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Conference article

A Comparative Study to Assess the Impact of Gym-Based Exercises and Natural Physical Activities among Students of Acharya College, Bangalore

Mrs. Shweta Ganapati Naik ✉

Assistant Professor, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Ajith K. Thomas

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Akash Kumar

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Ms. Aishwarya M

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Ms. Abini Wilson

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Adharsh Dileepkumar

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Ms. Abhirami E. Madhu

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Abhilash Sunny

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Abhinand MM

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Mr. Akhil Biju

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Ms. Yandhi Sherpa

Final year GNM students, Smt. Nagarathnamma College of Nursing, Bangalore, India

Abstract

A research study was conducted to compare the impact of gym based exercises and natural exercises among students of Acharya College, with the objectives. To assess the existing exercise patterns and preferences of students regarding gym-based workout and natural physical activities. To compare the effectiveness of gym-based exercise and natural physical activity on physical fitness among students. To find an association between exercise preferences and

More Information

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selected demographic variables. The study was carried out at selected colleges from Acharya institute using descriptive comparative study design. A total of 60 students (30 engaged in gym-based exercises and 30 engaged in natural physical activities) were selected through purposive sampling technique. Data was collected using a self-structured questionnaire and attitude scale. The result indicated that the mean percentage of knowledge score among the 30 participants who is practicing gym exercise (71.33%) was higher than the mean percentage of knowledge score among the 30 participants who is practicing natural exercise (69.78%). The calculated 't' value showed a significant difference between mean gym related and natural related knowledge scores. The attitude scale revealed that out of 30 respondents 13(43.33%) having positive attitude towards gym related exercises and out of 30 respondents 19(63.33%) having positive attitude towards natural exercises. The study concludes that the more number of participants were having positive attitude towards the natural exercises.

Introduction

Health is not just the absence of disease, but a state of complete physical, mental, and social well-being that enables a productive life. To achieve good health, both structured and unstructured exercises are important. Gym workouts and natural physical activities each have unique advantages that contribute to overall fitness.

Gym exercises are structured, equipment-based, and allow targeted training of specific muscle groups. They offer a controlled environment, professional guidance, and measurable progress, making them effective for muscle building, cardiovascular fitness, and rehabilitation. Access to machines, weight training, and personalized programs helps individuals achieve precise fitness goals.

Natural exercises, such as walking, hiking, swimming, gardening, and outdoor sports, emphasize functional movements and holistic health. These activities improve cardiovascular fitness, balance, and coordination while also reducing stress and enhancing mental well-being through contact with nature. However, they may be limited by weather, environment, or time constraints. Both approaches complement each other: gym workouts provide structure and accuracy, while natural activities foster psychological well-being and harmony with nature. An integrative strategy combining both ensures physical fitness, mental resilience, and overall quality of life.

Materials and Methods

Research approach

The research approach helps the researcher to determine what data to collect and how to analyze it. It also suggests possible conclusion to be drawn from the data.

The selection of a research procedure is a basic procedure for the research enquiry. In view of the nature of the problem selected for the study and objectives to be accomplished, a comparative descriptive approach was considered as an appropriate research approach for the present study.

Construction of the Tool and Teaching

The main strength behind developing this tool was, after an extensive review of literature, discussion with the guide and the various experts in the field of nursing and based on the investigator's personal experience on

the questionnaire. Total of 60 question, related to demographic variables and relate to assess knowledge assessment and attitude scale.

Sample and Sampling technique

Sample Size: n = 60 students (30 who regularly attend gm-bases workouts and 30 who engage in natural physical activities)

Sampling Technique: purposive sampling technique was used to collect the samples.

Inclusion and Exclusion Criteria

Students enrolled in Acharya College, Student aged between 18-26 years, Student who participates in physical activity at least 3 times a week and Student who give informed consent.

Exclusion Criteria are Students with medical conditions restricting physical activity and Student not regularly involved in any form of physical activity.

Ethical Consideration

The current study was carried out in our chosen permission from the college authority. Before the study began, the participants gave their consent in order to safeguard their legal right to participate in research. Participants took part in the program voluntarily and were free to leave at any moment.

Data Collection

Permission will be obtained from the college authorities. Informed consent will be taken form the participants. Participants will be divided into two groups:

Group A: Gym-based exercisers

Group B: Natural exercisers

Both groups completed the structured questionnaire. Data was collected 'coded' and statically analyze

Data Analysis

The collected data was coded and transformed to master sheets for analysis. The Data was analysed in terms of objectives of the study. Descriptive Statistics: Mean 'percentage' and frequency will be used to describe the physical activity patterns. Inferential statistics: Independent t-test to compare means between the two groups

Review of Literature

[1] conducted a study to investigate the effect of "green exercise" physical activity undertaken in natural environment – on mental and physical health

outcomes. Participants who exercised outdoor reported significant improvements in mood and self-esteem compared to those exercising indoor. The author attributed these benefits to the restorative qualities of natural settings. Which helps reduce stress and mental fatigue. The study utilized psychological assessment before and after exercise session to measure changes in participants’ emotional well being. While the research demonstrated clear advantage of natural exercise, it also recognized that individual factors such as weather and personal preferences might influences the extent of these benefits. Overall, [1] emphasized the importance of promoting outdoor physical activities as a strategy to enhance public health especially mental health, by leveraging the unique advantage offered by natural environment.

[2] performed a meta- analysis to identify the optimal “dose” of green exercise required for mental health benefits. Reviewing multiples studies, they found that even brief engagement-sometimes as short as five minutes—in natural exercise significantly improved mood and self-esteem. Their analysis suggested that benefits increased with longer exposure but plateaued after about 20-30 minutes. The researcher highlighted the accessibility of green exercise, suggesting that even small amount of time spent in natural environment during physical activity can serve as effective public health intervention. However, they also noted that environmental factors like the quantity and accessibility of green spaces could impact participation and outcomes. The study reinforced the notion that incorporating nature into physical activity routines enhances psychological well-being, making it a practical ad low- cost way to improve mental health across population.

[3] conducted a systemic review comparing mental health outcomes of physical activity performed outdoor versus indoors. Their analysis included 12 studies and revealed that outdoor exercise produced significantly greater improvements in mood, reduced tension , depression and confusion, and increased feelings of revitalization and energy compared to indoor exercise. The authors argued that the natural environment amplifies the psychological benefits of physical activity by offering sensory stimuli that promote relaxation and mental restoration. However, they cautioned that potential safety concerns, such as uneven terrain and exposure to weather extremes, could limit participation for some individual. Despite these challenges ,the study concluded that promoting outdoor physical activity in green spaces is an effective approach to enhance mental wellbeing and should be encouraged in public health initiatives.

[4] investigated the association between exposure to green space and health inequalities in a large UK population study. Using epidemiological data, they

found that individual with greater access to natural environment had lower all-cause mortality rates, suggesting that green spaces contribute to overall better outcomes, importantly, the study showed that green space exposure helped reduce health disparities between socio-economic groups, indicating a potential role for natural environment in addressing public health inequalities. The authors emphasized that while green spaces provide important health benefits their distribution is often uneven, with disadvantage population having less access. This inequity limits the potential positive effect for those who might benefit most. They recommended that urban planning and public health policies prioritize equitable access to green spaces to maximize population health and reduce health inequalities.

Results

The findings of the study are represented under the following sections:

SECTION A: Frequency and percentage distribution of subjects according to demographic variables.

SECTION B: Knowledge Assessment Based on Respondents.

SECTION C: Attitude Assessment Based on Respondent

Table 1: Classification of Respondents Based on Their Demographic Variables

Sl.no	Demographic variables	Frequency	Percentage
1	Age		
	18-20	31	51.66
	21-23	28	46.66
	24-26	1	1.66
2	Gender		
	Male	37	61.66
	female	23	38.3
	other	0	0
3	Type of exercise		
	Gym	30	50
	Natural	30	50
4	Duration per session		
	<30 min	20	33.33
	30-60 min	13	21.66
	>60 min	27	45.0

Most participants (51.66%) were in the 18-20 years age group, followed by 46.66% in the 21-23 years group. Only 1.66 % belonged to the 24-26 years age group. This shows that the majority of samples were younger adults. Out of 60 respondents, 61.66% were male and 38.3% were female. Showing a higher male predominance in the study population. Half of the respondents (50%) reported doing gym-based exercise, while the other half (50%) engaged in outdoor exercises, showing an equal distribution in exercise

preference. The majority of respondents (45%) exercised for 30-60 minutes per session, while 33.3% spent less than 30 minutes. Only 5% Reported

exercising for more than 60 minutes. This suggests that most participants preferred a moderate workout duration.

Table 2: Mean, standard deviation, mean percentage, mean difference value and p value of knowledge on the impact of gym-based exercise and natural physical activity.

Type of exercise	Mean	Standard deviation	Mean percentage	Mean difference	T value (paired test)	P value
Gym	10.7	1.02	71.33%	0.23	3.46	0.001*
Natural	10.47	1.2	69.78%			

The finding of the study shows that the mean gym knowledge score was 10.7 With SD 1.02 with a mean percentage of 71.83%, whereas the mean natural exercise knowledge score increased 10.47, SD 1.2 with a mean percentage of 69.78%. The mean difference between gym and natural exercise score was 0.23.

The result show that in natural exercise, out of 30 respondents, 19(63.33%) having positive attitude, 11(36.67%) having neutral attitude and 0% having negative attitude.

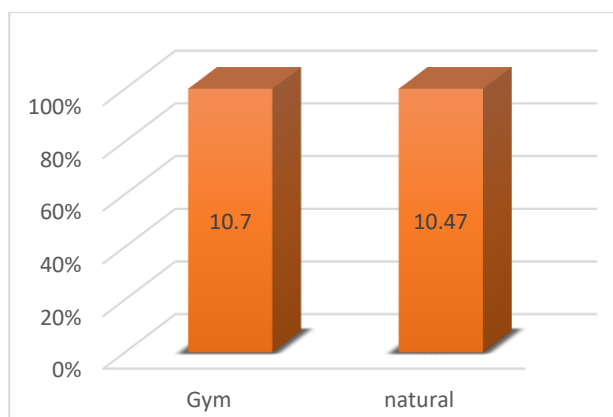


Figure 1: Percentage Distribution Based on Knowledge

The result show that in gym out of 30 respondents 13(43.33%) having positive attitude. 17(56.67%) having neutral attitude and 0% having negative attitude.

Table 3: Attitude Assessment Based on Respondents Related to Gym-Based Activities

Category	Frequency	Percentage (%)
Positive Attitude (>75%)	13	43.33
Neutral Attitude (50-70%)	17	56.67
Negative Attitude (<50%)	00	00.00

Table 4: Attitude Assessment Based on Respondents Related to Natural Based Activities

Category	Frequency	Percentage (%)
Positive Attitude (>75%)	19	63.33
Neutral Attitude (50-70%)	11	36.67
Negative Attitude (<50%)	00	00.00

Table 5: Comparison between Attitude towards Gym and Natural Based Exercises

Type of exercise	Mean	Standard deviation	Mean percentage (%)	Mean difference	p value
Gym	44.83	7.02	74.72	3.27	0.066
Natural	48.1	6.29	80.17		

The finding of the study shows that in gym, Mean is 44.83, Mean % is 74.72% and Standard deviation is 7.02. In natural exercise, Mean is 48.1, Mean % is 80.17 and Standard deviation is 6.29. Both gym and natural exercise, Mean difference is 3.27 and p value is 0.066.

Discussion

The results indicate that the participants who are practicing natural exercises are had higher positive attitude than the participants who are practicing Gym exercises.

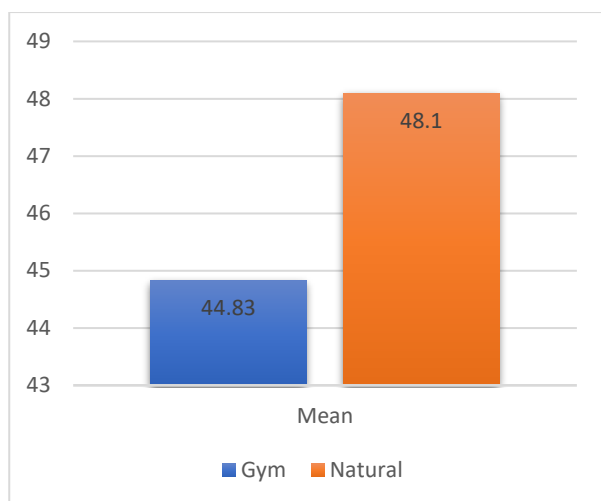


Figure 2. Comparison between Gym and Natural Exercises

Conclusion

The present study was undertaken to compare the impact of gym-based exercises and natural physical activities on the health and well-being of students. The findings revealed that both forms of physical activity contributed positively to physical fitness and overall well-being, though the degree of impact varied. Gym-based exercises provided a structured and goal-oriented approach, whereas natural physical activities offered flexibility, accessibility, and a more holistic influence on lifestyle.

The study highlights that neither form of exercise can be considered superior in all aspects; rather, both serve as effective means of promoting health depending on individual preference, availability of resources, and lifestyle. For nursing students, the results emphasize the importance of adopting suitable physical activity not only for personal health but also as a strategy to counsel and motivate patients and communities.

Thus, the study concludes that the promotion of both gym-based and natural physical activities is essential for fostering physical, mental, and social well-being among young adults.

Limitation

The study was conducted among students of a single institution, which may limit the generalizability of the findings to other populations.

The sample size was relatively small and may not fully represent the exercise patterns of all college students. Data collection was based on self-reported information, which may be subject to recall bias or socially desirable responses.

The study considered only short-term impact; long-term effects of gym-based and natural physical activities were not assessed.

Other influencing factors such as dietary habits, sleep patterns, genetic predisposition, and lifestyle variations were not controlled.

The study was limited to selected variables and did not cover all possible dimensions of physical, psychological, and social health.

Recommendation

On the basis of study findings, following recommendations have been made:

- The study can be replicated on a large sample with a control group.
- A comparative study may be conducted to find out the effectiveness between Structured Teaching Programme and Video assisted teaching programme regarding the same topic.
- Similar study can be undertaken using other teaching strategies.
- Similar study can be conducted using sample of large size selected by probability sampling for wider generalization.
- A similar study can be conducted at different settings on samples with different demographic variables.

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Conflict of Interest

None

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