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IDENTIFY THE BARRIERS OF PHYSICAL ACTIVITY AMONG YOUNG ADULTS (18-25 YEARS)

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ABSTRACT
Physical activity refers to any movement of the body involving the skeletal muscles that requires the expenditure of energy. It includes various forms of movement such as exercise, sports participation, active transportation like walking or cycling, household chores, and occupational activities.

Several factors can hinder individuals from engaging in regular physical activity. Common challenges include limited time, low motivation, inadequate social support, and physical constraints. Additional obstacles may involve fear of injury, lack of confidence or skill, and environmental conditions such as poor weather or limited access to suitable facilities.

The purpose of the present study was to identify the barriers to physical activity among nursing students and to examine their association with selected socio demographic variables. A quantitative research design was adopted, and thirty participants were selected through a non-probability purposive sampling method. The study was conducted at MGM Muthoot College of Nursing, Kozhencherry.

Data were collected using a Likert scale questionnaire designed to assess both barriers to physical activity and socio demographic characteristics. Findings revealed that 13.33% of the students experienced no barriers, 73.33% reported mild barriers, and 13.33% experienced moderate barriers. None of the participants reported severe barriers to physical activity.

Chi-square analysis indicated no significant association between barriers to physical activity and selected demographic factors, including age ($\chi^2 = 4.7$), gender ($\chi^2 = 0.17$), residence ($\chi^2 = 0.78$), time spent on phone use ($\chi^2 = 5.92$), availability of play facilities ($\chi^2 = 1.09$), duration of physical activity ($\chi^2 = 4.55$), and type of physical activity performed ($\chi^2 = 1.46$).

The study concludes that addressing barriers to physical activity requires a comprehensive approach. Efforts should focus on raising awareness, fostering supportive peer environments, improving access to safe facilities, and promoting the integration of physical activity into daily routines through inclusive and easily accessible opportunities.

Keywords: Physical activity, Barriers, Nursing students, Socio demographic factors

INTRODUCTION

Introduction

Technological advancements and modern conveniences have improved daily life but have also contributed to a decline in physical activity levels (**World Health Organization [WHO], 2020**). Sedentary lifestyles have become common as work, transport, and leisure increasingly depend on technology. Alongside these environmental changes, individual factors such as motivation, behavior, and psychological readiness also play a significant role in determining one's level of physical activity (**Pender et al., 2015**). Understanding these influences is crucial to promoting an active lifestyle, especially among young adults.

Young adulthood represents a critical period for establishing long-term health behaviors. However, this age group is often at increased risk for obesity and lifestyle-related diseases due to decreased physical activity, irregular eating habits, and high consumption of calorie-dense foods. The transition into adulthood brings new responsibilities, academic pressures, and social influences that may reduce time and motivation for regular exercise.

Physical inactivity is recognized as a major global health concern and a leading cause of non-communicable diseases, including cardiovascular diseases, diabetes, and obesity. Moreover, participation in physical activity varies across demographic and social groups. Gender-based disparities are evident, with global data indicating that women are less active than men, often due to cultural norms, safety concerns, and social expectations. Addressing these barriers requires targeted interventions and supportive environments that encourage active lifestyles for all individuals.

This study was conducted to identify the barriers to physical activity among young adults in selected colleges in Pathanamthitta and to develop a lifestyle modification program that promotes sustainable health behaviors. By understanding the personal, social, and environmental factors influencing physical activity, effective strategies can be designed to enhance participation and prevent future health risks.

Need and significance of the study

Physical activity offers significant physical and mental health benefits, including reducing the risk of chronic diseases such as heart disease, stroke, obesity, cancer, and diabetes. It also enhances brain function, mood, and sleep quality while alleviating symptoms of anxiety and depression. Despite these benefits, global participation in physical activity among young adults has remained low over the past two decades.

Young adulthood is a critical period when patterns of inactivity often develop. Participation is influenced by multiple barriers, including lack of time, energy, and motivation, as well as cost, limited access to facilities, illness or injury, transportation challenges, care giving responsibilities, safety concerns, and lack of suitable programs. Women often face additional obstacles due to cultural norms, safety issues, and care giving roles, while individuals with physical disabilities may encounter fatigue, fear of injury, inadequate guidance, and limited professional support. Conversely, motivation, self-efficacy, and positive attitudes toward physical activity act as facilitators.

The rising prevalence of chronic diseases in young adults, traditionally associated with older age, highlights the urgency of promoting active lifestyles early. Maintaining healthy behaviors in young adulthood can reduce the risk of cardiovascular disease later and alleviate long-term healthcare burdens.

Despite this importance, public health initiatives often focus more on adolescents or older adults, leaving young adults underrepresented. Most studies use broad adult populations and frameworks such as behavioral epidemiology or ecological models, with limited focus on the self-identified barriers and facilitators specific to healthy young adults.

Targeted research and interventions are needed to address the unique challenges faced by this group. Enhancing understanding of these factors is essential for improving participation in physical activity, thereby supporting long-term health, productivity, and societal well-being.

Statement of the problem

A descriptive study to identify the barriers of physical activity among young adults (18-25 years) in selected nursing colleges of Pathanamthitta district.

Objectives

1. To identify the barriers of physical activity among nursing college students.
2. To find out the association of barriers to physical activities of nursing college students with selected socio demographic variables.

RESEARCH METHODOLOGY

Research Design:

Research design used in this study was descriptive method.

Setting of the study

Study was conducted in MGM Muthoot College of Nursing, Kozhencherry

Sample:

Students of the age group 18 to 25 years

Sample size:

Sample size is 30

Sampling technique:

Non probability purposive sampling technique.

Tool/Instruments

The tool used in the study is a Likert scale to assess the barriers of physical activities among young adults.
The questionnaire is mainly divided into two sections:
Section A: Demographic variables like age of student, gender, residence, time spent for phone use ,any playing facilities nearby, time spent on physical activity and kind of physical activity interested in.
Section B: Consists of 5 point Likert scale to assess the physical barriers among nursing students in Pathanamthitta with 30 statements.

Validity and Reliability

The tools were validated by experts. Test retests method to test the reliability of the tool. The reliability of the tool was found to be 0.8.

Data collection process

The data collection period for this study was 03.05.2025 to 08.05.2025. Prior to data collection, formal permission was obtained from the Principal of MGM Muthoot College of Nursing, Kozhencherry. The data collection was done for 4 days at selected nursing college at Pathanamthitta. Prior consent was obtained from the selected samples. Likert scale was used to collect the data from the nursing to assess the barriers in physical activity.

Plan for data analysis

Data is analyzed by using inferential statistics by Chi square test. Analysis was organized under following heading.
Section A: Description of demographic variables.
Section B: Analysis of the Likert scale assessment of physical activity barriers.

Statistical tool

The statistical tool are those tools by which statistical methods are applied. Statistical tools help with data sorting, to identify and remedy issues with the quality of data through various data sorting methods. The most well known statistical tool are mean, median, mode, range, dispersion, standard deviation, coefficient of variation etc.

Descriptive statistics

Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data.
Data analysis is planned based on the objectives of the study. After collection of data, data were organized and tabulated using descriptive and inferential statistics manually using MS Excel, 2007 version. Frequency and percentage distribution were used to analyze the selected demographic variables. Chi-square test was used to find out the association between barriers to physical activities and selected socio-demographic variables.
A chi-squared test (also chi-square) is a statistical hypothesis test used in the analysis of contingency tables

when the sample sizes are large. In simpler terms, this test is primarily used to examine whether two categorical variables (two dimensions of the contingency table)are independent in influencing the test statistic (values within the table). The test is valid when the test statistic is chi-squared distributed under the null hypothesis, specifically Pearson's chi-squared test and variants thereof. Pearson's chi-squared test is used to determine whether there is a statistically significant difference between the expected frequencies and the observed frequencies in one or more categories of a contingency table. The chi-square statistic compares the size of any discrepancies between the expected results and the actual results, given the size of the sample and the number of variables in the relationship. For these tests, degrees of freedom are used to determine if a certain null hypothesis can be rejected based on the total number of variables and samples within the experiment. As with any statistic, the larger the sample size, the more reliable the results.

Formula for Chi-Square

$$\chi 2c = \Sigma \frac{(Oi - Ei)^2}{E^2}$$

where: c = Degrees of freedom; O = Observed value(s); E = Expected value(s)

RESULT AND DISCUSSION

Distribution of socio demographic variables among students of selected nursing college.

Table 1: Frequency and distribution of socio demographic variables

	frequency	percentage(%)
age		
18 years	16	53.3
19 years	12	40
20 years	2	6.66
gender		
female	24	80
male	6	20
residence		
Day scholar	2	6.66
hostel	28	93.33
time spend for phone use		
> 7 hr	1	3.33
2-4 hr	25	83.33
5-7 hr	4	13.33
play facilities		
yes	26	86.66
no	4	13.33
time spend for physical activity		
1 hr	8	26.66
30 min	16	53.33
none	6	20
kind of physical activity		
indoor	5	16.66
outdoor	24	80
none	1	3.33

Distribution of sample according to level of barriers of physical activity among nursing students.

Table 2 : Frequency and distribution of the levels of barriers of physical activity.

grading of barrier	frequency(f)	percentage(%)
no barrier	4	13.33
mild barrier	22	73.33
moderate barrier	4	13.33
severe barrier	0	0

Association between barriers of physical activities and socio demographic variables.

The Chi square value for age($\chi 2$ = 4.7) , gender($\chi 2$= 0.17), residence($\chi 2$=0.78), time on phone use($\chi 2$= 5.92) , play facilities ($\chi 2$=1.09), time spend for physical activities($\chi 2$=4.55) and kind of physical

activity($\chi 2$=1.46) at p value >0.05 were lesser than table value , so there is no significant association between barriers of physical activity and selected socio demographic variables like age, gender, residence, time on phone use, play facilities, time spend for physical activities and kind of physical activity.

Limitations:

1. The study was limited to 30 samples.
2. The study was limited to MGM Muthoot College of nursing , Kozhencherry.
3. The study was limited to 1st semester students

Recommendations:

1. Similar study can be replicated with a larger sample in order to generalize the study findings.
2. Similar studies can be carried out among other population.

CONCLUSION

The study showed that most nursing students were young adults aged 18–19 years, predominantly female, and mainly residing in hostels. While a majority had access to play facilities and engaged in at least 30 minutes of physical activity, a notable number remained inactive, and high phone usage was common. These results indicate the need for strategies that encourage regular physical activity, reduce sedentary habits, and provide both indoor and outdoor options to support the overall health of nursing students.

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