

Motivation and Awareness of Female Physiotherapists in Saudi Arabia toward Women Health Physiotherapy

Abstract

Background: Pelvic floor disorders (PFDs) are a group of common conditions that create a great distress to the lives of many female patients. The role of women health physiotherapy (WHPT) in managing PFDs is crucial. Scarce data in the literature describe the awareness, attitude, and practice of WHPT among female physiotherapists and to the best of our knowledge, none are reported in Saudi Arabia. This paper hypothesizes that female physiotherapists in Saudi Arabia are less motivated to practice WHPT and that being less motivated have led to acquiring a lower level of awareness to the specialty. Additionally, it aims to explore the beliefs of female physiotherapists toward WHPT. **Methods:** An online questionnaire was distributed among female physiotherapists working in Saudi Arabia. Participants were asked to identify other colleagues to include in the sample. Reliability of the questionnaire was tested using a pilot study. **Results:** The majority of respondents [75.9%] are specialists and 69.2% reported years of experience ranging from 1 to 5. Around 46.9% of respondents were motivated to practice WHPT and 82.1% agreed that physiotherapy is important in treating PFDs. Additionally, Respondents who were motivated to practice WHPT displayed a significantly higher level of awareness to the specialty and understood the importance of pelvic floor rehabilitation (PFR) as an intervention for PFDs. **Conclusions:** There is adequate level of awareness of female physiotherapists in Saudi Arabia to WHPT and a great motivation to practice the specialty. The study highlighted the need to organize various educational programs and workshops that focus on WHPT and PFR.

Keywords

awareness, motivation, pelvic floor disorders, physiotherapy

Introduction

Pelvic floor disorders (PFDs) are a common distressing condition that greatly impacts patients' quality of life causing several physical, social, and psychological consequences. It is defined as a defect in musculature and endopelvic fascia that results in a variety of conditions, such as pelvic organ prolapse (POP), urinary or fecal incontinence, and chronic pelvic pain [1]. Different treatment modalities are well established for PFDs including surgical, medical, and conservative management. Importantly, pelvic floor rehabilitation (PFR) plays a major role as an effective treatment measure for PFDs and aims to improve the strength, endurance, and function of pelvic floor muscles [2].

Concerning the practice of physiotherapy in Saudi Arabia, bachelor programs in physiotherapy were introduced later in the kingdom compared to other countries. Over the past decade, the kingdom's understanding of the importance of physiotherapy as an effective treatment of various medical conditions is evolving as the number of universities offering a bachelor's degree in physiotherapy has increased from 6 to 16 [3]. Contrary to the United States and United Kingdom, in Saudi Arabia, patients are not permitted to directly access physiotherapists without a referral from other health practitioners [4,5]. In addition, little is known about the role of female physiotherapists in Saudi Arabia and their practice as well as the currently available subspecialties. Moreover, postgraduate study in physiotherapy was introduced later in the year of 2000 and included pediatrics, geriatrics, orthopedics, neurology, and cardiothoracic studies [6]. Unfortunately, there are no accurate local data about the numbers

of registered women health physiotherapists and the specialized centers that offer women health physiotherapy (WHPT) services.

To our knowledge, no local data are available to describe the awareness, attitude, and practice of WHPT among female physiotherapists in Saudi Arabia. Thus, in this paper, we hypothesized that female physiotherapists in Saudi Arabia are less motivated to practice WHPT and that being less motivated have led to acquiring a lower level of awareness to the specialty. Additionally, it aims to explore the beliefs of female physiotherapists toward WHPT as a specialized practice.

Methods

An online questionnaire was designed to gather the data required. It was provided to be accessed using either a link or a barcode. Once the questionnaire was accessed, there was an introductory cover letter explaining the aims of the paper and ensuring that participation is completely voluntary and that all responses will be handled with confidentiality. Also, it was explained that the study subjects' anonymity was ensured, and a consent was obtained from each participant prior to answering the questions. The questionnaire was kept short taking less than 5 minutes to complete.

The questions included in the questionnaire were grouped into demographic information and 5 other categories including motivation, awareness, education and training program factors, attitudes and beliefs, and employment and career factors. Seven questions were included under demographic information to identify the characteristics of the sample which included age, nationality, academic level, employee level, years of experience, workplace, and current region of workplace. The questions under the other 5 categories were in the form of a Likert scale. Two

questions were included under motivation to assess whether female physiotherapists are motivated towards the practice of WHPT. The second category includes 5 questions to assess participants' understanding of the practice of physiotherapy and how important it is as an effective conservative treatment for PFDs. For education and training, 7 questions were included under this category to assess the presence of adequate educational programs, workshops, and training courses for WHPT. Five questions were included under attitudes and beliefs to gain an understating of physiotherapists' beliefs such as facing difficulties performing frequent vaginal examinations, feeling ashamed about being specialized in WHPT, and perceiving WHPT as ineffective and insignificant practice for treatment of PFDs. Lastly, employment and career category included 5 questions that aim to describe whether adequate number of job offers, and patients are available to encourage practicing WHPT.

To ascertain the reliability of the questionnaire, a pilot study was performed. The questionnaire was self-administered using barcodes to female physiotherapists working in different centers in the eastern region of Saudi Arabia and 30 participants were included in the pilot study. The Cronbach's alpha for the pilot study was 0.731 and no changes were made to the questionnaire afterwards. Female physiotherapists in different centers in the eastern region were asked to kindly participate in the study and to distribute the questionnaire to other colleagues that they know who are currently working as physiotherapists. The sample size was calculated using the formula $n = z^2 \times \hat{p}(1-\hat{p}) / \epsilon^2$ and the sampling technique was snowball sampling, a type of non-probability sampling. The study was approved by the institutional review board (IRB) of Imam Abdulrahman Bin Faisal University, Dammam.

Results

When inquiring about the respondents' motivation, almost a half [46.9%, n=53] agreed that they are motivated to practice WHPT. In addition, 62.1% [n=69] strongly agreed that physiotherapy is an interesting practice. Regarding the participants' awareness of WHPT practice, over a third of respondents [37.5%, n=42] strongly disagreed that WHPT deals only with pelvic floor dysfunction. Furthermore, over a half [53.1%, n=60] agreed that PFDs include pelvic organ prolapse, urinary incontinence, and fecal incontinence. Meanwhile, a large majority of respondents [82.1%, n=92] strongly agreed that physiotherapy has an important role in treating PFDs and over two thirds [61.9%, n=70] believe it is an effective treatment in about 50% to 70% of patients.

The sample characteristics include 41.3% [n=33] who were young aged between 20 to 25 years of age. In addition, the majority were of Saudi nationality [87.6%, n=99] as opposed to non-Saudi participants who were very few [12.4%, n=14]. Regarding employee level, 75.9% [n=85] of the respondents are specialists followed by 14.3% [n=16] who are technicians. A large majority of the respondents reported having no subspeciality [88.5%, n=100], from those with subspeciality only 4.4% [n=5] were specialized in WHPT. Around 69.2% [n=54] reported years of experience ranging from 1 to 5. For further details about the characteristics of the sample, refer to Table 1.

Concerning education and training, a sizable number of respondents [61.1%, n=69] agreed that there was insufficient exposure and teaching to WHPT in their undergraduate years. Moreover, 46.9% [n=53] of participants strongly agreed that during their training they have not seen many of referred patients who needed WHPT. Regarding the respondents' attitudes and beliefs, a large number [74.3%, n=84] agreed that they do not feel ashamed to say they are practicing WHPT. Forty-two percent [n=47] of participants strongly disagreed that it is

religiously unacceptable to perform frequent vaginal examinations. In regard to employment and career factors, the majority of respondents [67.9%, n=76] agreed that there are not as many job offers to practice WHPT, and that not many patients seek physiotherapy for treatment [50%, n=56]. Table 2 shows details of the questions used in the questionnaire under each of the 5 categories.

There was no statistically significant association between physiotherapists' academic level and their degree of motivation [$X^2= 2.05$, $df= 2$, $p=0.16$] nor was there an association between academic level and level of awareness [$X^2= 0.15$, $df=2$, $p= 0.79$]. In addition, participants who had 1 to 5 years of experience [$\bar{x}=4.22 \pm 0.95$] were found to be more motivated to practice WHPT with a statistically significant value [$X^2= 2.41$, $df=5$, $p=0.02$]. Furthermore, participants who were less experienced [$\bar{x}=3.59 \pm 1.08$] shared the belief that there were not enough job offers, fair financial rewards, and adequate number of patients' referral to WHPT [$X^2=3.49$, $df=5$, $p=0.01$]. Both groups of participants who worked in governmental hospitals [$\bar{x}=3.60 \pm 0.86$] and private rehabilitation centers [$\bar{x}=3.99 \pm 0.62$] believe that there were not many educational opportunities and workshops offered during their training years [$X^2=1.89$, $df=3$, $p=0.04$]. Furthermore, correlation between motivation and awareness using Pearson's correlation was tested. There was a statistically significant positive small correlation between the two variables [$r=0.33$, $p=0.000$]. to illustrate, respondents who were motivated to practice WHPT and thought that it is an interesting practice, displayed more awareness towards the specialty and understood the importance of PFR as an intervention for PFDs.

Discussion

Our null hypotheses in this study were that (1) physiotherapists are less motivated to practice WHPT and (2) being less motivated contributed to acquiring a lower level of awareness to practice the specialty. The responses obtained did not reflect the first hypothesis as the majority of participants were actually motivated to practice WHPT. Conversely, the second hypothesis was accepted as it was shown that the higher the motivation of female physiotherapists, the more aware they are about the importance and effectiveness of WHPT. The majority of physiotherapists included in the study are young-aged females with years of experience ranging from one to five and are general physiotherapists. Among our sample, it was noticed that physiotherapists who had less experience in the field were more motivated toward the specialty. While the majority of the sample included general physiotherapists, the responses reflected adequate level of motivation and awareness to WHPT. In contrast, the sample of another study conducted by Hagen et al [7] included many women health physiotherapists the majority of which are senior specialists in urogynecology. Moreover, almost half of participants reported insufficient exposure and teaching opportunities to WHPT during training years. Additionally, a large majority reported not seeing many patients during their years of practice. This might be attributed to low level of public awareness leading to lower number of patients seeking medical care. This observation is comparable to the findings reported by Abhyankar et al [8] which state that there is lack of awareness among patients to POP which led to delayed presentation. In Saudi Arabia, one study demonstrated moderate level of awareness of physiotherapy services and suggested the need to educate the public about the role of physiotherapy [9]. Hence, barriers such as low public awareness should be overcome to enhance medical access to female patients who require WHPT.

Pelvic floor rehabilitation has been shown to be an effective management option in 52 to 57% of POP patients [10]. The majority of physiotherapists involved in this study were well-aware of the effectiveness of PFR. In fact, physiotherapists who were motivated to practice WHPT displayed a higher level of awareness. Also, it was shown that participants who are more aware about the specialty believed that there is lack of adequate exposure to patients and teaching in the curriculum. Also, over half of participants agreed that they were less inclined to pursue a career in WHPT as they believe there is limited referral of patients by other health practitioners. Conversely, Odunaiya et al [11] studied the utilization of physiotherapy among obstetricians and gynecologists in Nigeria and found that a large majority of participants referred their patients to WHPT, and that the majority referred their patients to general or state hospitals.

In a community with a conservative culture such as that of Saudi Arabia, it was postulated that female physiotherapists might be ashamed to identify themselves as women health physiotherapists and are reluctant to perform frequent vaginal examinations whether due to religious or other reasons. However, only a minority of respondents shared this belief. With regards to the financial aspects of WHPT, the responses varied greatly of how rewarding the practice is as only one-fourth of participants agreed that it is financially unrewarding. Similarly, in a study conducted to investigate the experiences of overseas trained physiotherapists working in Saudi Arabia, one third of respondents listed poor financial outcome as a reason of suboptimal local work experience [12].

To the best of our knowledge, there are no other questionnaires in Saudi Arabia with which to compare our findings. Some of the literature found locally described awareness to physiotherapy among the public and healthcare workers and some studies addressed the overall importance of physiotherapy in the treatment of many medical conditions such as low back pain.

However, there is virtually no data on WHPT as a practice or the effectiveness of PFR in the treatment of PFDs and none on the perceptions of physiotherapists and the Saudi population to WHPT. Thus, the results of this questionnaire provide an insight about the current perceptions of female physiotherapists to WHPT. It also emphasizes the need to apply various WHPT training programs and educational courses as currently no accurate data about training programs are available in the kingdom. Thus, this paper forms the groundwork for further larger studies to better describe and signify the importance of WHPT.

The current study has several limitations. It is possible that the small sample size might have affected the responses obtained. Additionally, the sampling technique used might have influenced the equal distribution of the questionnaire among all regions of the kingdom. However, adapting a different sampling technique was not possible due to the circumstances created by the COVID-19 pandemic. Moreover, although online surveys are considered a relatively easy method of data collection, they have some downsides such as misidentification of participants.

Conclusion

The results of this study showed adequate level of awareness of female physiotherapists towards WHPT as well as a great motivation to practice WHPT. The study highlighted the need to organize various educational programs and workshops that focus on WHPT and PFR. Future studies are needed to determine the prevalence of PFDs among Saudi females and the role of WHPT in the management of these disorders.

List of abbreviations

- PFDs: Pelvic floor disorders
- WHPT: Women health physiotherapy
- POP: Pelvic organ prolapse
- PFR: Pelvic floor rehabilitation
- IRB: Institutional review board

Ethics approval and consent

In the cover page of the questionnaire, it was explained that the study subjects' anonymity was ensured, and a consent was obtained from each participant prior to answering the questions. The study was reviewed and approved by the institutional review board (IRB) of Imam Abdulrahman Bin Faisal University, Dammam.

Availability of data and materials

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

Reference

1. Hacker N, Gambone J, Hobel C (2016) Hacker & Moore's Essentials of Obstetrics and Gynecology. Philadelphia.

2. Li C, Gong Y, Wang B (2016) The Efficacy of Pelvic Floor Muscle Training for Pelvic Organ Prolapse: A Systematic Review and Meta-Analysis. *Int Urogynecol J.* 27(7):981-992.
3. Alghahtani A, Barhameen A, AbuAbat A (2007) Saudi Strategic Plan for Rehabilitation Services. Saudi Ministry of Health. 54-55.
4. Threlkeld A, Paschal K (2007) Entry-level Physical Therapist Education in The United States of America. *Phys Ther Rev.* 12(2):156-162.
5. Bithell C (2007) Entry-level Physiotherapy Education in The United Kingdom: Governance and Curriculum. *Phys Ther Rev.* 12(2):145-155.
6. Alghadir A, Zafar H, Iqbal Z, Anwer S (2015) Physical Therapy Education in Saudi Arabia. *J Phys Ther Sci.* 27(5):1621-1623.
7. Hagen S, Stark D, Dougall I (2015) A Survey of Prolapse Practice in UK Women's Health Physiotherapists: What Has Changed in The Last Decade? *Int Urogynecol J.* 27(4):579-585.
8. Abhyankar P, Uny I, Semple K, Wane S, Hagen S, Wilkinson J et al (2019) Women's Experiences of Receiving Care for Pelvic Organ Prolapse: A Qualitative Study. *BMC Womens Health.* 19(1).
9. Mohammed J, Alhamidah M, Alammar R, Jawkhab M, Bukhari L (2018) Awareness and Knowledge of Physical Therapy among Saudi Arabia Adult Population. *J Physiother Rehabil.* 2(2).
10. Hagen S, Stark D, Glazener C, Dickson S et al (2014) Individualised Pelvic Floor Muscle Training in Women with Pelvic Organ Prolapse (POPPY): A Multicentre Randomized Controlled Trial. *Lancet.* 383(9919):796-806.

11. Odunaiya N, Ilesanmi T, Fawole A, Oguntibeju O (2013) Attitude and Practices of Obstetricians and Gynecologists towards Involvement of Physiotherapists in Management of Obstetric and Gynecologic Conditions. *Int J Womens Health*. 5:109-114.
12. Alghadir A, Zafar H, Iqbal Z (2020) Experiences of Overseas Trained Physical Therapists Working in Saudi Arabia: An Observational Study. *Int J Environ Res*. 17(10):3406-3414.

Tables

Table 1 should appear under paragraph two of the heading 'Results'.

Table 1: Demographic Features of Respondents

Variable	Percentage [%]
Age	
– 20-25	41.3
– 26-30	28.7
– 31-35	12.5
– 36-40	7.5
– 41-45	3.8
– 46-50	3.8
– 51-55	2.5
Nationality	
– Saudi	87.6
– Non-Saudi	12.4
Academic level	
– Bachelor's degree	89.3
– Master's degree	8.0
– Doctoral degree [PhD]	2.7
Employee level	
– Technician	14.3
– Assistant	2.7
– Specialist	75.9
– Subspecialist	7.1

Employee subspecialty

- No subspecialty	88.5
- Women health physiotherapy	4.4
- Pediatric physiotherapy	0.9
- Musculoskeletal and orthopedic physiotherapy	2.7
- Neurology physiotherapy	1.8
- Sports physiotherapy	0.9
- Lymphedema management	0.9

Years of experience

- 1-5	69.2
- 6-10	12.8
- 11-15	7.7
- 16-20	3.8
- 21-25	5.1
- 26-30	1.3

Place of work

- Governmental hospital	58.0
- Private hospital	17.9
- University hospital	8.9
- Private rehabilitation center	15.2

Region

- Central region	18.8
- Eastern region	48.2
- Western region	11.6
- Southern region	16.1
- Northern region	5.4

Table 2 should appear under paragraph three of the heading ‘Results’.

Table 2: Motivation, Awareness, Education, Beliefs, and Employment Perceptions among Female Physiotherapists to Women Health Physiotherapy

Statement	Strongly agree	Partially agree	Neutral	Partially disagree	Strongly disagree	I don't know
	Number [Percentage %]					
Motivation						
I am motivated to practice WHPT	53 [46.9]	17 [15]	28 [24.8]	7 [6.2]	7 [6.2]	1 [0.9]
WHPT is an interesting practice	69 [62.2]	23 [20.7]	8 [7.2]	3 [2.7]	8 [7.2]	
Awareness						
WHPT deals only with PFD	14 [12.5]	17 [15.2]	11 [9.8]	25 [22.3]	42 [37.5]	3 [2.7]
PFD includes POP, UI, pelvic pain, and fecal incontinence	60 [53.1]	29 [25.7]	9 [8]	5 [4.4]	8 [7.1]	2 [1.8]
PT has an important role in treating		11 [9.8]	5 [4.5]	1 [0.9]	3 [2.7]	

PFD	92 [82.1]					
PT can be effective in 50-70% of patient with PFD	70 [61.9]	23 [20.4]	6 [5.3]	3 [2.7]	3 [2.7]	8 [7.1]
PFPT includes only Kegels exercises and supervised training of PFM	14 [12.4]	15 [13.3]	16 [14.2]	28 [24.8]	37 [32.7]	3 [2.7]
Education and training						
During my undergraduate study there were insufficient exposure and teaching to WHPT	36 [31.9]	33 [29.2]	20 [17.7]	10 [8.8]	6 [5.3]	8 [7.1]
During my undergraduate study, topics for WHPT were not interesting	16 [14.2]	20 [17.7]	25 [22.1]	25 [22.1]	23 [20.4]	4 [3.5]
During my training I have not seen much of referred patients who needed WHPT	53 [46.9]	28 [24.8]	14 [12.4]	6 [5.3]	8 [7.1]	4 [3.5]
Senior PT do not encourage to practice WHPT	21 [18.8]	24 [21.4]	29 [25.9]	11 [9.8]	15 [13.4]	12 [10.7]
There are not enough educational programs or workshops available [master or doctoral] for WHPT	61 [54]	20 [17.7]	11 [9.7]	10 [8.8]	5 [4.4]	6 [5.3]
There are not enough available training courses for WHPT	57 [50.9]	30 [26.8]	17 [15.2]	3 [2.7]	2 [1.8]	3 [2.7]
There are not enough available workshops for WHPT	51 [45.1]	35 [31]	18 [15.9]	4 [3.5]	3 [2.7]	2 [1.8]
Attitudes and Beliefs						
I am not comfortable to do frequent manual vaginal examination for PFMs evaluation and training	31 [27.7]	22 [19.6]	24 [21.4]	11 [9.8]	15 [13.4]	9 [8]
I feel ashamed to say I am a WHPT or PFPT	5 [4.4]	4 [3.5]	16 [14.2]	17 [15]	67 [59.3]	4 [3.5]
Religiously it is not acceptable to perform frequent vaginal examination	9 [8]	4 [3.6]	22 [19.6]	17 [15.2]	47 [42]	13 [11.6]
I think PFR and WHPT is not important as a practice	7 [6.2]	4 [3.5]	8 [7.1]	11 [9.7]	83 [73.5]	
I believe that Pelvic floor physiotherapy is not effective in treating POP and UI	3 [2.7]	3 [2.7]	8 [7.1]	18 [15]	79 [69.9]	2 [1.8]
Employment and Career						
There are not many job offers to practice WHPT	47 [42]	29 [25.9]	21 [18.8]	2 [1.8]	2 [1.8]	11 [9.8]
There are not many patients to practice WHPT	25 [22.3]	31 [27.7]	20 [17.9]	14 [12.5]	16 [14.3]	6 [5.4]
There is limited referral by	42 [37.5]	26 [23.2]	20 [17.9]	9 [8]	8 [7.1]	7 [6.3]

physician for WHPT which makes me hesitant to practice

WHPT is financially unrewarding compared with other subspecialties 29 [25.7] 22 [19.5] 29 [25.7] 5 [4.4] 5 [4.4] 23 [20.4]

*Abbreviations: WHPT: Women Health Physiotherapy; PFD: Pelvic Floor disorders; POP: Pelvic Organ Prolapse; UI: Urinary Incontinence; PT: Physiotherapy; PFPT: Pelvic Floor Physiotherapist; PFMs: Pelvic Floor Muscles; PFR: Pelvic Floor Rehabilitation.

UNDER PEER REVIEW