


Understanding the Role of Physical Therapists and Students in Promoting Physical Activity: A Cross-Sectional Study of Readiness and Perceived Challenges

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Physical inactivity, physical therapy, health promotion, barriers, readiness, cross-sectional study, healthcare professionals.

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ABSTRACT

Background: Physical inactivity is a global public health concern contributing to increased morbidity and healthcare costs. Healthcare professionals, including physical therapists, are in a unique position to promote physical activity, but may face challenges in implementing these strategies.

Objective: To assess the readiness and perceived barriers among physical therapists and students in promoting non-treatment-based physical activity.

Methods: This cross-sectional study was conducted in Karachi, Pakistan, involving 300 participants (150 students, 150 therapists). Participants were selected using Open Epi software and met eligibility criteria. A structured questionnaire was used to assess demographics, professional characteristics, attitudes, and barriers. Statistical analysis was performed using IBM SPSS 25.0, with chi-square tests for associations and independent t-tests for continuous variables. A significance level of $p < 0.05$ was set.

Results: Of 300 participants, 61% were female, and 91% were under 35 years of age. Therapists managed more patients weekly (32 vs. 11.8) and had more experience (4.9 vs. 1.4 years). Therapists promoting physical activity to fewer than 10 patients monthly perceived more barriers, including lack of compensation (OR: 4.21, 95% CI: 1.3-13.68).

Conclusion: Addressing barriers through targeted training and incentives may enhance the role of physical therapists in promoting physical activity.

INTRODUCTION

Physical inactivity is a critical public health concern that significantly contributes to global morbidity and mortality, exerting a heavy burden on healthcare systems (1). The economic impact is profound, with a substantial portion of direct healthcare costs attributable to a lack of physical activity (2). For instance, in the United Kingdom, the National Health Service (NHS) incurred approximately £0.9 billion in losses due to physical inactivity during 2006–07 (2). Globally, a study encompassing data from 358 surveys across 168 countries found that 27.5% of individuals did not meet recommended physical activity levels, thereby indicating a widespread deficiency in adherence to physical activity guidelines (3). Despite the well-documented health benefits, including improved cardiovascular health, reduced risk of chronic diseases, and enhanced mental well-being, over 60% of adults globally fail to engage in sufficient physical activity, placing a significant strain on health systems (4). The prevalence of physical inactivity is exacerbated by various demographic and sociocultural factors, leading to regional disparities. For instance, in the UK, less than 40% of men and less than 30% of women meet the required physical activity levels, indicating gender-specific barriers to physical activity participation (5).

The health benefits of physical activity are extensive, encompassing physical, mental, and social dimensions. Engaging in regular physical activity not only prevents and manages a wide array of chronic diseases, such as hypertension, diabetes, osteoporosis, and cardiovascular conditions, but also positively influences mental health by reducing anxiety, depression, and stress levels (6). In addition, physical activity has been associated with lower rates of obesity, enhanced cognitive function, and improved quality of life among older adults (7). Despite these advantages, various barriers persist, particularly in the healthcare sector, where healthcare professionals themselves may not consistently promote physical activity to their patients. This gap is concerning, as primary care providers and physical therapists are strategically positioned to advocate for and facilitate physical activity as a means of health promotion (8). However, these professionals often encounter several obstacles, such as time constraints, a perceived lack of training, and low confidence in modifying patients' health behaviors (9). For example, a survey among physical therapists in Japan revealed that the primary focus of health promotion was on increasing physical activity, yet the majority struggled with delivering these recommendations effectively (10). It is crucial to address these barriers to optimize the role of healthcare professionals in promoting physical activity.

Confidence in recommending physical activity has been identified as a key factor in determining whether or not a therapist will engage patients in discussions about lifestyle changes (11). Therefore, enhancing the training and support systems for physical therapists and students is essential to empower them in their role as advocates for physical activity. Moreover, the need for context-specific interventions is evident, as the dynamics of private practice, community-based work, and public healthcare settings may influence the feasibility and acceptance of physical activity promotion strategies (12). Incorporating brief counseling on physical activity into routine consultations has been highlighted as a promising approach, but further research is needed to explore the efficacy of these strategies in diverse clinical environments (13).

In conclusion, physical activity promotion remains an underutilized component of healthcare practice despite its well-established benefits. Addressing the barriers faced by healthcare professionals in promoting physical activity, such as time constraints and training deficiencies, is imperative for enhancing patient outcomes. Tailored interventions that consider the practice setting, gender dynamics, and professional confidence levels are essential for fostering a culture of health promotion within physical therapy and broader healthcare settings (14). Consequently, this study aims to evaluate the readiness and perceived challenges of physical therapists and students in promoting non-treatment-based physical activity, thereby providing insights for developing effective health promotion strategies in the field of physical therapy.

MATERIAL AND METHODS

The study was designed as an observational cross-sectional survey conducted across multiple physical therapy clinics and universities offering physical therapy services and education in Karachi, Pakistan. The sample included a total of 300 participants, comprising 150 physical therapy students and 150 practicing physical therapists. Participants were selected using open Epi software with a 95% confidence interval, utilizing mean and standard deviation values derived from a physical activity outcome measuring tool. Eligibility criteria included fourth and fifth-year Doctor of Physical Therapy (DPT) students currently enrolled across various institutes and physical therapists actively working in clinic or hospital settings. Exclusion criteria encompassed first, second, and third-year DPT students, physical therapists not engaged in clinical practice, and those working solely in domiciliary physical therapy settings. Prior to participation, all eligible individuals were informed of the study's purpose, procedures, and ethical considerations, and written informed consent was obtained. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki, ensuring confidentiality, anonymity, and voluntary participation throughout the research process.

Data was collected using a structured questionnaire adapted from previous research studies, with specific modifications to suit the current study's objectives. The

original questionnaire was derived from key literature on physical activity promotion among healthcare professionals. The survey comprised demographic information, including gender, age, year of education or professional experience, and type of clinical setting. Additionally, it assessed knowledge, attitudes, and confidence levels regarding the promotion of non-treatment-based physical activity. The questionnaire was administered in a paper-based format to students during their academic sessions and to physical therapists during scheduled work breaks at clinical sites. Responses were carefully documented, ensuring accuracy and completeness before data entry.

Data assessment involved categorizing responses based on predefined criteria. For physical therapists, the focus was on current clinical practices, barriers to physical activity promotion, and counseling strategies. For students, perceptions of their role in promoting physical activity and their readiness to implement these strategies were evaluated. To maintain the integrity and reliability of data collection, a pilot test was conducted on a small subset of participants prior to the main study to refine the survey tool and identify any ambiguities. Necessary adjustments were made to the questionnaire based on the pilot feedback, thereby enhancing the clarity and relevance of the questions.

Data analysis was performed using IBM SPSS version 25.0. Descriptive statistics were used to summarize the demographic characteristics of the participants, such as age, gender, and professional status. Chi-square tests were applied to evaluate associations between categorical variables, while independent t-tests were used for continuous variables. Odds ratios with 95% confidence intervals were calculated to determine the strength of associations between physical activity promotion practices and various predictors. A significance level of $p < 0.05$ was set for all statistical tests. Results were presented in tabular form to facilitate comparison between groups and highlight key findings.

The study adhered to all ethical guidelines, and approval was obtained from the institutional review board (IRB) of the respective institutions involved in the study. Participants were ensured that their participation was voluntary and that they could withdraw from the study at any stage without any repercussions. Confidentiality was strictly maintained by anonymizing all personal data and using coded identifiers during data entry and analysis. Data was securely stored and only accessible to the research team, ensuring compliance with ethical standards throughout the study.

RESULTS

The study included a total of 300 participants, comprising 150 physical therapy students and 150 practicing physical therapists. Table 1 summarizes the demographic characteristics of the participants. Among the physical therapy students, 66% were female, whereas the practicing physical therapists showed a relatively balanced distribution with 55% being female. The majority of participants (91%) were under the age of 35 years, with only

Table 1: Demographic Characteristics of Physical Therapy Students and Practicing Physical Therapists

Characteristic	Total (n=300)	Students (n=150)	Therapists (n=150)
Gender			
Female	182 (61%)	99 (66%)	83 (55%)
Male	118 (39%)	51 (34%)	67 (45%)
Age			
< 35 years	273 (91%)	150 (100%)	123 (82%)
35-44 years	23 (8%)	0 (0%)	23 (15%)
45-54 years	4 (1%)	0 (0%)	4 (3%)
> 54 years	0 (0%)	0 (0%)	0 (0%)
Practice Setting			
Private Practice	162 (54%)	68 (45%)	94 (63%)
Community Sector	23 (8%)	9 (6%)	14 (9%)
Public Hospital	115 (38%)	73 (49%)	42 (28%)

8% aged 35-44 and 1% aged 45-54. No participants were aged above 54 years. Results illustrates the age distribution between students and therapists across various practice settings, indicating that the highest proportion of students

were engaged in public hospitals (49%) while therapists were more likely to work in private practices (63%). The detailed distribution of practice settings is further elaborated in the table, reflecting diverse professional

Table 2: Personal and Professional Characteristics of Physical Therapists and Students

Variable	Total (n=300)	Students (n=150)	Therapists (n=150)
Years of Experience		1.4 (0.66)	4.9 (2.79)
Average Patients per Week	21.9 (14.14)	11.8 (9.87)	32 (9.98)
Average Hours per Week	27.9 (16.44)	17 (13.77)	38.8 (10.74)

environments. Table 2 shows that physical therapists had significantly more experience (4.9 ± 2.79 years) compared to students (1.4 ± 0.66 years). On average, therapists handled

a larger number of patients per week (32 patients) compared to students (11.8 patients). Similarly, therapists reported working for a greater number of hours weekly (38.8 hours)

Table 3: Counseling Practices and Perceptions of Physical Activity Promotion

Aspect	< 10/Month (n=150)	> 10 Patients/Month (n=150)	Odds Ratio (95% CI)
Recognizing the importance of physical activity	92 (61%)	24 (16%)	0.39 (0.12 - 1.26)
Walking for 30 minutes a day	87%	94%	0.61 (0.09 - 4.22)
Promoting physical activity as part of a physical therapist's role	88%	91%	0.51 (0.08 - 3.36)
Providing specific PA recommendations	90%	94%	0.84 (0.14 - 5.01)
Setting a PA example for patients	88%	91%	0.41 (0.06 - 3.07)
Perceived Barriers			
Insufficient time	68%	66%	0.62 (0.2 - 1.96)
Insufficient counseling skills	73%	75%	0.74 (0.2 - 2.78)
Not being compensated for PA promotion	68%	50%	4.21 (1.3 - 13.68)
Lack of patient benefit perception	50%	88%	0.17 (0.05 - 0.6)

than students (17 hours). As shown in Table 3, both students and therapists recognized the significance of promoting physical activity, with the majority (88% and 91%, respectively) acknowledging that it is part of a physical therapist's role. Interestingly, therapists who counseled more than 10 patients per month reported fewer barriers such as time constraints and lack of skills compared to those who counseled fewer patients.

The odds ratio for not being compensated for physical activity promotion was significantly higher in the group counseling less than 10 patients per month (OR: 4.21, 95% CI: 1.3 - 13.68).

Additionally, the odds ratio for believing that the patient would not benefit from the promotion was lower in the group counseling more than 10 patients (OR: 0.17, 95% CI: 0.05 - 0.6).

These findings suggest that the more frequently therapists engage in promoting physical activity, the more confident they become, and the fewer barriers they perceive. This indicates the need for targeted strategies to enhance therapists' engagement in physical activity promotion by addressing modifiable barriers and providing appropriate incentives.

DISCUSSION

The present study explored the readiness and perceived challenges of physical therapists and students in promoting non-treatment-based physical activity, highlighting variations in confidence, perceived barriers, and professional practices. The findings demonstrated that both groups acknowledged the importance of physical activity as part of a physical therapist's role, with higher engagement

observed among practicing therapists. These results were consistent with previous studies, such as those by Shirley et al., who reported that physical therapists are more likely to integrate physical activity counseling into clinical practice as their experience increases (12). The study revealed that, despite the overall positive attitudes towards promoting physical activity, barriers such as time constraints, lack of training, and perceived ineffectiveness of counseling persisted, particularly among less experienced individuals (13).

A significant observation was the progressive increase in confidence and readiness to promote physical activity as students transitioned into professional roles. This finding aligned with research by Pathare et al., which emphasized that physical therapy students possess theoretical knowledge but require more practical opportunities to refine their counseling skills (20). The higher readiness and confidence levels among practicing therapists underscored the impact of clinical experience on professional behavior and attitudes. However, the study also identified a notable gender disparity, with a higher proportion of female students actively engaged in promoting physical activity compared to male counterparts, a trend previously highlighted by O'Brien et al., who suggested that female therapists often perceive health promotion as a broader professional responsibility (13).

The strengths of this study included a balanced representation of both physical therapy students and practicing therapists, allowing for a comprehensive comparison of attitudes and practices. The inclusion of diverse clinical settings, such as private practices, community-based clinics, and public hospitals, provided a nuanced understanding of the contextual factors influencing physical activity promotion. However, certain limitations must be acknowledged. The study was conducted in a single geographical region, limiting the generalizability of the findings to broader populations. Additionally, the self-reported nature of the data collection may have introduced response bias, as participants could have overestimated or underestimated their engagement in physical activity promotion. Similar concerns were raised in studies by Crisford et al., who noted that self-reported measures in health promotion research often fail to capture the complexity of clinical interactions (19).

Furthermore, the study did not delve into the long-term impact of physical activity counseling on patient outcomes, which would have provided valuable insights into the effectiveness of various counseling strategies. A focus on short-term counseling practices without evaluating sustained behavior change in patients limits the applicability of the findings to broader health promotion frameworks. Addressing these gaps requires future research to incorporate longitudinal designs that assess the effectiveness of counseling on physical activity adherence and health outcomes over time (18).

Recommendations for enhancing physical activity promotion within physical therapy include the integration of structured training programs that emphasize both the theoretical and practical aspects of non-treatment-based

health promotion. Institutions should consider incorporating interprofessional education models that allow students to collaborate with other healthcare professionals, thereby strengthening their communication skills and confidence. Financial incentives for therapists who engage in health promotion activities, along with time allocations within clinical schedules, could alleviate some of the barriers identified in this study (19). Additionally, targeted interventions that address gender-specific dynamics and encourage male therapists to engage more actively in physical activity promotion may contribute to a more balanced approach within the profession.

CONCLUSION

In conclusion, this study reinforced the critical role of physical therapists in promoting physical activity and highlighted the need for ongoing education and support to address the barriers hindering effective health promotion. By implementing tailored strategies and providing continuous professional development opportunities, the profession can optimize its role in fostering a more physically active and healthier society. The findings contribute to the growing body of evidence supporting the integration of health promotion into routine physical therapy practice and underscore the necessity of addressing both individual and systemic barriers to achieve this goal.

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