

Awareness of Exercise in Preventing Non-communicable Diseases Among Young Adults

S. P. Srinivas¹, Shashikant G. Somani², B. Chandini Rani³, M. Rama Devi⁴

¹Associate Professor, Department of Physiology, Government Medical College, Yadadri, Telangana

²Associate Professor, Department of Physiology, Government Medical College, Nalgonda, Telangana

³Associate Professor, Department of Physiology, Raja Rajeshwari Institute of Medical Sciences- Girls, Sanga Reddy, Telangana

⁴Professor & HOD, Department of Physiology, Gandhi Medical College, Secunderabad, Telangana

Received: 01-12-2025 / Revised: 16-01-2026 / Accepted: 06-02-2026

Corresponding Author: Dr. Shashikant G Somani

Conflict of interest: Nil

Abstract

Background: Exercise is a proven preventive measure against non-communicable diseases such as obesity, diabetes, hypertension and mental health disorders. This study investigates the awareness of exercise among young adults in relation to disease prevention.

Aim: This study aim to assess the level of awareness among young adults regarding exercise as a preventive tool against diseases.

Methodology: A cross-sectional survey -based study of 200 participants aged 18–25 years was conducted using a structured questionnaire using google form. Data was analysed by appropriate statistical method.

Results: The duration of exercise in majority (40%) of participants was less than 30 minutes per day. The frequency of exercise in majority of participants (40%) was 3–4 times per week, which was closer to recommended guidelines but still below optimal daily activity. Exercise adherence rate was 35% indicating low compliance. In Majority of participants (80%) , strongest motivation for exercise was fitness and appearance, followed by disease prevention. only 35% of participants in high awareness group and 33% participants in low awareness group met WHO guidelines of exercise. The Chi Square test result ($\chi^2 = 0.105$, $df=1$, $p > 0.05$) indicates that the difference between awareness and practice is not statistically significant. Thus results revealed moderate awareness of exercise benefits but poor consistent practice.

Conclusion: The findings highlight the need for targeted health education and institutional support to promote exercise awareness and practice among students.

Keywords: Attitude, Exercise, Knowledge, Practice.

DOI: 10.25258/ijcpr.18.2.185

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Introduction

Regular physical exercise is widely recognized as a cornerstone of disease prevention. Knowledge, awareness and practices has an important role in prevention of non-communicable diseases. Exercise results in energy expenditure maintaining physical fitness[1,2]. Physical inactivity is a major public health concern globally. Young adults, often adopt sedentary lifestyles due to academic pressures, digital engagement, technology use and urbanization. In general, obesity is associated with a greater risk of type 2 diabetes mellitus, dyslipidemia, hypertension, stroke and coronary heart disease, infertility etc[3,4].

Obesity also carries serious implications for mental health, mainly due to social discrimination against fatness. “Global Recommendations on Physical Activity and Health” from WHO introduced in

2010 stated that minimum recommendation for physical activity in adults is aerobic activity either 2 hours 30 minutes per day moderate-intensity or 1 hours 15 minutes per day vigorous-intensity. Exercising can encompass a variety of activities such as gardening, vehicle washing, or strolling around the neighbourhood with a pet and it can even be done at home. Despite proven benefits, awareness and practice of exercise remain inconsistent among young adults.

Aim: The aim of present study is to assess the level of awareness among young adults regarding exercise as a preventive tool against diseases.

Objectives

1. To assess awareness of exercise in preventing chronic diseases among young adults.

2. To recommend strategies for improving awareness and practice.

Material and Method

Present study was a cross sectional study. It was done among Two hundred undergraduate medical students of both genders between age group of 18 to 25 years. After approval by Ethical Committee, the details of the study was explained to the participants and written informed consent was obtained. A structured questionnaire was used to assess knowledge, attitudes and practices (KAP) regarding exercise using Google forms. Students those refused to enrol were excluded.

Statistical Analysis

All the parameter were expressed as mean and standard deviation (mean \pm SD). They were tabulated in microsoft excel sheet. Statistical analysis was done using SPSS. Data were compared using Chi square test to determine associations between awareness and exercise behavior. 'p' value less than 0.05 was considered significant.

Questionnaire design had questions regarding knowledge, attitude and practice. The correct answers were counted and the scores were categorized.

KAP Questionnaire

Domain	Sample Item
Knowledge	<ol style="list-style-type: none"> 1. Is exercise helpful in managing obesity? 2. Does exercise reduce the risk of diabetes? 3. Can regular physical activity prevent heart disease? 4. Does exercise improve mental health? 5. Does exercise boosts immunity?
Attitude	<ol style="list-style-type: none"> 1. Do you believe exercise is essential for disease prevention. 2. Do you believe exercise is important for fitness ? 3. Do you believe exercise reduces stress and improves mental health? 4. Do you believe exercise work performance? 5. Do you believe exercise helps to socialize and enjoy group activities ?
Practice	<ol style="list-style-type: none"> 1. Do you prefer walking or cycling over motor transport for short distances? 2. Do you engage in at least 30 minutes of physical activity daily? 3. How often do you exercise per week? 4. Do you follow a structured workout plan? 5. Do you meet the WHO recommendation of 150 min per week exercise?

Results

Table 1: Knowledge of Exercise in Disease Prevention (N = 200)

Parameter	Number of Respondents	Percentage (%)
Obesity prevention	140	70%
Diabetes prevention	110	55%
Cardiovascular health	100	50%
Mental health improvement	80	40%
General immunity boost	90	45%

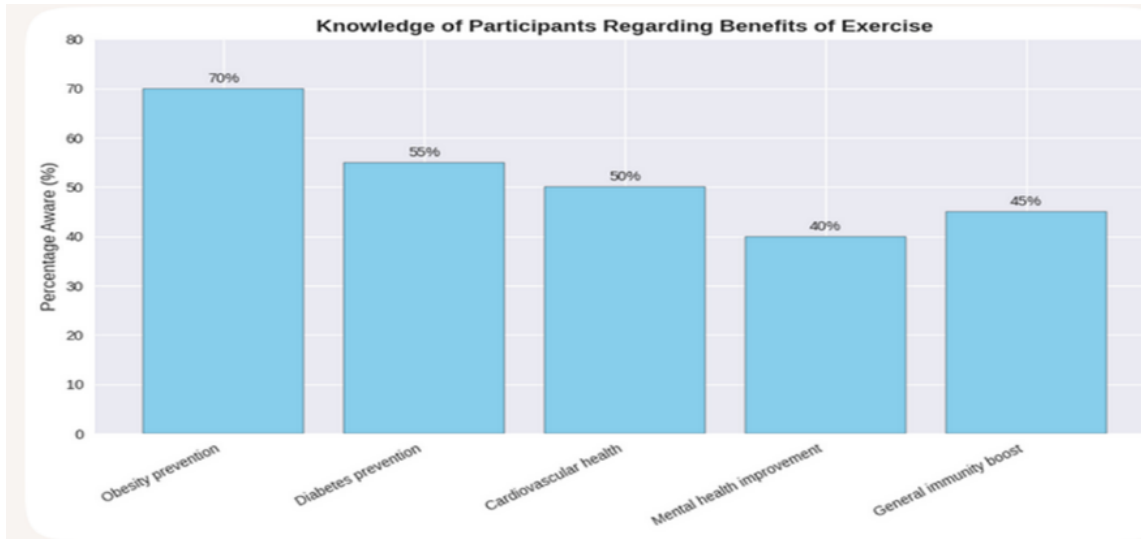


Figure 1: Knowledge of Exercise in Disease Prevention

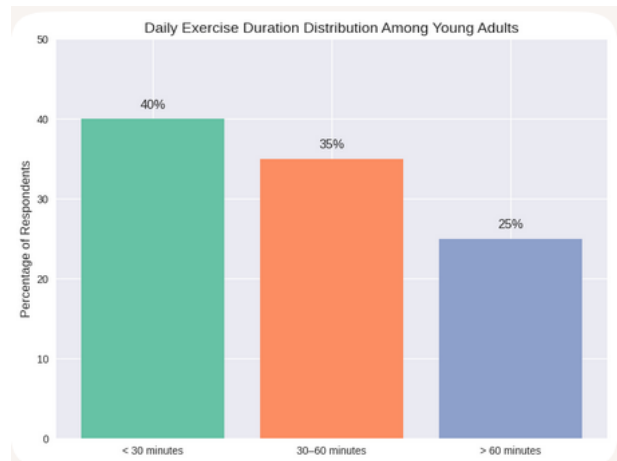


Figure 2: Duration of Exercise per Day in percentage (%)

The majority (40%) of participants were doing exercise for less than 30 minutes per day.

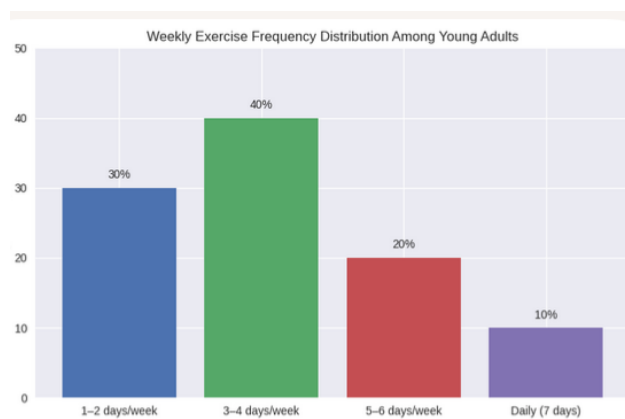


Figure 3: Frequency of Exercise per Week in percentage (%)

The majority of participants (40%) exercise 3-4 times per week, which is closer to recommended guidelines but still below optimal daily activity.

Table 2: Exercise Practice Levels (WHO Recommendation ≥150 min/week)

Category	Number of Respondents	% of Respondents
Meets WHO Recommendation	70	35
Below recommendation	130	65

Exercise adherence rate was 35% indicating low compliance.

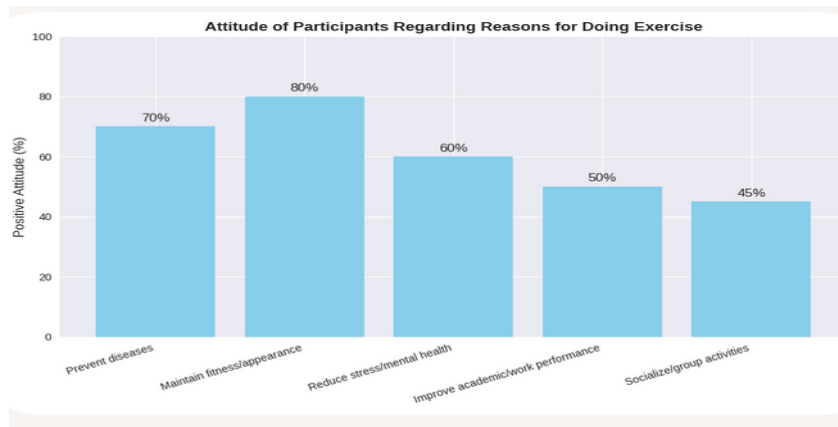


Figure 4: Attitude of Participants regarding different reasons on benefits of exercise

Majority (80%) show strongest motivation for fitness and appearance, followed by disease prevention

Table 3: Awareness vs. Practice

Awareness Level	Meets WHO Exercise Recommendation	Does Not Meet Recommendation	Total
High Awareness (≥50%)	50	90	140
Low Awareness (<50%)	20	40	60
Total	70	130	200

- Calculated $\chi^2 = 0.105$
- Critical χ^2 (df=1, $\alpha=0.05$) = 3.84

Since (0.105 < 3.84), the result is not statistically significant.

Discussion

The purpose of present study was to investigate the current KAP toward exercise among young adult. The study reveals moderate awareness but poor practice. While most participants understood the role of exercise in preventing obesity, fewer recognized its impact on diabetes and mental health. Similar studies show young adults prioritize short-term fitness goals over long-term disease prevention. Barriers could be time constraints and lack of motivation for regular exercise.

Thus there is a gap between knowledge and practice. Awareness of exercise as a preventive tool among young adults is moderate but insufficiently translated into practice. This gap between knowledge and behaviour is consistent with global trends reported by the WHO, which notes that 31% of adults and 80% of adolescents fail to meet recommended physical activity levels [1,2]. WHO Integrating exercise awareness into medical education, community health programs and digital campaigns could improve outcomes.

Knowledge vs. Practice Gap: Results of present study showed that 70% of participants recognized the role of exercise in preventing obesity, yet only 35% adhered to the WHO guideline of 150 minutes of moderate-intensity exercise per week. This discrepancy highlights that awareness alone is insufficient to drive behaviour change. Similar findings were reported by Vaara et al.[5] (2019), who found that young adult had limited knowledge of physical activity recommendations, particularly regarding strength training .

Attitude and Motivation: Present study results showed that attitude scores towards maintaining fitness/appearance was(80%), prevention of diseases (70%) and reducing stress (60%)were high. Mental health benefits are moderately recognized, while social reasons are least motivating. This aligns with the study by the University of Adelaide (2024), Science Daily [6] This suggests that awareness campaigns should emphasize long-term health and mental well-being.

Awareness and Practice: Results of present study showed that only 35% participants in high awareness group and 33% participants in low awareness group met WHO guidelines of exercise. The Chi Square test result ($\chi^2 = 0.105$, df=1, $p > 0.05$) indicates that the difference between awareness and practice is not statistically

significant, suggesting awareness alone does not guarantee adherence to exercise recommendations. However, the relatively low practice rates indicate that behavioural and environmental barriers must be addressed along with awareness campaigns. The rising prevalence of chronic diseases and physical inactivity can be attributed to changing lifestyle [7].

Exercise is a powerful tool for maintaining health and preventing illness. Increasing public awareness of the benefits of exercise could help to prevent obesity and chronic illnesses. In present study, 40% participants were found doing exercise 3–4 times per week, which is closer to recommended guidelines but still below optimal daily activity. This shows gap between awareness and consistent practice. Similar findings were reported by Al-Hazzaa et al [7], Kandasamy G et al [8], Ziari A et al [9]. This variation may be related to students, who tend to engage less in exercise due to their academic responsibilities. This highlights the need for interventions that encourages regular, sustained exercise habits.

Conclusion

Awareness of exercise as a preventive measure among young adults is present but incomplete. Translation into consistent practice remains a challenge. Structured interventions, including health education, peer-led initiatives and institutional support, are essential to bridge the gap. Promoting exercise awareness will significantly reduce the burden of lifestyle related diseases and foster healthier future generations. So there is need for integrating exercise awareness into medical education, community programs and digital health campaigns.

Recommendations

There is need to Integrate Exercise Awareness into Curriculum, Mandatory Physical Activity Hours in timetables as well as Monitoring and feedback using logbooks or mobile apps to track student exercise habits.

Limitations

Limitations of study were the lack of data on attitudes over time and the potential for recollection bias.

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