximum possible score was 225, and the minimum possible score was 45.

Ethical Consideration

Ethical permission was obtained from the Institutional Ethics Committee, Apollo Multispeciality Hospitals Limited, Kolkata. Written informed consent was taken from each participant before conducting the study.

Data Collection Procedure

Data was collected over one month in January 2025. Participants were selected in keeping in mind about inclusion and exclusion criteria. Self-introduction was

given, and rapport was established with the participants. The purpose of the study was explained to each participant separately. Written informed consent was obtained before starting the data collection, and assurances were given about the confidentiality of their responses.

Statistical Analysis

Frequency and percentage distribution were computed to analyse the background information, and in terms of good quality of life, medium quality of life, and poor quality of life. Chi square test to find out association of quality of life was computed with selected background information such as (age, height, weight, BMI, presently living in, history of existing physical diseases condition, history of any illness in family members, involve in any other recreational activity during leisure time, frequency of yoga practice, before attending the college-based yoga program previous experience of yoga practice).

Result

In the present study the obtained data was organized, tabulated, analyzed and interpreted.

Section I: This section deals with the description of sample characteristics.

Table 1: Frequency and percentage distribution of background information of the B. Sc. Nursing students attending the ongoing college-based yoga program.

Sl No.	Characteristics	Frequency	Percentage (%)
1.	Studied in:		
	Semester III	79	23.9
	Semester V	85	25.8
	Semester VII	84	25.5
2.	4 th year	82	24.8
	Age (in years)		
	18-20	100	30.3
3.	21-23	201	60.9
	24-26	29	8.8
	Height (in cms)		
4.	≤155cm	180	54.5
	156cm-177cm	130	39.4
	≥177cm	20	6.1
5.	Weight (in Kg)		
	≤55 kg	199	60.3
	56 – 67 kg	86	26.1
6.	≥ 67 kg	45	13.6
	BMI (in Kg/m ²)		
	13.6-23.6	229	69.4
7.	> 23.6	101	30.6
	Marital status		
	Single	330	100
	Married	0	0
7.	Widowed	0	0
	Divorced	0	0
	Monthly income of the family (₹)		
	≥212,929	14	4.2
	106,468-212,928	23	7.0
	79,648-106,467	48	14.5
	53,234-79,647	95	28.8
	31,938-53,233	63	19.1
10,662-31,937	72	21.8	
≤ 10,661	15	4.5	

n=330

Data presented in Table 1a revealed that the majority of the students (25.8 %) were from semester V. The majority of them (60.9%) belonged to the age group of 21 -23 years. The maximum number of students belonged to the ≤ 155 cm (54.5%) and ≤ 55 kg (60.3%) groups, respectively. The table

also described that in respect of BMI, the maximum students (69.4%) belonged to the BMI range of 13.6-23.6 Kg/m². All of the students (100%) were single, and the maximum students (28.8%) had having monthly family income of 53,234-79,647₹.

Table 2: Frequency and percentage distribution of background information of the frequency and percentage distribution of the background information of B. Sc. Nursing students attending an ongoing college-based yoga program.

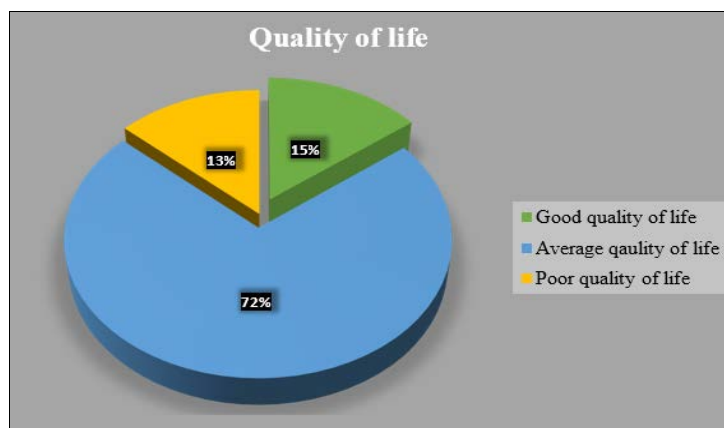
Sl No.	Characteristics	Frequency	Percentage (%)
8.	Presently living in:		
	Home	18	5.5
	Hostel	296	89.7
	Paying guest	9	2.7
9.	History of any existing physical disease condition		
	Yes	54	16.4
10.	History of any illness among family members		
	Yes	126	38.2
11.	Involved in any other recreational activity(mainly) during leisure time		
	Dance	71	21.5
	Music	116	35.2
	Art and crafts	96	29.1
	Recitation	14	4.2
	Sports	13	3.9
12.	Besides the college-based yoga program, practicing yoga by yourself:		
	Daily	35	10.6
	Alternative days	89	27.0
	Once a week	120	36.4
13.	Twice a week	86	26.1
	Previous experience of yoga practice		
	Yes	125	37.9
	No	205	62.1

n=330

Data presented in Table 1b revealed that the majority of the students (89.7 %) were from the hostel. The maximum number of students (83.6%) had no history of any existing physical disease condition. In the history of any existing physical disease condition, the maximum students (7.6%) had been affected by PCOD/PCOS. The maximum of the students (61.8%) had no history of any illness among family members. The table described that, among the students, the majority of them (35.2%) were involved in music as a recreational activity. Among all, the majority of them (36.4%) had practiced yoga once a week, besides the college-based yoga program. The majority of the students (62.1%) had no previous experience of yoga practice.

Section-II: Description of the quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program provided in terms of six domains, such as Physical capacity, Psychological, Level of independence, Social-relationship, Environment, Overall quality of life, and general health perception.

Section II-a: Findings related to the percentage distribution of quality of life of B. Sc. Nursing students attending ongoing college-based yoga program.



n=330

Fig 1: Pie diagram showing the percentage distribution of quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Figure 1 depicted that the majority of the students had an average (72%) quality of life after attending an ongoing yoga program.

Section II-b: Findings related to the percentage distribution of domain-wise quality of life of B. Sc. Nursing students attending ongoing college-based yoga program.

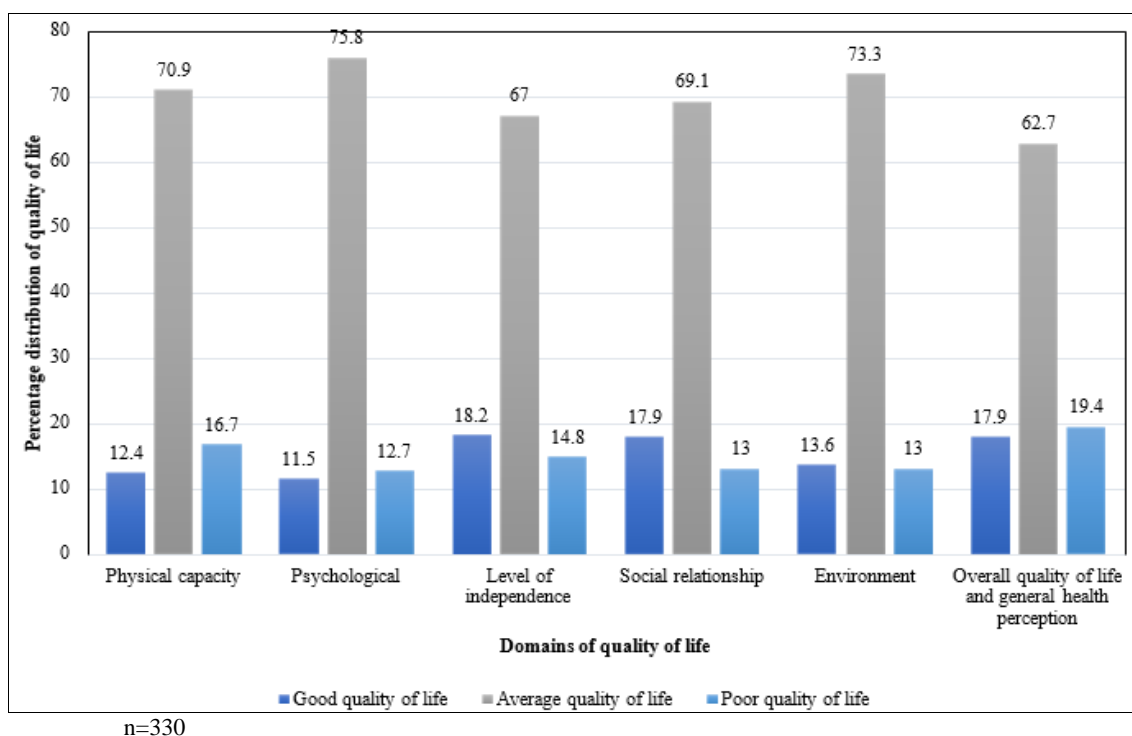


Fig 2: Bar diagram representing domain-wise percentage distribution of quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Data presented in Figure 2 describes that, in the domain of “Psychological,” the highest number of students had (75.8%) average quality of life. The maximum number of students (18.2%) had good quality of life in the “Level of independence” domain, and the maximum number of students (19.4%) had poor quality of life in the domain of “Overall quality of life and general health perception.”

Section II-c: Findings related to the mean, mean percentage, and standard deviation of quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Table 3: Mean, mean percentage, and standard deviation of quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Variable	Range	Mean	Mean percentage	Standard deviation
Quality of life	115 (88-203)	157.29	77.48	19.304

n=330

The data of Table 3 revealed that the mean score of quality of life of B. Sc. Nursing students attending an ongoing college-based yoga program was 157.29, the mean percentage was 77.48, and the standard deviation was 19.304.

Section II-d: Findings related to the domain-wise mean, mean percentage, and standard deviation of Quality of Life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Table 4: Domain-wise mean, mean percentage, and standard deviation of Quality of Life of B. Sc. Nursing students attending an ongoing college-based yoga program.

Domains of quality of life	Range	Mean	Mean percentage	Standard Deviation
Physical Capacity	20 (24-44)	33.71	76.61	3.44
Psychological	66 (23-89)	63.62	71.48	9.72
Level of Independence	20 (14-34)	25.19	74.08	3.71
Social relationship	16 (4-20)	13.38	66.9	2.45
Environment	16 (4-20)	13.86	69.3	2.56
Overall quality of life and general health perception	8 (2-10)	7.54	75.4	1.32

n=330

The data depicted in Table 4 explains that the mean percentage score was highest for the domain of physical capacity (76.61%). The mean score was highest (63.62) in the domain of psychological, and the SD of Psychological was the highest, which was 9.72.

Section-III: Association between quality of life and selected background information (age, height, weight, BMI, presently living in, history of existing physical diseases condition, history of any illness in family members, involve in any other recreational activity during leisure time, frequency of yoga practice, before attending the college-based yoga program previous experience of yoga practice).

Table 5: Association between quality of life of B. Sc. Nursing students and selected variables of background information of nursing students.

Variables	Quality of life			χ^2	df	p value
	Good (>176.594)	Average (137.986-176.594)	Poor (<137.986)			
Age						
18- 20 years	15	74	11	8.114	4	0.087
21-23 years	32	138	31			
24-26 years	1	27	1			
Height						
≤155cm	23	139	18	10.446*	4	0.034
156cm-177cm	19	91	20			
≥177cm	6	9	5			
Weight						
≤55 kg	24	150	24	10.379*	4	0.035
56 – 67 kg	3	35	7			
≥ 67 kg	21	54	12			
BMI (kg/m ²)						
13.6-23.6	33	165	31	0.171	2	0.918
> 23.6	15	74	12			
Presently Living in:						
Home	2	12	4	3.130	6	0.792
Hostel	42	217	37			
Paying guest	2	6	1			
Others	2	4	1			
History of any illness among family members						
Yes	20	87	19	1.225	2	0.542
No	28	152	24			
Involvement in Recreational Activities During Leisure Time						
Dance	10	54	7	13.911	10	0.177
Music	12	85	19			
Arts and crafts	16	70	10			
Recitation	5	5	4			
Sports	2	10	1			
Others	3	25	2			
Frequency of yoga practice						
Daily	12	72	2	15.061*	6	0.020
Alternative days	16	87	17			
Once a week	14	59	16			
Twice a week	6	21	8			
No	0	0	0			

(With Yates correction the Chi- square (χ^2), df (10)= 18.31, df (6)= 12.59, df (4)= 9.49, df (2)= 5.99, P<0.05, Significant*)
n=330

Data presented in Table 4 reveals that there was a significant association between height and quality of life, as the calculated 't' value (10.446) was greater than the tabulated 't' value (9.49) at the 0.05 level of significance.

Data also revealed that there was a significant association between weight and quality of life, as the calculated 't' value (10.379) was greater than the tabulated 't' value (9.49) at the 0.05 level of significance also there was a significant association between frequency of yoga practice and quality of life, as the calculated 't' value (15.061) was greater than the tabulated 't' value (12.59) at the 0.05 level of significance.

Based on the study findings, the Hypothesis was derived as

H₁: There is a significant association between quality of life and height of the B. Sc Nursing students at the 0.05 level of significance.

H₂: There is a significant association between quality of life and weight of the B. Sc Nursing students at the 0.05 level of significance.

H₃: There is a significant association between quality of life and frequency of yoga practice at the 0.05 level of significance.

Discussion

In this present study, mean score and SD of the total quality of life of B. Sc. Nursing students attending ongoing college-based yoga program score and of each domain were calculated and quality of life were classified into "Good quality of life", "Average quality of life" and "Poor quality of life" based on Mean \pm 1SD. So, the quality of life of B. Sc. Nursing students attending ongoing college-based yoga program was "Good quality of life", "Average quality of life" and "Poor quality of life" when the obtained total score was > 176.594, 137.986- 176.594 and < 137.986 respectively. The findings of the present study were supported by the study conducted by Jena J, Dr. Gomathi B, and Mohapatra P (2022) [3], who found that among 200 students, 48.5% of the students had moderate QOL and showed a mean score of 71.24 \pm 3.34. Followed by that, the highest (50.5%) percentage of the students had high QOL and showed the mean score of 80.74 \pm 3.83 and only two students had low QOL score and showed the mean score of 49.5 \pm 0.770. It can be interpreted that most of the students had a good quality of life [10].

In this present study, the quality of life was significantly associated with the frequency of yoga practice ($\chi^2 = 15.061$, $df = 6$, $p = 0.020$) at the 0.05 level of significance.

The findings were congruent with the findings of the study conducted by Dr. SL, Dr. GA *et al.* (2024), which showed a significant association of quality of life in females with frequency of yoga practice ($\chi^2 = 183$, $p < .001$) at the 0.05 level of significance.^[29]

In this present study, the quality of life of B.Sc. Nursing students was not significantly associated with any recreational activity during leisure time ($\chi^2 = 13.911$, $df = 10$, $p = 0.177$) at 0.05 level of significance.

The findings were congruent with the findings of the study conducted by Ms. Mundhe U and Mrs. N. P (2023)^[4] which showed there was no significant association between the quality of life and the child favourite hobbies ($\chi^2 = 2.408$, $df = 3$, $p = 0.492$) at 0.05 level of significance in a control group^[16].

Conclusion

On the basis of study findings, it can be concluded that the overall quality of life of B. Sc Nursing students attending ongoing college-based yoga program was of average quality of life. The study findings also revealed that the quality of life in the six domains, namely physical capacity, psychological, level of independence, social relationship, environment, overall quality of life, and general health perception, was also average. Quality of life of B.Sc. Nursing students attending ongoing college-based yoga program were associated with height, weight, and frequency of yoga practice.

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