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Perspectives of Jordanian men about lower urinary tract assessment and physiotherapy interventions: A cross-sectional study

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Abstract

There is a significant gap in understanding the impact of physiotherapy interventions on men with urinary incontinence (UI). Conducting clinical trials in this area is costly, time-consuming, and difficult. Before embarking on such trials, it is crucial to gather insights into men's perceptions regarding UI assessment and the acceptance of physiotherapy interventions. Therefore, this study aimed to explore the perspectives of Jordanian men about lower urinary tract assessment and physiotherapy interventions. An online survey was distributed through social media platforms targeting men's groups in Jordan, yielding responses from 421 participants. The results indicated that a majority of respondents found it acceptable to undergo assessments involving history taking (74%), voiding diaries (73%), and the pad test (71%). Furthermore, a significant number expressed a willingness to engage in pelvic floor exercises (83%) and behavioral therapy (85%). However, a notable proportion of participants deemed certain assessment methods unacceptable, including ultrasound examination of the anal sphincter (70%), palpation of the bulbocavernosus muscle via the perineum (73%), and electrical stimulation (98%) for future research participation. Overall, approximately three-quarters of the Jordanian men surveyed indicated a willingness to participate in research studies focused on physiotherapy management for UI, while specific techniques such as ultrasound, palpation of the bulbocavernosus muscle via the perineum, and electrical stimulation were not deemed acceptable techniques for use in research.

Keywords: Feasibility, Management Exercise, Men's health, Perspectives, Physiotherapy, Urinary incontinence, Lower urinary tract.

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1. Introduction

Urinary incontinence (UI), the complaint of involuntary loss of urine, is frequently addressed as a women's health concern. However, it has been reported that UI also affects approximately 10% to 25% of men in the general population [1]. The condition impacts men's quality of life across psychological, physical, and social health dimensions [2].

Assessment of UI includes history taking to identify: the type of incontinence; overall well-being, including physical and psychological status; medical history; social history; occupational history; urinary tract infections history; and caffeine and alcohol intake history [3]. Physiotherapy assessment may also include palpation of the bulbocavernosus via the perineum and contractions of the abdominal muscles [3]. In addition, ultrasound can be used in the assessment of UI [3]. Contractions of the male pelvic floor muscles are assessed via the anal sphincter; pelvic floor muscle overactivity may result in anal sphincter weakness [4].

Physiotherapy management of UI in women includes pelvic floor muscle training, behavioral therapy, bladder training, and electrical stimulation [5]. Evidence from a systematic review indicates that pelvic floor muscle training and bladder training effectively address UI in women; however, findings about the effects of electrical stimulation, medical devices, and local estrogen therapy were inconsistent [6]. Established guidelines for UI physiotherapy management in women, such as those from the Royal Dutch Society for Physical Therapy (KNGF) and the National Institute for Health and Care Excellence (NICE), provide a framework for evidence-based practice [7-9]. However, there are few research studies investigating the effects of physiotherapy interventions on UI in men. A systematic review with eight studies, including a trial by Milios, et al. [10], discovered that pelvic floor muscle training is an effective treatment for urinary incontinence in men after radical prostatectomy, and it improves both physical health and quality of life for men after this procedure [10, 11].

A review by Nahon [7] on the physiotherapy management of male UI highlighted the necessity of conducting randomized controlled trials (RCTs) to evaluate different physiotherapy techniques Nahon [7]. However, RCTs are resource-intensive, requiring substantial time, funding, and effort, often taking years to complete. Feasibility studies play a critical role in determining whether such trials are practical, assessing factors such as participant recruitment, adherence to assessment protocols, and intervention acceptability [12, 13]. Feasibility studies are important to avoid wasting time and costs on procedures that are not feasible to be conducted in future trials. This study aimed to inform the feasibility of running pilot studies and randomized controlled trials to research physiotherapy management of UI in men by exploring the perspectives of men in Jordan.

2. Materials and Methods

2.1. Study Design

A cross-sectional study was conducted to achieve the study objectives using an online questionnaire. Ethical approval was obtained from the Institutional Research Committee at Al-Ahliyya Amman University (AAU/1/8/2022-2023).

2.2. Setting

The questionnaire was distributed online in Jordanian men's social media groups (via Facebook, WhatsApp and, Instagram) between June and September 2023. Selection of social media community platforms was in accordance with the groups that have the highest number of members and, where possible, groups which were specified for men only (named as men's accounts).

2.3. Participants

Men were included if they were 40 years old or above, of Jordanian nationality and residing in Jordan, but excluded if they were not living in Jordan or did not speak Arabic.

2.4. Variables

2.4.1. Survey Development and Data Collection

The questionnaire included 15 closed questions about UI, awareness/education, management of UI, and acceptability to be assessed and treated by physiotherapists for UI. Due to the lack of available standardized questionnaires, the questionnaire

was developed by two physiotherapists and agreed upon by another two physiotherapists before piloting it, using recommendations on how to write survey questions [14]. To assess the face validity, which tests the degree to which a layperson considers the test content relevant to achieve the assessment objective [15], the first twelve participants who filled out the questionnaire via social media community platforms (Facebook, WhatsApp, and Instagram) were asked to pilot the questionnaire and report any changes or rewording that needed to be made to an item/question to make it more understandable/easy to answer. The twelve participants were chosen as the first 12 responders who filled out the questionnaire and provided their emails/mobile numbers to be contacted when needed. Test-retest reliability was established by answers from the 12 participants who piloted the questionnaire and who were asked to complete it on two occasions, one week apart. All participants in this study read the online participants' information sheet at the beginning of the survey and ticked the boxes on questions related to consenting to participate in the study before answering the main survey questions on the following page of the online survey.

2.5. Study size

The sample size of the study was calculated to be 385 participants (men above 40 years old, because UI prevalence is high globally after the age of 40) [16] based on a population of 1,199,166 men in 2022 who were above 40 years old (Department of Statistics, Jordan) [17] using a confidence level of 95%, and 50% population proportion.

2.6. Statistical methods

Data for the pilot and main study were analyzed using SPSS, Version 21 (SPSS, Chicago). In the pilot study, a test-retest reliability assessment was conducted for questions that included choosing one answer only (closed-end question). Data reported for the test-retest reliability included medians and the Kappa coefficient. Descriptive statistics, including frequencies, proportions, counts, and medians/modes, were reported.

3. Results

3.1. Pilot Questionnaire and Test-Retest Reliability

Table 1 shows the question scores at the two tests, one week apart, and the test-retest reliability of the question scores for the 12 participants who piloted the questionnaire online. Table 1 also shows that the kappa coefficient=1 in most questions, indicating almost perfect agreement. No changes or rewording for the questions/items were reported necessary following the piloting phase.

Table 1.
results of the test-retest reliability of the survey questions.

Question	Test 1	Test 2	Kappa coefficient
Do you suffer from urinary incontinence?	1.50 (1, 2)	1.50 (1, 2)	1.00
Physiotherapy assessment of urinary incontinence includes a variety of techniques. If you were going to participate in a research study, do you think it would be acceptable to be assessed using the following techniques?			
To be asked about urinary incontinence history?	1.50 (1, 2)	1.50 (1, 2)	1.00
Palpation of the bulbocavernosus muscle via the perineum?	1.50 (1, 2)	1.50 (1, 2)	1.00
To fill a voiding diary?	1.50 (1, 2)	1.50 (1, 2)	1.00
To do a pad test?	1.50 (1, 2)	1.50 (1, 2)	1.00
Physiotherapy treatment programs for urinary incontinence in females include pelvic floor muscle training, behavioral therapy, bladder training, and electrical stimulation. If a research study is conducted in the future, do you think it would be acceptable to use the following physiotherapy techniques for men?			
Pelvic floor muscles training?	1.50 (1, 2)	1.50 (1, 2)	1.00
Behavioral therapy?	1.50 (1, 2)	1.50 (1, 2)	1.00
Electrical stimulation of the pelvic floor muscles?	1.50 (1, 2)	1.50 (1, 2)	1.00

IQR: interquartile range.
All values are median (IQR)

3.2. Main Survey Findings

In total, 421 participants submitted the online questionnaire, which was 109.3% of the targeted sample size. The average time to complete the questionnaire was nine minutes. The mean (SD) age of participants was 64.1 (11) years. Most participants (n=329, 78% of the sample) reported that they do not have UI. The remaining participants (n=92, 22%) reported experiencing UI.

Most of the participants answered that it would be acceptable to be assessed using history taking (74%), voiding diaries (73%), and the pad test (71%) in future research studies. Most of them (70%) indicated that they believe it would not be acceptable to be assessed using ultrasound examination of the anal sphincter (70%) or palpation of the bulbocavernosus muscle via the perineum (73%) in future research studies (Table 2).

When asked about physiotherapy management techniques, most of the participants answered that it would be acceptable to use pelvic floor exercises (83%), and behavioral therapy (85%) but they did not think it would be acceptable to use electrical stimulation (98%) in future studies (Table 2).

Table 2.
Results of the online survey questionnaire (n=421).

Questions	Results	
	Responses	Number of responses (Percentage)
Do you suffer from urinary incontinence?	Yes	92 (22%)
	No	329 (78%)
Physiotherapy assessment of urinary incontinence includes a variety of techniques. If you are going to participate in a research study, do you think it would be acceptable to be assessed using the following techniques:		
To be asked about urinary incontinence history?	Yes	311 (74%)
	No	110 (16%)
To fill a voiding diary?	Yes	306 (73%)
	No	115 (27%)
To do a pad test?	Yes	299 (71%)
	No	122 (29%)
Palpation of the bulbocavernosus muscle via the perineum?	Yes	112 (27%)
	No	309 (73%)
Ultrasound examination of the anal sphincter?	Yes	127 (30%)
	No	294 (70%)
Physiotherapy treatment programs for urinary incontinence in females include pelvic floor muscle training, behavioral therapy, bladder training, and electrical stimulation.		
If a research study is conducted in the future, do you think it would be acceptable to use the following physiotherapy techniques for men:		
Pelvic floor muscles training?	Yes	351 (83%)
	No	70 (17%)
Behavioral therapy?	Yes	359 (85%)
	No	62 (15%)
Electrical stimulation?	Yes	7 (2%)
	No	414 (98%)
Results are presented as the frequency of answers		

4. Discussion

This is the first study to explore expected acceptability for men participating in physiotherapy research studies by investigating the perspectives of men in Jordan towards the assessment and management of physiotherapy techniques for urinary incontinence. The study included 421 participants who were recruited from Jordanian men's groups via social media community platforms.

A systematic review reported that pelvic floor muscle training is an effective treatment for urinary incontinence in men after radical prostatectomy and that it improves quality of life as well as physical health [11]. The systematic review emphasized the need for well-designed trials aimed at determining the exact procedure for prescribing pelvic floor muscle exercises in men [11]. However, before conducting research trials that investigate the effects and the procedure of prescribing exercises, it is important to assess the feasibility of running trials in this field. This is necessary to inform future study designs, enabling the avoidance of methods that participants might not accept or adhere to, and the inclusion of preferred techniques, so recruitment will be facilitated.

It is noteworthy to mention that most of the participants in this study (78%) reported that they did not experience UI. This could indicate that the recruitment strategies reached a more general population rather than solely targeting individuals with UI. This broader recruitment may have influenced the perspectives on the acceptability of various interventions, as those without UI might have different views compared to those experiencing UI. In fact, including both groups was important to explore their potentially differing views and perspectives. Future studies could benefit from targeted recruitment strategies, such as recruiting through urology clinics or support groups for individuals with UI, to capture a more representative sample of the affected population.

In some cultural contexts, individuals might not want to be associated with or asked if they want to be assessed for certain conditions such as UI [18]. For this reason, the survey in this study was set up to enable anonymity (contact information question was optional to be answered); this might have helped to increase the number of responses if people wished to remain anonymous. Anonymity is also likely to have resulted in more honest responses [18].

We found that assessment techniques such as history taking, voiding diaries, and the pad test were generally acceptable (74%, 73%, and 71% respectively), with men indicating these techniques which are non-invasive [19, 20] and straightforward would be feasible to be used in future studies. Men's preferences for these techniques are likely due to their easy implementation and minimal discomfort.

On the other hand, we found that techniques such as ultrasound examination of the anal sphincter and palpation of the bulbocavernosus muscle via the perineum were deemed not acceptable by most of the participants in the survey (70% and 73%, respectively). This finding is similar to Anderson, et al. [21] study that reported poor acceptance for palpation of the bulbocavernosus muscle via the perineum [22]. These techniques could be perceived as invasive and likely to incur potential discomfort for men contributing to men's aversion to them and making them a potential barrier that researchers and clinicians should consider. Innovative, less invasive diagnostic techniques, such as wearable sensors or external imaging tools, could be explored as alternatives in future studies to improve acceptability and participation rates [18]. Patient-friendly diagnostic tools in UI assessment should be selected when designing clinical research trials.

Physiotherapy management is an important aspect of men's health, specifically in UI management [7]. In our study, the majority of the participants supported the inclusion of pelvic floor exercises and behavioral therapy (85% and 83%, respectively), both of which are considered non-invasive and have reported efficacy in managing UI [7, 11]. These findings could indicate that men are open to engaging in self-managed and therapist-guided interventions that promote autonomy and are associated with minimal discomfort. Conversely, men almost unanimously rejected electrical stimulation (98%) as a management technique for UI. This strong opinion should be considered when taking this research forward; concerns about the potential discomfort, invasiveness of the technique, and perceived fear of electrical stimulation are similar to findings of a previous study about the acceptance of anal electrical stimulation in women with incontinence [23]. This finding indicates that healthcare providers should consider patient comfort and preferences when recommending UI management strategies or when planning for a UI physiotherapy management research trial.

Overall, the results from this study assert the importance of aligning UI assessment and management techniques with peoples' preferences to enhance acceptability and adherence. Tailored approaches are crucial to ensure inclusivity and relevance in diverse populations [18]. In addition, various aspects have been highlighted that will inform future feasibility trials related to physiotherapy management of UI.

5. Limitations

This feasibility study is not without limitations. There were no participants living in countries other than Jordan or from ethnic groups other than Arab, although recruitment was not limited to a specific ethnic group. This might increase the effect of culture and traditions on the responses of participants, limiting generalizability [24]. Future studies should include participants from diverse cultural and ethnic backgrounds to ensure findings can be applied to a broader population and account for potential differences in acceptability based on cultural norms. Another limitation is that the survey was online, shared on social media community platforms where the age group of the study participants (>40 years) might not be actively participating in these platforms. Anyone without access to the internet/emails/social media would not have had the opportunity to answer the survey and would have been excluded. Additionally, many of the participants reported that they do not suffer from UI, and therefore, the results of the questionnaire might not reflect the acceptance of people with UI towards many techniques; their experiences may influence their opinions regarding what would be acceptable. While including a general population provides a broader view of acceptability, future studies should aim to stratify analyses based on the presence or absence of UI to understand differences in perspectives between affected and unaffected groups. Furthermore, the inclusion of patient and public involvement while designing the study was not considered; this would be beneficial in future studies. Involving patients and the public during the design phase could ensure that the survey addresses relevant concerns and is phrased in a way that resonates with the target population, improving both engagement and the validity of the findings [25]. Also, sociodemographic information of the participants, including but not limited to marital status, education level, and occupational status, was not collected. Collecting such data in future studies could provide valuable insights into how sociodemographic factors influence attitudes toward UI assessment and management techniques, helping to tailor interventions more effectively.

6. Conclusion

Most Jordanian men responding to this study questionnaire would be willing to enroll in health research studies related to lower urinary tract assessment and physiotherapy management, which involve non-invasive techniques. Assessment using anal sphincter ultrasound or palpation of the bulbocavernosus muscle via the perineum was not deemed acceptable. The results provide insights into men's preferences and potential barriers to the implementation of certain techniques, informing future research and clinical practice. These findings emphasize the importance of culturally sensitive approaches and patient-centered strategies in the design and implementation of future physiotherapy research and interventions.

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