



Original Article

The perception of physical therapy leaders in Saudi Arabia regarding physical therapy scope of practice in primary health care

HANI MOHAMMED AL-ABBAD, PT, BSc, MMSPhy¹*,
HISHAM MOHAMMED AL-HAIDARY, PT, BSc, MSc, DPT²

¹) King Fahad Medical City: P.O. Box 59046, 11525 Riyadh, Saudi Arabia

²) Prince Sultan Center for Special Education Support Services, Saudi Arabia

Abstract. [Purpose] To explore the views of the physical therapy service leaders in Saudi Arabia regarding the integration of physical therapy service in primary health care settings. [Subjects and Methods] A self-administered questionnaire consisting of both open and closed ended questions was distributed during May–July 2013 via email to physical therapy leaders representing different regions and health care providers in Saudi Arabia. [Results] Twenty-six participants answered the questionnaire. Eighty five percent of the sample had ≥ 10 years of experience with 57.6% of them holding a post-graduate degree. Participants were from different health care providers and represented different geographical regions of Saudi Arabia. Eighty one percent of the sample reported that the adoption of physical therapy services in primary health care would be advantageous, as it would offer earlier access to health care and would be more cost-effective. The respondents also stated that such a service would contribute towards the prevention of common non-communicable health diseases. [Conclusion] The results of this survey provide generally positive recommendations for the provision of physical therapy service in Saudi Arabia primary health care centers. However, challenges and barriers identified by this study require consideration during the development of the service.

Key words: Primary health care, Physical therapists views, Saudi Arabia

(This article was submitted Aug. 20, 2015, and was accepted Oct. 14, 2015)

INTRODUCTION

Physical therapy services in primary health care (PHC) has recently become an area of considerable international interest^{1–4}. The current global trend of health care delivery is increasingly moving toward primary care models². Primary health care is defined as “essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community ...”⁵.

The ministry of Health (MOH) of Saudi Arabia considers PHC a major strategic focus for the development of its health services to provide preventive, curative and rehabilitative services. This consideration is manifested in the rapid growth of the total number of PHC centers from 1,925 centers in 2007 to 2,259 centers in 2012⁶. Although 33–60% of PHC centers provide ancillary medical services including dental, radiology and laboratory services^{6, 7}, physical therapy services do not exist in these centers.

A recent MOH statistical report showed that the second most common disease seen at both PHC and hospitals’ outpatient departments were movement-related disorders accounting for 2.06 million and 1.08 million visits, respectively⁷. In addition, the MOH survey of health information reported the prevalence of physical inactivity and sedentary life style to be over 60% of the total population⁸, and physical inactivity burdens the national health system^{9, 10}. Physical inactivity is a leading cause

*Corresponding author. Hani Mohammed Al-Abbad (E-mail: hmalabbad@kfmc.med.sa)

©2016 The Society of Physical Therapy Science. Published by IPEC Inc.

This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives (by-nc-nd) License <<http://creativecommons.org/licenses/by-nc-nd/3.0/>>.

of major public health problems contributing to various chronic non-communicable diseases and health complications such as cardiovascular diseases, obesity, diabetes and cancer^{11, 12}. Epidemiological studies have found that diabetes mellitus is high among the Saudi population with a reported prevalence rate of 30%¹³. Morbid obesity, defined as a body mass index of ≥ 30 kg/m², has a prevalence rate of 28.7% among the Saudi population¹⁴. Also, osteoarthritic diseases among the elderly (> 60 years of age) is as high as 60.6% leading to earlier functional disability¹⁵.

Saudi Arabia is divided into 13 regions covering approximately 2,250,000 km² of land space, and has a current total estimated population size of over 29 million and an annual population growth rate of 3.19%⁶. The number of hospitals that provide physical therapy service in suburban areas is deficient. There are over 800 qualified physical therapists in Saudi Arabia, with double that number of physical therapy technicians working in secondary or tertiary level care hospitals⁶. This makes access to physical therapy care difficult and delays its provision to patients. Different health care providers offer free of charge medical services for their patients including physical therapy (Table 1^{6, 7}). Therefore, the availability of physical therapy services at PHC centers needs to be evaluated and considered to meet the growing health needs of the Saudi population.

Physical therapists are equipped with the necessary education and experience to address the needs of health promotion and disease prevention, both for individuals and the community¹⁶. Specifically, physical therapists have extensive training in the field of musculoskeletal, cardiopulmonary and neurological care¹⁷. In addition, physical therapy has an essential role in the prevention of chronic non-communicable diseases through the promotion of safe appropriate physical activity programs¹⁸.

The current literature suggests that the removal of barriers to access to physical therapy may provide a number of key potential advantages including a reduction in patient waiting time, costs associated with drug prescriptions and radiological investigations, tertiary care referral rates, non-attendance of appointments, physical therapy visits and patients' dissatisfaction¹⁹⁻²¹. The perceived benefits and concerns of providing physical therapy at PHC have not previously been investigated from the service providers' perspective. The aim of this study was to explore the views of physical therapy service leaders in Saudi Arabia on the provision of physical therapy service in PHC.

SUBJECTS AND METHODS

Ethical approval for this study was obtained from the Institutional Review Board of King Fahad Medical City. A cross-sectional survey using a self-administered questionnaire was constructed by the authors using items identified based on relevant literature and form part of the common perceptions of physical therapy services in PHC²². The questionnaire consisted of three sections. The first section asked for demographic and professional profile information such as educational level, years of experience and area of specialization. The second section was composed of 8 Likert-like items designed to obtain participants perceptions on providing physical therapy services in PHC. The third section consisted of open-ended questions asking for personal opinions about the potential advantages or disadvantages of implementing physical therapy services. The purpose of adding these open questions was to allow the participants to provide their own views without being restricted by closed questions on pre-determined issues. A preliminary version of the questionnaire was given to a sample of four non-participating clinical administrative physical therapists to review it as a pilot. The comments of those participating in the piloting were considered in the final version.

The finalized questionnaire was distributed during the period of May–July 2013 via email to 42 physical therapy leaders representing different geographical regions and health care providers in Saudi Arabia. Physical therapy leaders in the private sector were excluded as the study aimed to explore the PHC status in the public sector. Physical therapy leaders were identified through different directories such as MOH regional rehabilitation managers and the Saudi Physical Therapy Association member list. Other participants were identified using a snowball sampling technique in which respondents recommended other individuals who would be appropriate to participate in the survey. A cover invitation letter was attached with the questionnaire highlighting the purpose, rationale of the study and guidance on how to complete the questionnaire. The targeted participants had to be Saudi clinical physical therapy service providers holding at least a bachelor degree in physical therapy with a minimum of two years experience in their administrative position. A follow-up letter and reminder email was

Table 1. Major governmental sector health care providers in Saudi Arabia¹²⁾

1.	Ministry of Health
2.	Specialized/Tertiary care
3.	Universities
4.	National Guard
5.	Armed Forces
6.	Ministry of Interior
7.	Royal Commission
8.	Youth Welfare
9.	Saudi Aramco

sent within a month after the initial contact if no response was received.

The percentages of participants' answer preferences were calculated using Microsoft Office Excel 2007 (Microsoft Corporation, Redmond, WA, USA). The categorical data derived from the open questions were analyzed using a content analysis technique and summarized as percentages in a frequency table. One author performed the content analysis. Peer examination of the data and the analysis was undertaken by the second author.

RESULTS

A total of 26 physical therapy leaders out of the invited 42 (62% response rate) responded to the survey. The participants represented different health care providers from 11 cities in Saudi Arabia which provide publicly funded medical services. The majority (84.6%) of the participants had more than 10 years of clinical experience with 57.6% of them holding post-graduate qualifications. More than 80% of the responders reported that physical therapy services in PHC are advantageous. Respondents agreed or strongly agreed that physical therapy in PHC centers would reduce waiting times and costs (85%), prevent chronicity (96%), and provide earlier access to care (96%) (Table 2). Fewer agreed or strongly agreed that it would reduce the need for drugs prescription (73%) and radiological investigations (54%), and that physical therapy in primary care has a role in preventing common non-communicable diseases (66%). These were the same items some respondents reported disagreement (8–31%).

The importance of improved access to physical therapy was repeated in the open-ended questions for early detection and management of physical dysfunction (20%); the prevention of further complications and disease chronicity was mentioned as another key advantage (15.6%). Other advantages for both the patients as well as the profession are summarized in Table 3.

Table 2. Perception about physical therapy service in primary health care (n=26)

Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Physical therapists are competent to manage patients with movement related complaints	65%	31%	4%	0%	0%
Physical therapy in primary care reduces waiting times to see specialists at an advanced facility	35%	50%	15%	0%	0%
Physical therapy in primary care can prevent chronicity of movement related conditions	46%	50%	4%	0%	0%
Physical therapy in primary care provides easy earlier access to care compared to advanced facility	46%	50%	4%	0%	0%
Physical therapy in primary care reduces the cost of health care delivery for patients with movement derived complaints	31%	54%	8%	4%	4%
Physical therapy in primary care reduces the need for drug prescriptions	19%	54%	19%	4%	4%
Physical therapy in primary care reduces the need for radiological investigations	8%	46%	15%	27%	4%
Physical therapy in primary care has a role in the prevention of common non-communicable diseases (CVD, DM, overweight)	31%	35%	23%	12%	0%

Table 3. Perceived advantages of physical therapy in primary health care

1. Consultative support to PHC physicians decision making for diagnosis and early plan of care	8.9%
2. Easier geographical access for patients in suburban (non-central) areas	11.1%
3. Creates more employment opportunities	6.7%
4. Helps reduce the patient load and waiting time on tertiary care hospitals	11.1%
5. Early detection and management of physical dysfunction	20.0%
6. Prevents the development of further complications to the condition and transformation into chronic disorder	15.6%
7. Expands the scope of physical therapy as a profession and public awareness	8.9%
8. Helps reduce the patients' consumption of medications	2.2%
9. Individuals and public health education programs on well-being through physical activity and chronic disease risk factors	4.4%
10. Group treatment classes for similar chronic conditions to improve motivation	2.2%
11. Accentuates the reputation of the profession and relationship with other health care professionals	8.9%

Disadvantages reported were mainly concerned with the necessity of appropriately trained, experienced, and specialized therapists to fulfill the role of primary care. Infrastructure concerns focused on lack of required equipment, adequate space and facilities. The risk of professional isolation potentially impacting career development was another concern. In addition, the possible lack of cooperation and support from administrative and medical staff in PHC needs consideration.

Successful implementation of primary care physical therapy is acknowledged as first requiring MOH support. Respondents further commented that preparing the centers for the service would require providing appropriate space, supplying necessary equipment, and fostering partnerships with other healthcare professionals. Specific policies and procedures are necessary to assure adequate training is provided for physical therapists as PHC professionals, and that patient care and referrals are standardized.

DISCUSSION

The current survey of physical therapy leaders in Saudi Arabia generally supported the integration of physical therapy services in PHC. Saudi Arabia is in the advantageous position of being able to draw on the experiences of other countries to assist with the development and implementation of physical therapy services in PHC centers²²). Multi-professional health team models including physical therapists in PHC exist in different countries including North America, Europe, Australia and New Zealand²³).

The findings of this initial survey show that most physical therapy leaders support moving towards this PHC model. In addition, they had a proper understanding regarding the benefits of and requirements for introducing this potentially beneficial healthcare practice. With over 1.25 million physical therapy visits directed to the eleven MOH rehabilitation centers across the Kingdom⁶), the benefits of distributing the care of the patients can be easily appreciated. This was reflected in our survey: 96% of the responses agreed that earlier access to physical therapy services in PHC was better than access in a hospital setting.

A recent systematic review of eight articles reporting outcomes of patients with musculoskeletal injuries compared direct access to physical therapy with physician's referral outcomes²⁴). The findings of that review stated that the three studies reporting comparative pharmacological interventions showed significantly more drug use in physician referral groups than in direct access patients. Similarly, three studies with imaging data reported significantly more imaging orders in physician referral groups than in direct access groups. Our respondents were not as confident about these benefits reported in the systematic review. Two (8%) of them disagreed or strongly disagreed that physical therapy in primary care would reduce the need for drug prescriptions, leaving 19 (73%) with beliefs consistent with the systematic review outcomes. Only 14 (54%) of our respondents believed fewer radiological investigations would result from the physical therapy in PHC model, and 8 (31%) either disagreed or strongly disagreed. This may suggest deficient awareness of the participants about global experience with physical therapist competencies in the direct access model²⁵). However; it may also be attributable to concerns associated with participants' understanding of and experience with practice patterns in Saudi Arabia which deserves further investigation.

Physical therapists already provide services across the health spectrum from well-being promotion to disability prevention. There is strong empirical evidence supporting interventions in a range of areas relevant to the objectives of PHC associated with injury prevention and chronic disease management²⁶). Moreover, accumulating evidence supports the role of physical therapists as health care providers in health promotion. This includes the prescription of general physical activity programs, work place assessments and programs specifically designed for the elderly²⁷⁻²⁹). The World Physical Therapy Confederation (WCPT) advocates the provision of physical therapy services in PHC that is appropriate to local cultural, socio-economic and political circumstances and provides equitable access to effective services³⁰).

Adopting the model of physical therapy in PHC in Saudi Arabia is a significant change that requires commitment at different levels of policy decision makers. Introducing major change requires well-planned actions and effective communication to change current beliefs regarding the importance of rehabilitative services as preventive care. It is important to evaluate and understand the current situation; then, to identify with all those involved what barriers exist and what is required. This needs consideration of resource limitations, financial, facilities, equipment, education, and staffing, including levels of skills and competency required to deliver satisfactory health care³⁰).

Moreover, the physical therapy profession in Saudi Arabia needs to emphasize their role in PHC from an educational and training perspective. Implementing the model requires collaborative efforts between various authorities including the Ministry of Health, physical therapy academic program directors and the Saudi Physical Therapy Association. The number of universities offering a bachelor's degree in physical therapy has risen from 6 to 16 in the past few years³¹) and the numbers of physical therapists graduating are sufficient. Physical therapy entry level education and continuing professional development needs to equip physical therapists with the appropriate knowledge and skills to work in PHC as well as to promote the value of working in these settings. Further research is recommended to explore the views of both medical professionals, such as general practitioners and family medicine in PHC in addition to patients potentially benefiting from this service. A further step is to evaluate a sample of physical therapists' skills in the assessment and management of patients with movement-related disorders at PHC.

Certain limitations of this study need to be acknowledged. First, our sample study (26) was small. It should also be noted

that physical therapy leaders who may have substantial reasons to disagree with the provision of physical therapy PHC may not have responded to this survey given that anonymity was not guaranteed. Consequently, our findings may have been potentially affected by selection bias.

In conclusion, the results of this survey provide generally positive recommendations from physical therapy leaders in Saudi Arabia towards the integration of physical therapy services in PHC. However, the concerns and the barriers identified that may affect the successful implementation of this health care reform require consideration during the establishment of the service.

REFERENCES

- 1) Samsson K, Larsson ME: Physiotherapy screening of patients referred for orthopaedic consultation in primary health-care—a randomised controlled trial. *Man Ther*, 2014, 19: 386–391. [[Medline](#)] [[CrossRef](#)]
- 2) Holdsworth LK, Webster VS: Direct access to physiotherapy in primary care: now?—and into the future? *Physiotherapy*, 2004, 90: 64–72. [[CrossRef](#)]
- 3) Murphy BP, Greathouse D, Matsui I: Primary care physical therapy practice models. *J Orthop Sports Phys Ther*, 2005, 35: 699–707. [[Medline](#)] [[CrossRef](#)]
- 4) Cott CA, Mandoda S, Landry MD: Models of integrating physical therapists into family health teams in Ontario, Canada: challenges and opportunities. *Physiother Can*, 2011, 63: 265–275. [[Medline](#)] [[CrossRef](#)]
- 5) International Conference on Primary Health Care: Declaration of Alma-Ata. *WHO Chron*, 1978, 32: 428–430. [[Medline](#)]
- 6) Ministry of Health, Health statistical year book, Saudi Arabia, 2012. <http://www.moh.gov.sa/en/Ministry/Statistics/book/Documents/1433.pdf> (Accessed December 2014).
- 7) Ministry of Health, Health statistical year book, Saudi Arabia, 2011. <http://www.moh.gov.sa/Ministry/MediaCenter/News/Documents/healthybook.pdf> (Accessed December 2014)
- 8) Ministry of Health, Survey of health information, Saudi Arabia, 2013. <http://www.moh.gov.sa/Ministry/Statistics/Documents/Final%20book.pdf> (Accessed October 2015)
- 9) Al-Hazzaa HM: The public health burden of physical inactivity in Saudi Arabia. *J Fam Community Med*, 2004, 11: 45–51. [[Medline](#)]
- 10) AlQuaiz AM, Tayel SA: Barriers to a healthy lifestyle among patients attending primary care clinics at a university hospital in Riyadh. *Ann Saudi Med*, 2009, 29: 30–35. [[Medline](#)] [[CrossRef](#)]
- 11) Al-Nozha MM, Al-Hazzaa HM, Arafah MR, et al.: Prevalence of physical activity and inactivity among Saudis aged 30–70 years. A population-based cross-sectional study. *Saudi Med J*, 2007, 28: 559–568. [[Medline](#)]
- 12) Al-Eisa ES, Al-Sobayel HI: Physical activity and health beliefs among Saudi women. *J Nutr Metab*, 2012, 2012: 642187. [[Medline](#)] [[CrossRef](#)]
- 13) Alqurashi KA, Aljabri KS, Bokhari SA: Prevalence of diabetes mellitus in a Saudi community. *Ann Saudi Med*, 2011, 31: 19–23. [[Medline](#)] [[CrossRef](#)]
- 14) Memish ZA, El Bcheraoui C, Tuffaha M, et al.: Obesity and associated factors—Kingdom of Saudi Arabia, 2013. *Prev Chronic Dis*, 2014, 11: E174. [[Medline](#)] [[CrossRef](#)]
- 15) Al-Arfaj AS, Alballa SR, Al-Saleh SS, et al.: Knee osteoarthritis in Al-Qaseem, Saudi Arabia. *Saudi Med J*, 2003, 24: 291–293. [[Medline](#)]
- 16) Childs JD, Whitman JM, Sizer PS, et al.: A description of physical therapists' knowledge in managing musculoskeletal conditions. *BMC Musculoskelet Disord*, 2005, 6: 32. [[Medline](#)] [[CrossRef](#)]
- 17) Bindawas SM, Vennu V, Azer SA: Are physical therapy interns competent in patient management skills? Assessment of the views of clinical and academic physical therapists. *J Phys Ther Sci*, 2013, 25: 649–655. [[Medline](#)] [[CrossRef](#)]
- 18) Robert G, Stevens A: Should general practitioners refer patients directly to physical therapists? *Br J Gen Pract*, 1997, 47: 314–318. [[Medline](#)]
- 19) Fritz JM, Childs JD, Wainner RS, et al.: Primary care referral of patients with low back pain to physical therapy: impact on future health care utilization and costs. *Spine*, 2012, 37: 2114–2121. [[Medline](#)] [[CrossRef](#)]
- 20) Mitchell JM, de Lissovoy G: A comparison of resource use and cost in direct access versus physician referral episodes of physical therapy. *Phys Ther*, 1997, 77: 10–18. [[Medline](#)]
- 21) Dufour SP, Lucy SD, Brown JB: Understanding physiotherapists' roles in Ontario primary health care teams. *Physiother*

- Can, 2014, 66: 234–242. [[Medline](#)] [[CrossRef](#)]
- 22) Minns Lowe CJ, Bithell CP: Musculoskeletal physiotherapy in primary care sites: survey of English NHS trusts. *Physiotherapy*, 2000, 86: 479–485. [[CrossRef](#)]
 - 23) Alberta Physiotherapy Association: Primary health care, a resource guide for physical therapists, 2003. http://www.physiotherapyalberta.ca/files/primary_health_care_1.pdf (Accessed October 2015)
 - 24) Ojha HA, Snyder RS, Davenport TE: Direct access compared with referred physical therapy episodes of care: a systematic review. *Phys Ther*, 2014, 94: 14–30. [[Medline](#)] [[CrossRef](#)]
 - 25) Holdsworth LK, Webster VS, McFadyen AK: Physiotherapists' and general practitioners' views of self-referral and physiotherapy scope of practice: results from a national trial. *Physiotherapy*, 2008, 94: 236–243. [[CrossRef](#)]
 - 26) Sephton R, Hough E, Roberts SA, et al.: Evaluation of a primary care musculoskeletal clinical assessment service: a preliminary study. *Physiotherapy*, 2010, 96: 296–302. [[Medline](#)] [[CrossRef](#)]
 - 27) Hay EM, Foster NE, Thomas E, et al.: Effectiveness of community physiotherapy and enhanced pharmacy review for knee pain in people aged over 55 presenting to primary care: pragmatic randomised trial. *BMJ*, 2006, 333: 995. [[Medline](#)] [[CrossRef](#)]
 - 28) Ludvigsson ML, Enthoven P: Evaluation of physiotherapists as primary assessors of patients with musculoskeletal disorders seeking primary health care. *Physiotherapy*, 2012, 98: 131–137. [[Medline](#)] [[CrossRef](#)]
 - 29) Dufour SP, Brown J, Deborah Lucy S: Integrating physiotherapists within primary health care teams: perspectives of family physicians and nurse practitioners. *J Interprof Care*, 2014, 28: 460–465. [[Medline](#)] [[CrossRef](#)]
 - 30) World Confederation for Physical Therapy: Primary health care and community based rehabilitation: implications for physical therapy based on a survey of WCPT's member organizations and a literature review. WCPT Briefing Paper 1. London: WCPT. 2003.
 - 31) Alghadir A, Zafar H, Iqbal ZA, et al.: Physical therapy education in Saudi Arabia. *J Phys Ther Sci*, 2015, 27: 1621–1623. [[Medline](#)] [[CrossRef](#)]