WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

ASSESS THE PHYSICAL ACTIVITY AND OBESITY AMONG YOUNG ADULTS.

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ABSTRACT :

Background: Physical inactivity is an established risk factor for cardiovascular disease, cancer and diabetes, which along with chronic respiratory disease account for more than 60% of all deaths. More than 80% of chronic disease deaths occur within low- and middle-income countries. The aim of the study is to assess the level of physical activity among young adults. **Methods:** The study was conducted after formal permission of the students for Faculty of Nursing in Dr MGR Educational and Research Institute. The study participants were selected by using non – probability simple random sampling – Lottery method who met the inclusive criteria. Informed consent was obtained from the participants. The anthropometric measurements (height, weight, waist circumference) were measured and calculated BMI by standard formula. Physical activity was assessed using 5- point likert scale. The e-questionnaire was sent to the selected participants. The collected data were analyzed by descriptive and inferential statistics. **Result:** The results showed that the assessing the physical activity and obesity among the B Sc Nursing Students Faculty of Nursing Dr .M.G.R Educational and Research Institute. The analysis shows that 55(55%) of the students had moderate physical activity, 53(53%) of the students were normal and 60(60%) of the students had Very high waist circumference. **Conclusion:** The study concluded that higher probabilities of obesity in young adulthood were found across combinations of lower physical activity level. It can be suggesting the need for tailored health promoting actions. Special attention should be given to obesity prevention.

Keywords: Physical activity, obesity, young adults.

INTRODUCTION :

Physical activity, including leisure time, transport, and work, is essential for overall health and well-being. Inactivity, the largest cause of disease and disability in the UK, contributes to 1 in 6 deaths and is linked to conditions such as obesity, diabetes, cancer, dementia, stroke, heart disease, hypertension, and mental illness. There is a 3 year difference in life expectancy between active and minimally active individuals.

Arunkumar Verma (2022) conducted a cross-sectional study on physical activity among University students, finding that 14.5% of students fall inactive. Obesity is a complex disease involving excessive body fat due to unhealthy lifestyles and inactivity, increasing the risk of diseases like heart disease, diabetes, high blood pressure, and certain cancers. Men and women have varying rates of obesity, with women having higher rates of severe obesity.

Eyadmakkawy (2019) found that 23.7% of students were overweight and 11% were obese, with higher prevalence among females. BMI, a useful measure of overweight and obesity, is calculated from height and weight of an individual and may increase the risk for certain diseases. Sachin Singh Yadav et.al. (2015) assessed the body mass index (BMI) of medical undergraduate students in Haryana, finding that 73.1% of students were in normal BMI, while 22.3% were overweight, 3.1% were obese, and 1.5% were underweight.

Clemens Drenowatz (2016) conducted a study on the association of physical activity during weekdays and weekend with body composition in younger adults in the USA, emphasizing the importance of physical activity in regulating body weight. Young adults are in the transition between adolescence and adulthood, and accurate assessment of physical activity is necessary to identify current levels and assess the effectiveness of intervention programs designed to increase physical activity.

AIM:

The aim of the study is to assess the level of physical activity among young adults.

STATEMENT OF THE PROBLEM:

A descriptive study to assess the level of physical activity and obesity among young adults at selected colleges in Chennai.

OBJECTIVES:

- To assess the level of physical activity among young adults
- To assess the obesity among young adults
- To correlate the physical activity and obesity among young adults
- To find out the association between obesity, level of physical activity, waist circumference with selected demographic variables.

RESEARCH METHODOLOGY :

The methodology for this study was based on a quantitative research approach, aligning with the nature of the research problem. The research design chosen was descriptive, focusing on understanding the relationship between physical activity and obesity among young adults. The key variables in the study included demographic variables (age, gender, religion, hours of work, dietary patterns, year of study, type of working, and family history of co-morbidities), dependent variables (Body Mass Index and waist circumference), and the independent variable (physical activity).

The study was conducted at Dr. MGR Educational and Research Institute, a renowned private university in Chennai, specifically within the Faculty of Nursing, which is located at the A.C.S Medical College and Hospital campus. The target population comprised young adults in Chennai, while the accessible population included undergraduate nursing students enrolled in the 2nd, 3rd, and 4th years of the B.Sc Nursing program at the Faculty of Nursing. A total of 100 students were selected using a non-probability simple random sampling technique, with participants chosen via a lottery method.

The data collection tool consisted of three sections: Section A covered demographic variables, Section B involved anthropometric measurements (height, weight, and waist circumference), and Section C was a rating scale assessing physical activity using a five-point Likert scale. The anthropometric measurements were used to calculate Body Mass Index (BMI), which was classified based on WHO guidelines, and waist circumference was categorized into four levels of risk. The physical activity assessment was based on a 16-question rating scale, with a total possible score of 64, and was categorized into low, moderate, or heavy physical activity levels.

The study was reviewed and approved by the Institutional Ethics Committee of Dr. MGR Educational and Research Institute, and informed consent was obtained from all participants. Content validity was ensured through expert review by internal nursing experts. Ethical considerations were adhered to throughout the study, ensuring the integrity and reliability of the findings.

RESULT:

Table 1: Frequency and percentage distribution of demographic variables of B.Sc(N) Students.

S.No	Demographic variables	Frequency (n)	Percentage (%)
1.	**Age in years**		
	a.18-19 years	37	37
	b.20-21 years	60	60
	c.22-24 years	3	3
2.	**Gender**		
	a. Male	22	22
	b. Female	78	78
3.	**Religion**		
	a. Hindu	76	76
	b. Christian	17	17
	c. Muslim	7	7
	D. Others	0	0
4.	**If you are working part time, choose one category under this:**		
	a. Sedentary worker	47	47
	b.Moderate worker	49	49
	c.Heavy worker	4	4
5.	**Hours of working**		
	a.<6 hours	57	57
	b.6-8 hours	35	35

	c.8-10 hours	5	5
	d.>10 hours	3	3
6.	**Dietary habit**		
	a.Vegetarian	5	5
	b.Non-vegetarian	95	95
7.	**Family history of co-morbidity in parents(DM ,Hypertension, CVD)**		
	a. Yes	33	33
	b. No	67	67
	If yes specify whom		
	a. Father	20	61
	b. Mother	13	39

Table 2: Frequency and distribution of level of physical activity among young adults.

SL. No	Level of physical activity	Frequency (n)	Percentage %	Mean & SD
1	Low physical activity	31	31	57.04±4.14
2	Moderate physical activity	55	55	
3	Heavy physical activity	14	14	

Table 3: Frequency and distribution of level of obesity among young adults

SL. No	Level of obesity	Frequency (n)	Percentage %	Mean SD
1	Under weight	27	27	21.09±11.30
2	Normal	53	53	
3	Over weight	17	17	
4	Obesity	3	3	

Table 4: Frequency and distribution of level of waist circumference among young adult

SL. No	Level of waist circumference	Frequency (n)	Percentage %	Mean & SD
1	Very low	60	60	82.5±11.3
2	Low	20	20	
3	High	12	12	
4	very high	8	8	

Table 5: Correlation between physical activity and obesity among young adults

Variables	Mean	Standard deviation (SD)	'r' Value	'p' Value & its significance
Physical activity	57.04	4.14	-0.014	0.012*S
Obesity	21.09	11.30		

DISCUSSION:

This chapter discusses the study's findings, comparing them with relevant literature and statistical analysis. The primary aim of the study was to assess the level of physical activity and obesity among young adults. A total of 100 B.Sc Nursing students were selected through simple random sampling using the lottery method. Data was collected through a 5-point Likert scale for physical activity and anthropometric measurements for height, weight, and waist circumference. Descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (Chi-square test, Pearson correlation) were used to analyze the data.

Regarding demographic variables, 60% of the participants were aged 20-21 years, 78% were female, and 76% were Hindu. Additionally, 49% of the students were moderate workers, 57% worked less than 6 hours per week, and 67% had no family history of co-morbidities. In terms of physical activity, 31% of the students had low physical activity, 55% had moderate physical activity, and 14% had high physical activity. For obesity levels, 27% were underweight, 53% had normal weight, 17% were overweight, and 3% were obese. Regarding waist circumference, 60% of the students had an excellent circumference, 20% had good, 12% had average, and 8% were at risk of obesity.

The study found a statistically significant negative correlation between physical activity and obesity (Pearson $r = -0.014$), supporting the hypothesis that increased physical activity is associated with lower obesity levels. Furthermore, the study revealed that while there was no significant association between physical activity and demographic variables, hours of work and dietary habits showed a statistically significant association with obesity and physical activity ($p < 0.05$). Additionally, waist circumference was significantly associated with age, religion, and dietary habits. Overall, the study concludes that physical activity and obesity are significantly correlated, with demographic factors influencing these variables. Both hypotheses (H1 and H2) were accepted.

CONCLUSION:

In conclusion, this study provides valuable insights into the relationship between physical activity and obesity among young adults. The findings suggest that moderate physical activity is prevalent among the majority of B.Sc Nursing students, and most participants had a normal weight range. A significant negative correlation between physical activity and obesity was observed, highlighting the importance of physical activity in managing obesity. Furthermore, the study identified key demographic factors, such as hours of work and dietary habits, that significantly influenced obesity and physical activity levels. These results emphasize the need for promoting healthier lifestyles through increased physical activity and better dietary habits to reduce the risk of obesity in young adults.

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