ORIGINAL ARTICLE

Prevalence, patterns, motivators, and barriers of physical activity among medical undergraduates: A mixed-methods study in a south Indian medical college

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Abstract

Background: Physical activity is essential for the well-being of medical students, yet demanding academic schedules and multiple stressors may impede their engagement in regular exercise. Understanding participation patterns and influencing factors is crucial for developing effective health promotion strategies. *Aim and Objectives:* This study aimed to determine the extent of physical activity engagement among undergraduate medical students in Chittoor, India, and identify motivating factors and barriers influencing their participation. *Material and Methods:* A mixed-methods study was conducted among 394 medical undergraduates selected through stratified random sampling. Quantitative data were collected using the International Physical Activity Questionnaire-Short Form (IPAQ-SF) and an electronic questionnaire assessing sociodemographic characteristics, activity patterns, motivators, and barriers. Ten students were purposively sampled for in-depth interviews exploring motivators and barriers qualitatively. Descriptive statistics summarized quantitative data, and thematic analysis identified key themes from qualitative interviews. *Results:* The mean age of participants was 22 years (SD 1.2 years). Among 394 students, 79.2% (95% CI: 75.1–83.3%) reported engaging in physical activity, while only 16.5% (95% CI: 12.8–20.2%) exercised daily. Primary motivators were improving fitness (70.3%) and stress relief (66.2%), while barriers included lack of time due to academic commitments (70.3%). Qualitative interviews reinforced these findings, highlighting academic stress, busy schedules, and limited exercise variety as significant obstacles. *Conclusion:* Medical students recognize physical activity benefits, yet multiple barriers limit regular participation. Targeted interventions addressing time management, stress reduction, and diverse exercise options are essential to promote physical activity in this population.

Keywords: barriers, exercise, motivation, physical activity, medical undergraduate

Introduction

Physical activity is crucial for students' overall well-being, offering multitudinous benefits such as improved cardiovascular health, enhanced cognitive function, and reduced depression and anxiety [1,2]. Despite these well-documented advantages, a substantial proportion of the adolescent and young adult population worldwide fails to meet recommended activity levels. This is attributed to factors such as changing transportation patterns, increased screen time, and sedentary behaviors associated with modern lifestyles [1]. The World Health Organization (WHO) recommends that individuals should aim for a minimum of 150–300 minutes of weekly moderate-intensity

aerobic physical activity or 75–150 minutes of vigorous-intensity aerobic physical activity [2]. Insufficient physical activity stands as an important risk factor for the emergence of Noncommunicable Diseases (NCDs) such as diabetes, hypertension, and cardiovascular diseases [3]. Between 2001 and 2016, high-income countries saw a twofold increase in the rate of physical inactivity compared to low- and middle-income countries including India [4,5].

Multiple barriers and motivators for physical activity have been identified across the globe including individual, cultural, gender, and social factors [6-8]. In India, there has been limited research into what drives or hinders physical activity among young adults [6-9]. Furthermore, as age increases, individual priorities often shift towards education, career, family, and other responsibilities, leading to an increase in sedentary behavior [10,11].

For medical students, integrating physical activity into their daily routine is particularly important. It serves as a potent stress reducer amidst the pressures of medical education, uplifts mood, and enhances cognitive functions like memory and problem-solving skills [12]. Moreover, it fosters cardiovascular health, bolsters sleep quality, and prevents burnout, thereby promoting wellness within the medical community [13,14]. By prioritizing physical activity, students not only improve their personal health but also set a positive example for patients and colleagues, fostering a culture of wellness. Acknowledging its importance, the National Medical Council has integrated sports and extracurricular activities into the MBBS curriculum.

Medical students face unique challenges predisposing them to physical inactivity. Rigorous academic curricula, long study hours, clinical rotations, and examination pressures create demanding environments with limited time for exercise. Additionally, stress and anxiety associated with medical training reduce motivation for physical activity. Despite growing awareness of the importance of physical fitness, insufficient evidence exists on physical activity patterns among medical students in India, particularly South Indian medical colleges. Understanding specific motivators and barriers is essential for designing effective interventions promoting regular physical activity and improving future healthcare professionals' health and well-being.

While studies have examined physical activity levels among medical students across India, limited research employs mixed-methods approaches combining quantitative assessment with qualitative exploration. This study addresses this gap by providing statistical evidence of physical activity patterns and qualitative insights into motivations and barriers. Understanding these factors is crucial for developing contextualized, evidence-based interventions in medical education settings. Furthermore, as future physicians counseling patients on lifestyle modifications, medical students establishing healthy physical activity habits during training has implications for both personal health and future professional practice.

Operational definitions

1. **Physical activity patterns:** Frequency, duration, type, and intensity of physical activities including cardiovascular exercises, strength training, mind-body activities, team sports, and outdoor activities, assessed by self-reported frequency (daily, 3-5 times/week, 1-2 times/week, rarely/never), duration per session (<30

minutes, 30 minutes-1 hour, 1-2 hours), and activity types.

2. **Motivators:** Factors encouraging physical activity engagement, including intrinsic motivators (personal satisfaction, stress relief, mental health improvement) and extrinsic motivators (physical fitness goals, appearance, social interaction), identified through questionnaire responses and interview themes.
3. **Barriers:** Obstacles limiting physical activity participation, including time constraints, work-life imbalance, stress, lack of motivation, limited facility access, and absence of diverse exercise options, assessed through questionnaire data and interview narratives.

The study was aimed to estimate prevalence of regular physical activity; describe patterns including frequency, duration, and activity types; identify motivators; explore barriers; and provide qualitative insights into students' perceptions and attitudes regarding physical activity.

Material and Methods

Study design: This was a mixed-methods study employing both quantitative and qualitative approaches. The quantitative component consisted of a cross-sectional survey to estimate the prevalence and characterize the patterns of physical activity among medical undergraduates. The qualitative component involved in-depth interviews to explore the underlying motivators and barriers to physical activity from the students' perspectives. This design was chosen to provide a comprehensive understanding by combining numerical data on physical activity patterns with rich, contextual insights into the factors influencing these patterns

Undergraduate medical students studying 1st MBBS to Final MBBS Part-II aged 18 years and above, attending a private medical college in Chittoor district of Andhra Pradesh, were eligible to take part in the study

Ethical considerations: The study was approved by the ethics committee of the institute (Reference: UG/21/IEC/AIMSR/2023). Written informed consent was obtained from all participants prior to enrolment. Participants were assured of confidentiality and anonymity, and they were informed of their right to withdraw from the study at any time without consequences.

Sample size and sampling technique: A sample size of 384 was calculated based on the assumed proportion of 50% of regular physical activity among students, at 5% type 1 error ($p < 0.05$), with the precision/absolute error of 5%. Stratified random sampling was used to recruit participants for the quantitative phase, yielding a total sample of 394 students. Participants were approached in their classrooms, informed about the study, and invited to take part. From each academic batch, between 74 and 84 eligible students were then randomly selected. A sample of 10 students was selected for the in-depth interview component of the qualitative study by purposive sampling to ensure diversity in year of study, gender, and level of physical activity engagement.

Variables: Questions from The International Physical Activity Questionnaire-Short Form (IPAQ-SF) were used to quantify the physical activity levels of medical students. The IPAQ-SF is a validated, internationally recognized tool that assesses physical activity across different domains including leisure time, domestic, and work-related activities. Questions related to participants'

sociodemographic characteristics, patterns of physical activity, and its barriers and facilitators were collected using an anonymized, selfadministered, English language electronic questionnaire. The questionnaire was piloted, and questions were modified as appropriate based on feedback. An interview guide was prepared for the qualitative study, with questions related to exploring the motivators and barriers to physical activity.

Data collection: Students were invited to voluntarily participate in the study. After taking informed consent, a pre-tested, self-administered electronic questionnaire was shared with each participant. Subsequently, participants' weight and height were measured using standardized and portable weighing scales and stadiometers. In-depth interviews were conducted for a subset of purposively selected students to explore the motivators and barriers. An interview guide was used to conduct the in-depth interviews. The interviews were audio recorded after taking additional consent.

Statistical analysis

Descriptive statistics were used to summarize the characteristics of the study participants, including age, gender distribution, and year of study. Quantitative data were entered into Microsoft Excel and were analyzed using the Statistical Package for the Social Sciences (IBM SPSS) version 22.0. Continuous variables such as age were presented as mean ± Standard Deviation (SD), while categorical variables were reported as frequencies and percentages. The proportion of students engaging in regular physical activity was expressed as a percentage with 95% Confidence Interval (CI). In-depth interviews were transcribed verbatim and analyzed using thematic analysis. Qualitative analysis was done using a deductive approach, where themes and subthemes related to motivators and barriers to physical activity were identified through iterative coding and constant comparison. Two researchers independently coded the transcripts, and any discrepancies were resolved through discussion. The themes were then reviewed and refined to ensure consistency and reliability. Quotations illustrating key themes were extracted from the transcripts to support the findings and provide a deeper understanding of the motivators and barriers identified by the participants.

Results

We recruited a total number of 394 participants in the study, out of which 52.3% (n = 206) were males. The mean age of the participants was 22 years (SD 1.2 years). The socio-demographic distribution of the participants is shown in Table 1.

Physical activity

As reported by the students, 312 (79.2%; 95% CI: 75.1 to 83.3%) were actively engaged in some form of physical activity. Daily physical activity was performed by 65 (16.5%; 95% CI: 12.8 to 20.2%) participants. The frequency of physical activities is shown in Table 2.

Motivators and barriers

Improving physical fitness was the commonest (70.3%) motivator for the students (Figure 1). The other motivators were exercise being a stress reliever (66.2%), desire to improve physical appearance, and achieving personal fitness goals. Improving mental health and relieving stress were reported by 66.2% of the participants. Despite having motivators, a majority of participants (70.3%) expressed lack of time due to academic commitment as the commonest barrier to physical

Table 1: Socio-demographic distribution of the participants

Variables	N (%)
Gender	
Male	206 (52.3)
Female	188 (47.7)
Year wise distribution	
Final year	78 (19.8)
Fourth year	82 (20.8)
Third year	84 (21.3)
Second year	76 (19.3)
First year	74 (18.8)
Place of residence	
On-campus	318 (80.7)
Off-campus	76 (19.3)

exercise (Figure 2). The other common barriers were inability to balance personal life with academics and the stress and anxiety due to academic pressures. Efficient time management and access to fitness facilities (70.3%) and short workout routines (48.4%) were the major suggestions from the students to improve their physical activity.

Qualitative analysis

Impact of physical exercise on academic performance

The participants held varying beliefs regarding the impact of regular physical exercise on academic performance. Some of them expressed a strong belief in the positive correlation between exercise and academic productivity, citing benefits such as enhanced focus and increased energy levels. One participant expressed, "Absolutely! I feel regular exercise increases my energy levels and productivity in academics." Others were more skeptical, acknowledging the potential benefits of exercise but noting that it had not significantly affected their academic performance. As expressed by one participant, "I feel it depends on the person. I personally feel that hitting the gym will not impact my grades."

Reasons for lack of motivation

The major reasons identified were busy schedules, provision of only traditional boring exercise options with limited scope for alternative activities like dancing or hiking, and fear of exercise due to negative experiences. One final year female student expressed her concern: "My busy schedule makes it hard to prioritize exercise."

Table 2: Frequency of physical activity among medical undergraduates

Characteristics of physical activity	**N (%)**
Frequency	
Daily	65 (16.5)
3–5 times a week	127 (35.5)
1–2 times a week	120 (30.4)
Rarely or almost never	82 (20.8)
Time spent on each exercise session (n=312)	
Less than 30 minutes	136 (43.6)
30 minutes to 1 hour	152 (48.7)
1 to 2 hours	24 (7.7)
Type of physical activity (n=312)*	
Cardiovascular exercises (e.g., running, cycling, dancing)	174 (55.8)
Strength training (e.g., weightlifting, bodyweight exercises)	101 (32.4)
Mind-body activities (e.g., yoga, meditation)	97 (31.1)
Team sports (e.g., basketball, soccer)	101 (32.4)
Outdoor activities (e.g., hiking, swimming)	36 (11.5)
Physical activity they find most feasible during a busy schedule (n= 312)*	
High-intensity interval training (HIIT)	37 (11.9)
Yoga or meditation for relaxation	111 (35.6)
Short cardio sessions (e.g., running, jumping rope)	131 (42.0)
Bodyweight exercises (e.g., push-ups, squats)	94 (30.1)
Team sports with flexible schedules	98 (31.4)

**Multiple responses also received from one participant*

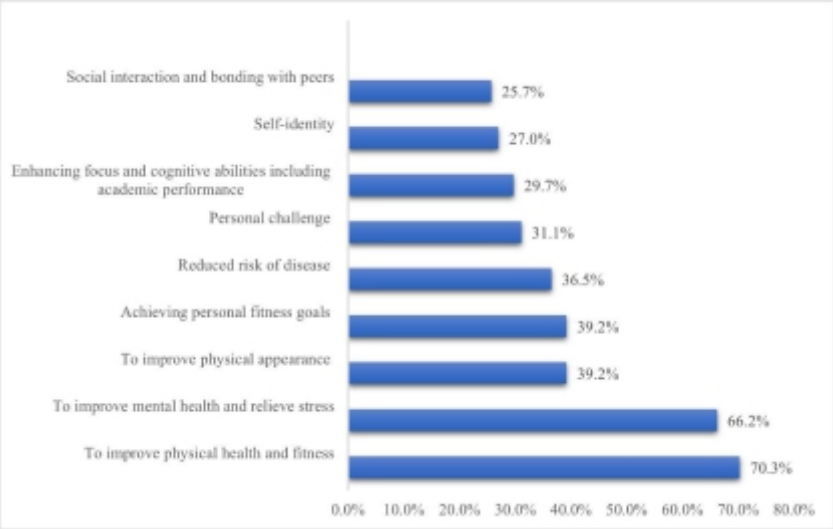

Figure 1: Motivators for doing physical activity among study participants

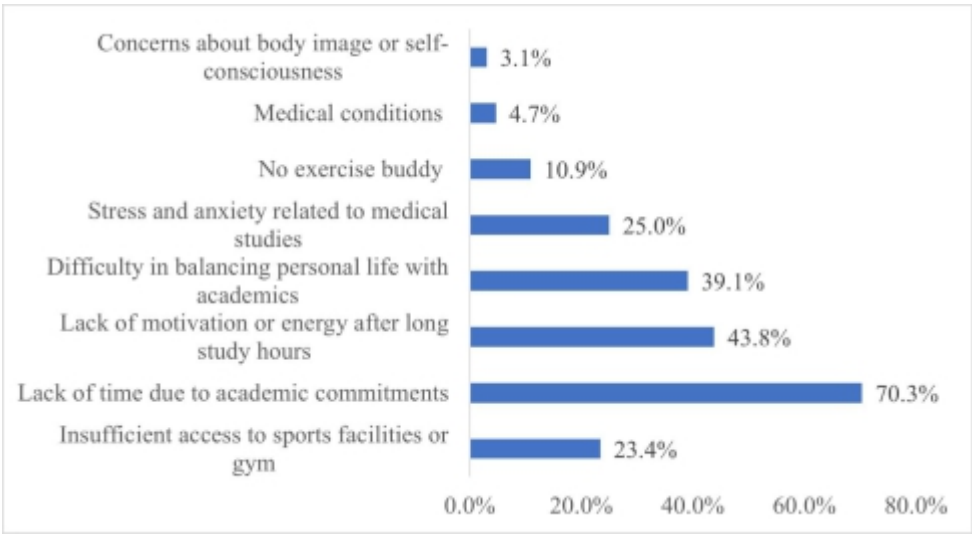

Figure 2: Perceived barriers of doing physical activity among study participants

Availability of fitness classes or exercise groups on campus

Overall, the participants expressed a lack of fitness classes within the campus but believed that having structured fitness classes on campus would positively influence students' willingness to prioritize their health. A third-year male student who was residing on campus said, "I struggle with motivating myself to initiate exercise. The idea of on-campus fitness classes sounds appealing. The accountability of attending on-campus fitness classes could be a positive influence on my habits."

Designated exercise breaks during study sessions

Most of the participants were unsure or had not considered the concept but were open to exploring it further. "I never tried, but the concept of designated exercise breaks seems worth exploring for our well-being," was expressed by a first-year student.

Exercise participation during stressful periods

Students felt it was challenging to maintain a regular exercise routine during stressful periods, prioritizing academic responsibilities instead. A fourth-year student expressed her concern: "I find it difficult to have a consistent exercise routine during stressful academic periods." Some participants shared that short workouts helped them maintain their well-being during exams, while others experienced a decline in exercise participation due to stress impacting their motivation or time availability.

Discussion

This study reveals a high engagement in physical activity among undergraduate medical students in a private medical college in Chittoor district, Andhra Pradesh. Approximately eight out of ten students participated in some form of physical activity, although only a small fraction engaged in it daily. The primary motivators for physical activity included the desire to improve physical fitness, alleviate stress, and enhance physical appearance. Despite these motivators, students frequently cited academic commitments, difficulty balancing personal life with academics, and stress as significant barriers to regular physical activity. Exercise practices among undergraduate medical students in India show a diverse range of activities, predominantly including aerobics, walking, running, and gym workouts. In our study, a significant portion of students engaged in regular physical activity, reflecting similar trends observed in other studies across India [15-20]. For instance, a study conducted in Kerala found that nearly 67% of medical students engaged in some form of physical activity, with walking being the most common exercise followed by running and gym workouts [20]. Another study in Delhi reported that around 53% of medical students were physically active, with males being more active than females. The primary forms of exercise included gym workouts, jogging, and sports like cricket and football [15-18]. Similarly, research in Bangalore showed that medical students preferred aerobic exercises and yoga as part of their routine [21]. A study by Padmapriya et al. in Bangalore reported that 58.7% of medical students engaged in regular physical activity, with cardiovascular fitness being a primary motivator. These findings are consistent with our results, indicating that medical students across different regions of India engage in a variety of physical activities primarily for fitness and stress relief.

Physical fitness relates to health and academic performance. Taparia *et al*. [13] and Taware *et al*. [14] demonstrated optimal fitness levels and regular training enhance performance, underscoring the importance of promoting physical activity among medical students for optimizing physical and cognitive capabilities during demanding academic training.

The engagement in physical activity among undergraduate medical students is influenced by a variety of barriers and motivators, which are crucial to understand in order to promote an active lifestyle within this group. The most frequently cited barrier in our study was the lack of time due to academic commitments. This is consistent with findings from other studies, where the rigorous demands of

medical education often leave students with little time for exercise. For example, research conducted in Delhi found that academic workload was a primary barrier to physical activity among medical students [17]. Similarly, a study in Tamil Nadu highlighted that students struggled to balance their academic responsibilities with personal time, leading to reduced participation in physical activities [18].

In addition to academic pressures, other common barriers include stress and the inability to balance personal life with studies [19]. A study in Kerala also identified stress as a significant impediment to physical activity, as students often prioritized academic tasks over exercise [20]. Furthermore, limited access to fitness facilities and a lack of structured exercise programs on campus were noted as barriers as well [21]. Our qualitative findings further support these observations, with students expressing frustration over monotonous exercise options and the absence of on-campus fitness classes that could provide structure and accountability.

On the other hand, the primary motivators for physical activity identified in our study include the desire to improve physical fitness, alleviate stress, and enhance physical appearance. These findings are in line with other research which indicates that medical students are driven to exercise primarily for health benefits, stress relief, and intrinsic motivation [19,22,23]. For instance, a study in the United States reported that improving physical fitness and mental well-being were key motivators for students to engage in physical activities [24]. Additionally, the social aspect of exercise, such as participating in group activities or sports, has been highlighted as a motivating factor [22]. A study by Ilić *et al*. among medical students in the Western Balkans found that health improvement (68.4%) and stress reduction (62.1%) were the most common motivators, which aligns closely with our findings [22].

International studies document similar patterns and challenges. A systematic review by Johannes *et al*. identified time constraints, academic workload, and lack of motivation as universal barriers to physical activity among university students globally [25]. Interventions focusing on time management, convenient exercise facilities, and peer support were most effective in promoting physical activity. Our findings align with these global trends, suggesting challenges faced by Indian medical students are part of a broader pattern affecting medical education worldwide.

Understanding these barriers and motivators is essential for developing effective strategies to promote physical activity among medical students. Recommendations from students in our study included better time management, the provision of on-campus fitness facilities, and the inclusion of structured fitness classes, which are also supported by findings in the literature [25-27]. Evidence from intervention studies suggests that web-based programs and campus-based exercise initiatives can significantly improve physical activity levels and psychological well-being among medical students [26,27].

This study has important implications for medical education and student wellness. Medical colleges should integrate structured physical activity programs into curricula, provide flexible exercise schedules accommodating academic demands, and create supportive environments with accessible fitness facilities. Wellness initiatives must address

both physical and psychological barriers like stress and anxiety impeding exercise participation.

One notable limitation of this study is its reliance on self-reported data, which may introduce bias and affect the accuracy of the findings. Self-reported physical activity levels can often be overestimated due to social desirability bias, where participants may report higher levels of activity to align with perceived social norms or expectations [28]. Also, there might be a chance of misclassification in physical activity due to recall bias of the participants. This study's single-institution setting limits generalizability to other medical colleges and regions. The cross-sectional design precludes establishing causal relationships. Future longitudinal studies are needed to understand how physical activity patterns change during medical training and evaluate long-term intervention impacts. Despite these limitations, our findings provide valuable insights into the physical activity patterns and the key motivators and barriers faced by medical students, offering a foundation for targeted interventions to promote healthier lifestyles in this population.

Conclusion

This study found that while four out of five medical undergraduates engage in physical activity, only 16.5% exercise daily, indicating suboptimal adherence to guidelines. Primary motivators were improving fitness and stress relief; main barriers were time constraints and inability to balance academics with personal life. Targeted interventions addressing time management, providing diverse exercise options, establishing campus fitness facilities with structured programs, and integrating physical activity into curricula are essential for promoting regular physical activity and enhancing medical students' well-being.

References

1. Govinda RNL, Kumar VV, Supriya, Bhat PP. Age-specific reference intervals for Prostate-Specific Antigen (PSA), its isoform [-2] pro-PSA (p2PSA) and prostate health index in Indian males. *J Krishna Inst Med Sci Univ* 2024; 13(2):78-89.
1. Physical activity. who.int. https://www.who.int/news-room/fact-sheets/detail/physical-activity. Accessed October 15, 2024.
2. Deepthi R, Ashakiran S, Thota Venkat Akhilesh, Reddy M. Good mental health status of medical students: Is there a role for physical activity? *J Krishna Inst Med Sci Univ* 2015; 4(1):55–63.
3. Bull FC, Al-Ansari SS, Biddle S, Borodulin K, Buman MP, Cardon G, *et al*. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *Br J Sports Med* 2020; 54(24):1451-1462.
4. Guthold R, Stevens GA, Riley LM, Bull FC. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1·9 million participants. *Lancet Glob Health* 2018; 6(10): e1077-e1086.
5. Anjana RM, Pradeepa R, Das AK, Deepa M, Bhansali A, Joshi SR, *et al*. Physical activity and inactivity patterns in India - results from the ICMR-INDIAB study (Phase-1) [ICMR-INDIAB-5]. *Int J Behav Nutr Phys Act* 2014;11(1):26.
6. Lo BK, Morgan EH, Folta SC, Graham ML, Paul LC, Nelson ME, *et al*. Environmental influences on physical activity among rural adults in Montana, United States: Views from built environment audits, resident focus groups, and key informant interviews. *Int J Environ Res Public Health* 2017;14(10):1173.
7. Mathews E, Lakshmi JK, Ravindran TKS, Pratt M, Thankappan KR. Perceptions of barriers and facilitators in physical activity participation among women in Thiruvananthapuram City, India. *Glob Health Promot* 2016; 23(4):27-36.
8. Ashton LM, Hutchesson MJ, Rollo ME, Morgan PJ, Collins CE. Motivators and barriers to engaging in healthy eating and physical activity: A cross-sectional survey in young adult men. *Am J Mens Health* 2017;11(2):330-343.

9. Sabharwal A, Sabharwal M. Perceived barriers of young adults for participation in physical activity. *Curr Res Nutr Food Sci J* 2018; 6(2):437-449.
10. Newtonraj A, Murugan N, Singh Z, Chauhan RC, Velavan A, Mani M. Factors associated with physical inactivity among adult urban population of Puducherry, India: A population based cross-sectional study. *J Clin Diagn Res* 2017;11(5):LC15-LC17.
11. Oommen A, Devamani C, Mini GK, Abraham V, George K. Levels of physical inactivity in rural and urban Tamil Nadu, India: A cross-sectional study. J Clin Prev Cardiol 2019; 8(1):13.
12. CDC.gov. Accessed October 15, 2024. https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm
13. Taparia M, Agni MB, Hegde PS. Exploring the relationship between the impact of central obesity indices on forced vital capacity in young adult males. *J Krishna Inst Med Sci Univ* 2024;13(4): 86-94.
14. Taware GB, Bhutkar MV, Surdi AD. A profile of fitness parameters and performance of volleyball players. *J Krishna Inst Med Sci Univ* 2013; 2(2): 48-59.
15. R A, Srivastava K, Nair GR, Vajjala SM, Verma P, Palal D, *et al*. A cross-sectional study on sedentary lifestyle among budding doctors: Silent killer? *Cureus* 2024;16 (2): e53684.
16. Banerjee A, Khatri S. A study of physical activity habits of young adults. *Indian J Community Med* 2010; 35(3):450-451.
17. Anand T, Tanwar S, Kumar R, Meena GS, Ingle GK. Knowledge, attitude, and level of physical activity among medical undergraduate students in Delhi. *Indian J Med Sci* 2011; 65(4):133-142.
18. Patil VV, Basavaraju V. Patterns and barriers of physical activity among medical students in Davangere, Karnataka. *Natl J Community Med* 2022;11 (10):371-375.
19. Rao CR, Darshan B, Das N, Rajan V, Bhogun M, Gupta A. Practice of physical activity among future doctors: A cross-sectional analysis. *Int J Prev Med* 2012;3 (5):365-369.
20. Joy V, Vincent DJ. The prevalence of physical activity among MBBS students in a medical college in Kerala. *Public Health Rev: Int J Public Health Res* 2020;7(4):28-34.
21. Padmapriya K, Krishna P, Rasu T. Prevalence and patterns of physical activity among medical students in Bangalore, India. *Electron Physician* 2013;5(1):606-610.
22. Ilić M, Pang H, Vlaški T, Grujičić M, Novaković B. Motives and barriers for regular physical activity among medical students from the Western Balkans (south-east Europe region). *Int J Environ Res Public Health* 2022;19(23):16240.
23. Laishram J, Vanlalduhsaki, Akoijam B. Medical students' practice, attitudes, and motives toward physical activity: A cross-sectional study. *J Med Soc* 2020; 34(3):144.
24. Frank E, Tong E, Lobelo F, Carrera J, Duperly J. Physical activity levels and counseling practices of U.S. medical students. *Med Sci Sports Exerc* 2008; 40(3):413-421.
25. Johannes C, Roman NV, Onagbiye SO, Titus S, Leach LL. Strategies and best practices that enhance the physical activity levels of undergraduate university students: A systematic review. *Int J Environ Res Public Health* 2024;21(2):173.
26. Marenus MW, Murray A, Friedman K, Sanowski J, Ottensoser H, Cahaus A, *et al*. Feasibility and effectiveness of the web-based WeActive and WeMindful interventions on physical activity and psychological well-being. *Biomed Res Int* 2021; 2021:8400241.
27. Worobetz A, Retief PJ, Loughran S, Walsh J, Casey M, Hayes P, *et al*. A feasibility study of an exercise intervention to educate and promote health and well-being among medical students: the "MED-WELL" programme. *BMC Med Educ* 2020;20(1):183.
28. Healey EL, Allen KD, Bennell K, Bowden JL, Quicke JG, Smith R. Self-report measures of physical activity. *Arthritis Care Res (Hoboken)* 2020;72(S10):717-730.

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