Original Article

Obesity's Uptick Among Physical Therapists: A Matter of Growing Concern

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ABSTRACT

Background: Obesity is rising globally, negatively impacting public health. This study examines obesity prevalence among physical therapists and its potential effects on job performance and healthcare. Using BMI classifications from the Asia Pacific and World Health Organization (WHO), the study assesses obesity rates among physical therapists.

Methods: A cross-sectional study was conducted over three months with 165 physical therapists from public and private hospitals, clinical units, and academic institutions in Karachi. Participants provided informed consent, and data were collected using non-probability convenience sampling. BMI was calculated from height and weight measurements, classified according to Asia Pacific and WHO guidelines.

Results: The mean age of participants, primarily clinicians (66%), was 38.92 years. Obesity prevalence was 24.1% (grade-I) and 10.8% (grade-II). Among female physiotherapists, 15% were overweight, 27% obese type-I, and 9% obese type-II, compared to 8%, 13%, and 9% in males, respectively.

Conclusion: The study highlights a concerning obesity prevalence among physical therapists, particularly males. Urgent action is needed to mitigate health risks and prevent negative impacts on job performance and healthcare costs. Obesity prevention should be prioritized, with further research required to explore its effects on healthcare professionals.

Keywords: Body mass index, Lifestyle, Obesity, Physical fitness, Risk factor.

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INTRODUCTION

Obesity has emerged as a significant global health challenge worldwide[1]. Obesity, according to the World Health Organization (WHO), is reported to be threefold more in occurrence since the 1970s, with 650 million adults being categorized as obese in the second decade of the twenty-first century[2]. With nearly 13% of adults affected, obesity—also termed as a body mass index of 30 or higher—is leading the cause of death around the world[3].

Recently, an overwhelming trend of obesity has been found globally among the women belonging to the middle socio-economic territories in compression to males[4]. Moreover, the risk of degenerative diseases like Osteoarthritis (OA) is more prevalently clustered among obese individuals[5]. This has been in congruence with a deprived quality of life accompanied by a relatively higher risk of lower back injuries[4-6]. Notably, obesity also increases the risk of cognitive issues and musculoskeletal disorders, which causes undeniable work-related injuries and illnesses among the cedar of professionals belonging to the healthcare industry[6-7]. Concerning, a significant portion of healthcare workers are obese, according to several studies on their health[8-9]. However, the risk of obesity is not evenly distributed in the general population[10]. Certain groups, such as healthcare workers, are at a higher risk than the general population[10]. Surprisingly, despite their understanding of the etiology, risks, and consequences of obesity, numerous studies conducted in Mexico and the United States consistently report that healthcare workers are more susceptible to obesity than the general

population[3,5]. A Scotland-based study revealed that 29% of the nurses, 17% of other care workers excluding nurses, and 35% of unregistered care workers were obese[5]. Furthermore, the Department of Health in England estimated that 300,000 healthcare professionals, accounting for up to 21% of the workforce, were obese, with the number likely to rise in line with population trends; therefore, such non-communicable diseases like obesity have been identified as a significant threat to long-term progress in the 2030 Agenda for Sustainable Development[11].

Although the causes of obesity are incredibly complicated and multifaceted, they frequently come down to increased consumption of foods high in calories without a corresponding increase in physical activity[10]. According to a recent study in Turkey, 34.8% of medical professionals were deemed overweight, and the remaining professionals were categorized as having varying degrees of obesity[11]. This study, in particular, revealed a high prevalence of obesity among doctors[12]. However, other healthcare professionals are not significantly in a different state. For instance, stigma associated with obesity in the medical field has also been identified to negatively impact physical therapists' attitudes and behaviors[13].

Similarly, obese people may experience health problems associated with their weight, such as fatigue, breathlessness, or arthritis, which can reduce their productivity at work[14]. Likewise, this adversely affects the performance of physical therapists, as they are the leading fitness advocates and instrumental in promoting, directing, prescribing, and managing exercise programs for the clients[15]. When compared to their non-obese counterparts, physical therapists' obesity may adversely impact patient care and significantly reduce job effectiveness[16]. It is important to note that, even among healthcare professionals, especially physical therapists, awareness regarding obesity and weight management is a serious concern in Pakistan[17]. This highlights an inevitable need to conduct prevalence surveys to gather epidemiology data for obesity among the physical therapist community. This study aimed to assess the prevalence of obesity among physical therapists in the Karachi metropolis.

METHODOLOGY

Study Design and Sample

This cross-sectional survey was conducted on 165 physical therapists working at various public and private tertiary care hospitals, clinical units, and academic institutions across Karachi.

Sampling Technique

A non-probability convenience sampling technique was employed for the sample selection.

Ethical Consideration

All the participants were given informed consent prior to data collection for them to volunteer. The data collected from participants was confidential, and all participants were allowed the right to withdraw from this research during any time of the study.

Data Collection Method

The participants filled out an assessment proforma. Subsequently, all participants' weight and height readings were recorded using a stadiometer, and the BMI was calculated through a standard formula. The Asia Pacific criteria of BMI was considered in this study along with the WHO criteria for risk of comorbidities classification, as depicted in Table-1.

Table-1 Classification of Body Mass Index (BMI) as per WHO classification

Classification	BMI kg/m^2 (Asian Population)	Risk of comorbidities
Underweight	<18.5	Low
Normal	18.5-22.9	Average
Overweight	23-24	Increased
Obese I	25-29.9	Moderate
Obese II	≥30	Severe

Data Analysis

The data was analyzed using SPSS version 20. The demographic characteristics and responses of the participants were represented by frequency, percentage, mean, and standard deviations while chi-square test of association

was applied to determine the association between variables.

RESULTS

A total sample of 165 participants, including 76 males and 24 females with a mean age of 38.92, were recruited from public and private medical centers in Karachi. Out of 165 participants, 66 % (111) were clinicians, 18.1 % (30) were academicians, and only 14.5 % (24) of the participants were affiliated with both academics and clinical settings. Further analysis of the results demonstrated the breakdown under the categories of BMI, including underweight, standard, overweight, obese type-1, obese type-2 and obese type-3, along with further segmentation into academic, clinical and physical therapists who work in both domains as depicted in Table-2:

Furthermore, the gender-wise analysis revealed that 15%, 27% and 9% of the female physiotherapists come under the category of overweight, obesity type-I and obesity type-II, respectively.

Table-2 Job-Sector-Wise Distribution of BMI Classes among the Physical Therapist

Job Sector	BMI kg/m²						
	Underweight	Normal	Overweight	Obese type-1	Obese type-2	Obese type-3	Total
Academia	7	10	4	6	3	0	30
Both	4	10	0	6	4	0	24
Clinical	9	43	19	28	12	1	111
Total	20	63	23	40	1	1	165

However, the percentage was much lower among male physiotherapists, of which 8%, 13% and 9% were found to be overweight, obese type-I and obese type-II, respectively (Fig.1).

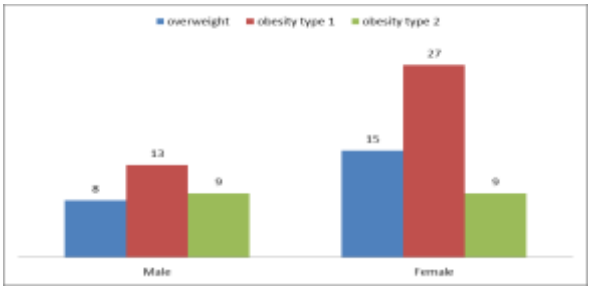

Fig.1 BMI Classifications among Participants

Furthermore, there is a significant association between gender and obesity <0.005. A Pearson Chi-square test was run to check the association between gender and obesity. Moreover, the results revealed a significant association between variables, as shown in Table-3.

Table-3 Chi-Square Analysis

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.479[a]	5	.004
Likelihood Ratio	16.693	5	.005
N of Valid Cases	165		

DISCUSSION

This cross-sectional study aimed to estimate and describe the prevalence of overweight and obesity in physical therapists. The study found that the prevalence of overweight, type-1 and type-2 obesity was significantly higher in male physical therapists than in female physical therapists. Obesity is more prevalent among physical therapists due to an increase in physical inactivity, which has the potential to lead to an obesity epidemic within this professional group[18].

Like other countries, Pakistan is undergoing a confluence of concurrent transformations involving population dynamics, economic development, urbanization, and lifestyle shifts such as dietary habits and physical activity[19]. Notably, variations in obesity rates are primarily driven by geographical location, lifestyle choices, and dietary patterns[20]. A high population level, for example, combined with a sedentary lifestyle and a high-calorie diet, are key factors contributing to the elevated obesity rate[21].

It is worth noting that as more adults' progress from overweight to obesity class, the prevalence of overweight is decreasing. This trend emphasizes assessing weight changes across the

BMI spectrum rather than focusing solely on specific classifications. The significant increase in the prevalence of extreme obesity, which is closely associated with significantly higher mortality rates, increased morbidity, and increased healthcare expenditures, is especially concerning[22]. However, prior research has not discovered any appreciable differences in men's prevalence of severe obesity due to age. However, compared to women aged 20 to 39, those 60 years or older showed a significantly lower prevalence of extreme obesity[23].

The longer a person has been obese, the more likely it is that a given level of body fat and distribution of adipose tissue will persist into adulthood as age increases[24]. An obese adolescent who has been overweight for two years is more likely to become an obese adult than a 10-year-old child who has been overweight for eight years[25]. Overall, research is needed to judge the effects of obesity on physical and mental capacity to perform effectively in professional activities among physical therapists.

There are a few limitations to this study. For instance, physical therapists were hesitant to participate in the study, which resulted in a low response rate. Second, an array of factors, including dietary habits and sedentary lifestyles, contribute to the overweight and obesity epidemic. While the study detects the potential importance of healthy eating habits and access to exercise opportunities in understanding what distinguishes overweight and obesity, these aspects have yet to be thoroughly explored or addressed.

CONCLUSION

The outcomes of this study elucidate that overweight and obesity constitute a swiftly expanding and enduring public health exigency, with particular pertinence to the gender-specific dimensions of obesity and its ramifications on the occupational roles of male and female physical therapists.

Significantly, the study reveals that the prevalence of obesity is significantly higher among academic physiotherapists than among their clinical counterparts. If this trend continues, it will have serious and adverse health consequences. To effectively counteract current trends, immediate and comprehensive measures are required, supported by robust obesity control strategies, prevention initiatives, and cross-sectional interventions.

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None.

Author Contributions
Huzaifa Ather Rajar was responsible for conceptualization, study design, and manuscript drafting. **Faryal Shaukat** handled data collection and analysis, while **Sheikh Muhammad Munir** contributed to methodology and statistical analysis. **Danish Zaman** conducted the literature review and assisted in manuscript editing. **Ushna Asif** played a key role in data interpretation and critical revision. **Muhammad Ather Hashmi** provided supervision and gave final approval for the manuscript.

Ethical Approval
This study received approval from the Institutional Review Board (Ref No: FMRL-IRB/2024/014) of Foundation of Medical Research and Laboratories, Karachi, Pakistan.

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None.

Conflict of Interests
None.

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