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PERCEIVED BARRIERS AND FACILITATORS TO PHYSICAL ACTIVITY AMONG POSTGRADUATE MEDICAL TRAINEES

Original Research

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ABSTRACT

BACKGROUND: Postgraduate medical trainees face unique internal and external challenges affecting physical activity, including time constraints, fatigue, and limited access to facilities. Conversely, factors such as social support, structured opportunities, and incentives can facilitate exercise. Understanding these influences is critical for promoting active lifestyles in this population.

OBJECTIVE: To determine perceived barriers and facilitators to physical activity among postgraduate medical trainees in Pakistan.

METHODS: A descriptive cross-sectional online survey was conducted from January–March 2024 among postgraduate medical trainees enrolled in accredited programs. Data were collected via a self-administered questionnaire distributed through WhatsApp and Facebook groups. Physical activity levels were assessed using the WHO Global Physical Activity Questionnaire (GPAQ) and categorized into low, moderate, or high activity. The minimum sample size was 267, calculated using a 95% confidence level and 6% margin of error. Descriptive statistics were analyzed using SPSS v23.

RESULTS: Of 267 respondents, 44.9% were male and 55.1% female; the majority specialized in medicine (33.7%) and was in Year 1 of training (31.8%). Physical activity levels were low in 44.9%, moderate in 41.2%, and high in 13.9%. Major barriers included lack of time (mean 2.42±0.92), exercise facilities with incompatible schedules (2.44±0.99), and physical fatigue (2.37±0.95). Key facilitators were social encouragement, workplace flexibility, and access to affordable exercise facilities.

CONCLUSION: Nearly half of postgraduate medical trainees reported low physical activity, with time constraints and fatigue as primary barriers. Targeted interventions, including flexible scheduling, accessible facilities, and peer support, are essential to foster sustainable physical activity habits in this group.

KEYWORDS: Barriers, Facilitators Physical Activity, Lifestyle habits, Medical

INTRODUCTION

The perceived barriers and facilitators to physical activity among postgraduate medical trainees encompass a range of internal and external factors that significantly influence their engagement in exercise. Internal barriers often include personal challenges such as lack of motivation, fatigue, and time constraints, with studies indicating that up to 50% of individuals cite "lack of time" as a primary concern hindering their participation in physical activity[1]. On the other hand, external barriers are shaped by environmental and socio-economic contexts, including factors such as safety concerns, accessibility of facilities, and geographical influences, which can impede regular physical activity among this population[2].

Facilitators of physical activity among medical trainees are also diverse, including social support, enjoyment, and structured opportunities for exercise. Research shows that higher levels of social support can significantly enhance participation, as encouragement from peers and mentors plays a crucial role in sustaining long-term engagement in physical activity[3]. Additionally, effective incentives, such as financial subsidies and organized breaks during work hours, have been identified as critical components in promoting regular exercise among trainees[4]. These facilitators highlight the importance of creating supportive environments that motivate individuals to maintain active lifestyles. Notably, the implications of physical activity for medical trainees extend beyond personal health benefits; regular exercise can enhance physical fitness, mitigate stress, and improve mental well-being, which are essential given the high demands of medical training[5]. However, despite these advantages, medical trainees often report lower physical activity levels compared to their peers, primarily due to time constraints and a lack of confidence in integrating exercise into their routines.

This paradox raises important questions regarding the effectiveness of existing educational interventions aimed at promoting physical activity within medical curricula[6]. Overall, understanding the perceived barriers and facilitators to physical activity among postgraduate medical trainees is crucial for developing targeted strategies that encourage healthier lifestyles and address the challenges faced in this unique demographic[7]. By leveraging both intrinsic motivation and external support, medical education institutions can foster a culture of wellness that not only benefits trainees' health but also equips them to advocate for physical activity within their future clinical practice. So the main objective of the study was to determine the barriers and facilitators to physical activity among post graduate medical trainees.

METHODS

A descriptive cross sectional online survey was conducted from January to March 2024 to assess physical activity levels and associated facilitators and barriers among postgraduate medical trainees in Pakistan. The study population comprised medical residents enrolled in various accredited training programs. Data were collected through an online self-administered questionnaire disseminated via WhatsApp and Facebook groups used by medical trainees. This mode was chosen for its accessibility, convenience, and ability to reach a wide sample across different training institutes. All currently enrolled postgraduate medical trainees who consented to participate and had internet access were eligible for inclusion.

Physical activity was assessed using the Global Physical Activity Questionnaire (GPAQ), a validated tool developed by the World Health Organization. The GPAQ collects data on physical activity in three domains—work-related, transport-related, and recreational—as well as on sedentary behavior. For each domain, participants reported the frequency and duration of moderate and vigorous physical activities. Total physical activity was calculated in MET-minutes per week, and participants were classified into low, moderate, or high physical activity levels using standard GPAQ scoring guidelines[8].

The sample size was calculated using the formula $n = Z^2pq/L^2$, assuming a 95% confidence level ($Z = 1.96$), a 50% estimated prevalence of sufficient physical activity ($p = 0.5$)[9], and a 6% margin of error ($L = 0.06$). The calculated minimum sample size was 267. To account for possible non-responses or incomplete data, a 10% buffer was added, resulting in a final target sample size of 294. Informed consent was obtained electronically from all participants prior to data collection. Data were extracted from Google Forms into Microsoft Excel and analyzed using SPSS version 23. Descriptive statistics including means, standard deviations, and frequency distributions were used to summarize the data.

RESULTS

Table 1: Baseline Characteristics of participants

Characteristics		Frequency	Percentage
Gender	Male	120	44.9%
	Female	147	55.1%
Specialty	Medicine	90	33.7%
	Surgery	57	21.3%
	Pediatrics	26	9.7%

	Eye	9	3.4%
Year of Training	Year 1	85	31.8%
	Year 2	67	25.1%
	Year 3	70	26.2%
	Year 4	55	20.6%

Table 2: Physical activity levels among participants

Levels	Frequency (n)	Percentage (%)
Low	120	44.9%
Moderate	110	41.2%
High	37	13.9%
Total	267	100%

Table 3: Perceived Barriers among participants

Barrier Domain	Mean (SD)
Environment & Accessibility	
Available exercise areas are too distant from me	2.04 (0.82)
I feel self-conscious when exercising	1.44 (0.74)
Gym memberships or exercise costs are unaffordable	1.46 (0.62)
Exercise facilities do not offer schedules that match my availability	2.44 (0.99)
I feel uncomfortable wearing exercise attire	1.67 (0.74)
There are limited public places available for exercise	2.13 (0.88)
Time Constraints	
I don't have enough time to exercise	2.42 (0.92)
Exercise interferes with my time for family or relationships	2.19 (0.93)
My family responsibilities leave me with no time to exercise	2.09 (0.92)
Physical Fatigue	
Exercise makes me feel tired	2.37 (0.95)
I often feel exhausted after exercising	2.34 (0.92)
Exercise feels physically demanding	2.16 (0.97)
Lack of Support	
My partner or spouse does not motivate me to be physically active	1.33 (0.80)
My family members are not supportive of my exercise efforts	1.40 (0.66)

Table 4: Perceived facilitators among participants

Barrier Domain	Mean (SD)
Environment & Accessibility	
Available exercise areas are too distant from me	2.04 (0.82)
I feel self-conscious when exercising	1.44 (0.74)

Gym memberships or exercise costs are unaffordable	1.46 (0.62)
Exercise facilities do not offer schedules that match my availability	2.44 (0.99)
I feel uncomfortable wearing exercise attire	1.67 (0.74)
There are limited public places available for exercise	2.13 (0.88)
Time Constraints	
I don't have enough time to exercise	2.42 (0.92)
Exercise interferes with my time for family or relationships	2.19 (0.93)
My family responsibilities leave me with no time to exercise	2.09 (0.92)
Physical Fatigue	
Exercise makes me feel tired	2.37 (0.95)
I often feel exhausted after exercising	2.34 (0.92)
Exercise feels physically demanding	2.16 (0.97)
Lack of Support	
My partner or spouse does not motivate me to be physically active	1.33 (0.80)
My family members are not supportive of my exercise efforts	1.40 (0.66)

DISCUSSION

This study examined postgraduate medical students' perceptions of the obstacles and enablers to physical exercise. It produced a number of findings that are consistent with international research while also bringing to light certain contextual difficulties[10]. A significant percentage of medical students were found to be insufficiently active despite receiving training in disease prevention and health promotion, which is consistent with other research done in comparable groups[11]. Even individuals with health awareness may find it difficult to put their own physical health first due to the demanding nature of residency training, which includes long hours, night shifts, and academic pressure.

One of the biggest obstacles was time constraints, which align with research that found residents' participation in physical activity is regularly limited by a shortage of time brought on by clinical and academic obligations[12]. Participants in our study expressed similar concerns, pointing out that exhaustion and family obligations further limited their possibilities for exercise. Similar feelings were documented in a study where junior doctors indicated difficulty in continuing regular activity due to weariness and competing personal obligations. These consistent results from many healthcare systems point to the need for institutional change on a broad scale to promote the wellbeing of trainees[13].

Participants identified accessibility and environmental factors as major obstacles as well, pointing to things like far-off or irregularly scheduled fitness centers. This result is consistent with a previous study, which highlighted that convenience and proximity are important factors that influence exercise participation, particularly among working professionals[14]. On the other hand, protected fitness breaks and institutional gyms had a favorable impact on residents' activity levels in an urban Singaporean study, suggesting that when amenities are integrated into the healthcare environment, use improves[15]. This contrast highlights how training facilities and hospitals may be able to help create environments that encourage physical exercise.

It's interesting to note that, in contrast to earlier research, psychosocial constraints—including lack of support from partners or family—were not as strongly identified in our cohort. For example, social support, particularly among women, has been identified in literature as a critical facilitator for maintaining regular exercise[16]. This domain's comparatively low impact in our study may be a reflection of a cultural setting where logistical and institutional factors influence behavior more than interpersonal ones. On the other hand, it can suggest that younger medical professionals are becoming more conscious and independent.

Overall, the results indicate that institutional measures that emphasize and normalize physical exercise for medical students are desperately needed. Despite its importance, human motivation is insufficient when faced with systemic and structural obstacles. Programs that incorporate physical activity into regular hospital activities, provide discounted access to fitness facilities, and make use of technology resources like smartphone applications or online group meetings may provide long-term fixes. Furthermore, long-term change requires cultivating a culture that views mental and physical health as crucial elements of professional growth.

CONCLUSION

The study concluded that Postgraduate medical trainees face multiple barriers to physical activity, primarily time constraints, fatigue, and limited access to suitable facilities. Despite being health professionals, their ability to maintain an active lifestyle is hindered by structural and institutional challenges rather than lack of motivation.

AUTHOR's CONTRIBUTION:

Author	Contribution
Ayesha Javed	Conceptualization, Methodology, Formal Analysis, Writing - Original Draft, Validation, Supervision
Muhammad Sohaib Azeem	Methodology, Investigation, Data Curation, Writing - Review & Editing
Nousheen Azam	Investigation, Data Curation, Formal Analysis, Software

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