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Awareness and perception of urogynecologists/urologists on the role of physiotherapy in the management of pelvic floor dysfunction: Cross-sectional study

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ABSTRACT

Objective: Urogynecology is a medical specialty where physiotherapists play a well-established and essential role. However, there is a common misconception among physicians and other healthcare professionals who often equate physiotherapy with physiotherapeutic tools or modalities. This study aimed to assess the level of awareness and perception among urogynecologists and urologists regarding the role of physiotherapy in managing pelvic floor dysfunction.

Materials and Methods: A cross-sectional, descriptive, census-based approach was used to recruit practicing urogynecologists and urologists in Nigeria. A total of 241 participants took part in the study. Data was collected using an electronic questionnaire comprising 29 semi-structured questions divided into three domains: Personal information, awareness, and perception. Data analysis was conducted using a pragmatist paradigm.

Results: Of the 241 respondents, 50.2% (n=121) were registrars, 40.7% (n=98) were senior registrars, and 9.1% (n=22) were consultants. The findings revealed that 57.7% (n=139) demonstrated "insufficient awareness," and 53.9% (n=130) had "insufficient perception" regarding the role of physiotherapy in managing pelvic floor dysfunction. Notably, among all participants, consultants showed higher levels of awareness and understanding of the physiotherapist''s role in treatment.

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Conclusion: Physiotherapy is a vital component in the multidisciplinary management of pelvic floor dysfunction, and it is important for urogynecologists and urologists to recognize its significance. The study concluded that the majority of Nigerian urogynecologists and urologists lack adequate awareness and understanding of physiotherapy's role in the management of pelvic floor dysfunction.

Keywords: Awareness; perception; urogynecologists; urologists; physiotherapy; rehabilitation

INTRODUCTION

Pelvic floor disorders are common in both men and women[1] and encompass a broad range of clinical conditions. These include urinary and anal incontinence, pelvic organ prolapse, lower urinary tract sensory and emptying disorders, defecatory dysfunction, sexual dysfunction, and various chronic pelvic pain syndromes.[2] These conditions significantly impact quality of life and have social, psychological, and functional consequences across all age groups.[3] The prevalence of urinary incontinence is estimated to be between 25% and 45% in women, while up to 80% of men may experience it following prostate surgery.[4,5] Pelvic organ prolapse affects 40% to 60% of parous women, and sexual dysfunction is reported by 30% to 49% of women in the general population.[6,7] Erectile dysfunction affects approximately 50% of men aged 50, and this figure rises to 70% in those aged 70 and above.[8] Ferreira et al.[9] noted that although pelvic floor dysfunction is more prevalent in women, men are also significantly affected. Most individuals suffering from these disorders report detrimental effects on daily activities, personal relationships, social interactions, and mental health. Pelvic floor dysfunction is closely linked with depression, anxiety, social isolation, and an overall decline in quality of life.

Several studies have emphasized the importance of interprofessional collaborative practice in urogynecology and urology, with many professional societies publishing guidelines that recommend patient care involving multiple healthcare professionals.[10,11] Furthermore, Bedretdinova et al.[12] highlighted that effective communication among healthcare providers and mutual understanding of each other's roles and responsibilities are crucial for building successful teams and achieving optimal patient outcomes.

Physiotherapists play a vital role in both urogynecology and urology. However, the term "physiotherapy" is often incorrectly equated with general conservative treatments or therapeutic modalities by healthcare providers.[13] In reality, physiotherapy refers to the specialized care provided by trained professionals aimed at optimizing movement and functional ability throughout the lifespan.[14] Specifically, pelvic floor physiotherapy addresses dysfunctions of the pelvic floor in men, women, and children.[15]

Chronic urological and urogynecological conditions are more prevalent than previously assumed, often presenting with complex comorbidities that severely affect patients' well-being. Increasingly, evidence suggests that a single-specialty approach is inadequate for managing such multifaceted issues. This outdated model has been linked to higher surgical failure rates, persistent symptoms, and suboptimal outcomes, highlighting the necessity for integrative care strategies, including physiotherapy.[15]

Previous studies underscore the importance of collaboration between urologists, urogynecologists, and physiotherapists in managing pelvic floor dysfunction.[16,17] However, little is known about the awareness and perceptions of these specialists regarding physiotherapy's role, particularly in low- and middle-income countries. In such regions, healthcare systems are often constrained by limited infrastructure, workforce shortages, and insufficient access to comprehensive medical and surgical care for pelvic floor disorders.

Given this context, there is a critical need for data on the awareness and perceptions of urogynecologists and urologists about physiotherapy's role in pelvic floor dysfunction—especially in Sub-Saharan Africa. Therefore, this study aimed to assess the level of awareness and perception among urogynecologists and urologists in Nigeria regarding physiotherapy interventions in the management of pelvic floor dysfunction.

MATERIALS AND METHODS

Study Design and Settings

A cross-sectional online survey was conducted to assess the awareness and perception of urogynecologists and urologists regarding the role of physiotherapy interventions in the treatment of patients with pelvic floor dysfunction. The study targeted Nigerian urogynecologists and urologists working in various governmental and non-governmental hospitals and clinics across the country. Ethical approval was obtained from the Research Ethics Committee of the College of Health Sciences, Bayero University, Kano (reference number: NHREC/06/13/19/79, date: 29.08.2024).

Participants were eligible for inclusion if they met the following criteria: (1) male or female medical doctors, (2) currently specializing or already specialized in urogynecology or urology, (3) residing and practicing in Nigeria, and (4) holding a valid practicing license issued by the Medical and Dental Council of Nigeria. Urogynecologists or urologists who were not practicing

or residing in Nigeria, or those without a current practicing license, were excluded from the study.

Sampling Size and Sampling Technique

A census-based sampling method was employed in this study. This approach involves collecting data from every member of the target population, allowing for comprehensive and in-depth information across multiple dimensions of the issue under investigation.[18] A total of 241 subjects gave their consent and participated in the study.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of the College of Health Sciences, Bayero University, Kano (reference number: NHREC/06/13/19/79, date: 29.08.2024). Participants were informed that by clicking the link and accessing the questionnaire, they were providing consent to participate, as the informed consent form was included with the questionnaire. All participants were assured of their anonymity and informed of their right to withdraw from the study at any time. The survey was conducted between November 2024 and March 2025.

Formation and Validation of the Questionnaire

The survey was conducted using a structured electronic questionnaire developed through Google forms. An expert panel comprising specialists in pelvic floor physiotherapy designed the questionnaire, which was organized into three domains: Personal information, awareness, and perception. To ensure the questionnaire was contextually appropriate, content validity was assessed by pretesting it with six urogynecologists/urologists. Their feedback was reviewed in a peer debriefing session, which resulted in minor recommendations. Based on these, the researcher revised and finalized the questionnaire to maintain the original intent while aligning it with the study's objectives. Divergent validity was evaluated by asking ten urogynecologists/urologists to complete both the developed questionnaire and another validated instrument by Kenny and Adamson[19] which measures physicians' knowledge and understanding of the physiotherapist's role in managing pelvic floor dysfunction. Pearson's Product Moment Correlation was used to analyze the results, revealing an insignificant correlation ($r=0.011$, $n=10$, $p=0.893$). This confirmed that the two questionnaires assess distinct constructs, ensuring that responses to one did not influence the other. Test-retest reliability was determined by having the same group of ten urogynecologists/urologists complete the questionnaire twice, with a two-week interval between administrations. The intraclass correlation coefficient was 0.786, indicating acceptable reliability. The two-week gap was deliberately chosen to minimize recall bias and ensure response independence. The final version of the questionnaire was distributed via email and WhatsApp to the target group. To enhance participation, follow-up reminders were sent every other day throughout the data collection period.

Statistical Analysis

Data analysis for this study was conducted using the Statistical Package for the Social Sciences (SPSS) version 24.0. A pragmatist paradigm guided the analysis, incorporating both qualitative (constructivist) and quantitative (positivist) approaches. This mixed-methods strategy was employed to provide a more comprehensive and in-depth understanding of the research topic. The significance level was set at 5%, with a 95% confidence interval (CI).[20]

Qualitative Analysis

Participants' responses were analyzed qualitatively using content analysis.[21] the researchers reviewed the responses multiple times to interpret their meanings within the local context.

In the second phase—systematic coding—responses were grouped into coherent categories: Positive, negative, and undecided, which were then labeled as codes (clusters of words with similar meanings). The initial coding of the result was conducted by three researchers and their results were compared and discussed with the wider research team until a consensus was reached. In the third phase, the codes were further synthesized and organized into subcategories, specifically focusing on awareness and perception. In the final stage, through collaborative discussions, these subcategories were merged into broader categories and then consolidated into major themes. These themes represented overarching patterns in the data, such as sufficient awareness, insufficient awareness, lack of awareness, sufficient perception, insufficient perception, and lack of perception.

Quantitative Analysis

Quantitative data analysis was carried out to examine differences in awareness and perception of the role of physiotherapy in managing pelvic floor dysfunction among urogynecologists and urologists with varying levels of professional experience (novice, experienced, expert). Normality of the data was confirmed using the Shapiro-Wilk test, and homogeneity of variances was verified using Levene's test.

A One-Way Analysis of Variance (ANOVA) was employed to assess differences, with awareness and current perception serving as the dependent variables and level of professional experience as the independent variable. Separate ANOVAs were conducted

for each dependent variable. When significant differences were detected, Bonferroni post-hoc tests were performed to identify specific group differences.

RESULTS

Socio-demographic Characteristics

Participants were categorized into three predefined age groups: 114 (47.3%) young adults, 124 (51.5%) middle-aged adults, and 3 (1.2%) older adults. A total of 241 individuals took part in the study, comprising urogynecologists and urologists. The majority of participants were employed in government hospitals, while the remaining worked in private healthcare facilities.

Regarding professional rank, 50.2% were registrars, 40.7% were senior registrars, and 9.1% were consultants (Table 1).

Findings on the Urogynecologists/Urologists' Awareness

Findings on urogynecologists and urologists' awareness, along with the emerging themes, are summarized in Table 2. Three major themes were identified: Sufficient awareness, insufficient awareness, and lack of awareness. The theme of insufficient awareness contained the highest number of codes. After coding, 26.5% of participants demonstrated sufficient awareness, 57.7% exhibited insufficient awareness, and 15.8% showed a lack of awareness. Participants in the sufficient awareness group had a clear understanding of physiotherapy's role in managing pelvic floor dysfunction. Those classified under insufficient awareness had some knowledge but lacked comprehensive understanding. Participants in the lack of awareness group were unaware of physiotherapy's role in this context.

Table 1. Demographic characteristics of the participants (n=241)

Variables	Number of doctors
Q1-age:	
Young adults (19-35 years)	114
Middle-aged adults (36-55 years)	124
Older adults (above 55 years)	3
Q2-gender:	
Males	218
Females	23
Q3-work setting:	
Government hospital	184
Non-government hospital	57
Q5-rank:	
Registrar	121
Senior registrar	98
Consultant	22
Q6-specialty:	
Urogynaecology	153
Urology	88

Findings on the Urogynecologists/Urologists' Perception

Findings on the urogynecologists' and urologists' perceptions, along with the emerging themes, are presented in Table 3. Three major themes emerged: Sufficient perception, insufficient perception, and lack of perception, with insufficient perception containing the highest number of codes. After coding, 28.6% of participants demonstrated sufficient perception, 53.9% exhibited insufficient perception, and 17.4% showed a lack of perception. Participants in the sufficient perception group held a strong understanding of physiotherapy's role in managing pelvic floor dysfunction. Those in the insufficient perception group had some awareness but lacked a full understanding. Participants classified as lacking perception had a poor understanding of physiotherapy's role in this area.

Findings on the Difference in Awareness and Perception Based on Professional Experience

Results from the One-Way ANOVA assessing differences in awareness and perception are presented in Tables 4 and 5, respectively. The analysis revealed significant differences in both awareness and perception among participants. Additionally, there was a significant linear trend showing that both awareness (p=0.004) and perception (p=0.013) increased with greater professional experience. Post-hoc comparisons indicated that significant differences were observed only between consultants and registrars. Consultants demonstrated higher levels of awareness [mean difference =4.68 (95% CI: 3.78 to 8.49), η^2=0.641, p=0.001] and perception [mean difference =3.85 (95% CI: 3.02 to 6.07), η^2=0.578, p=0.001]. The effect sizes (η^2) suggest that professional experience accounted for approximately 64.1% of the variance in awareness and 57.8% of the variance in perception.

DISCUSSION

Although urogynecology and urology have made significant advances in treating pelvic floor dysfunction, emerging

Table 2. Themes and number of codes for doctors' awareness

Themes	Number of codes	Number of doctors
Sufficient awareness	**1178**	**64**
Insufficient awareness	2567	139
Lack of awareness	691	38

Table 3. Themes and number of codes for doctors' perception

Themes	Number of codes	Number of doctors
Sufficient perception	1123	69
Insufficient perception	2123	130
Lack of perception	676	42

Table 4. One-Way ANOVA for the difference in awareness					
Professional experience	**N**	**Mean (SD)**	**F(df)**	***P*-value**	***P*-value trend**
Registrar	121	4.41 (0.39)	8.67 (2.238)	0.001	0.004
Senior registrar	98	6.23 (0.49)			
Consultant	22	9.09 (0.37)			
N: number of doctors; SD: standard deviation; F: ANOVA; df: degree of freedom					

Table 5. One-Way ANOVA for the difference in perception					
Professional experience	**N**	**Mean (SD)**	**F(df)**	***P*-value**	***P*-value trend**
Registrar	121	3.99 (0.21)	10.32 (2.238)	0.001	0.013
Senior registrar	98	5.91 (0.72)			
Consultant	22	7.84 (0.63)			
N: number of doctors; SD: standard deviation					

evidence suggests that a single-specialty approach may no longer be optimal for managing patients with complex pelvic floor conditions. This approach has been linked to higher rates of surgical failure, persistent symptoms, and suboptimal outcomes, highlighting the need to incorporate complementary treatments such as physiotherapy interventions.[15] Pelvic floor physiotherapy is a specialized branch of physiotherapy focused on alleviating symptoms related to pelvic floor dysfunction by improving muscle function. However, it remains unclear how well urogynecologists and urologists understand and perceive the role of physiotherapy in managing these conditions.

This study aimed to evaluate the awareness and perception of urogynecologists and urologists regarding physiotherapy's role in pelvic floor dysfunction management. The findings revealed that most participants demonstrated insufficient awareness and perception of physiotherapy's contributions. Limited knowledge among referring specialists could be as a result of the level of their education, their working place, and availability of collaboration with other professional which could hinder appropriate patient referrals, regardless of the effectiveness of physiotherapy. A brief review by Lough[22] emphasized that better understanding among referring specialists—including urogynecologists, urologists, or colorectal surgeons—of the specific treatments and skills physiotherapists provide can enhance referral rates and patient adherence to therapy.

The low levels of awareness and perception observed in this study align with prior research[23] that identified a significant gap between the potential and actual referral rates from pelvic floor specialists to physiotherapy for urinary incontinence. Those authors recommended raising awareness among key stakeholders about physiotherapy's role and advocated for developing tailored clinical care pathways to improve physiotherapy services and overall healthcare quality. In contrast, a study by Ansari et al.[24] found that 80% of doctors (including urogynecologists, urologists, and nephrologists) were aware of physiotherapy's role in managing stress incontinence, with urogynecologists showing higher awareness and perception compared to other specialties.

While this study also found that some urogynecologists and urologists possessed partial but insufficient awareness of physiotherapy's role in pelvic floor rehabilitation, a subset lacked awareness entirely. This may be related to the fact that the majority of participants were registrars, many of whom had not yet completed fellowship training. These results are consistent with findings by Abichandani and Radia[25], who reported inadequate awareness among resident doctors about physiotherapists' roles in antenatal and post-hysterectomy care—including relaxation techniques, breathing exercises, positioning, infant handling, and pelvic floor muscle training for incontinence—while noting limited perception of physiotherapy's broader contributions to women's special care.

The present study also demonstrated significant differences in awareness and perception between consultants and registrars, with consultants showing greater understanding of physiotherapy's role in pelvic floor rehabilitation. Furthermore, awareness and perception improved in a linear fashion with increasing professional experience, indicating that clinical exposure enhances understanding. This finding is consistent with earlier research[26], which showed that senior doctors tend to have deeper insight, utilize more reflective clinical decision-making, and are more likely to refer patients for pelvic floor physiotherapy compared to less experienced residents.

CONCLUSION

This study revealed that urogynecologists and urologists generally have limited awareness and perception of physiotherapy's role in managing pelvic floor dysfunction. Fostering mutual respect and understanding among healthcare professionals is crucial for developing an effective multidisciplinary team. Such collaboration not only enhances awareness of each professional's contributions but is also essential for effectively addressing the complex range of pelvic floor symptoms through combined expertise.

ETHICS

Ethics Committee Approval: Ethical approval was obtained from the Research Ethics Committee of Bayero University, the College of Health Sciences, Kano (reference number: NHREC/06/13/19/79, date: 29.08.2024).

Informed Consent: Informed consent was obtained.

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FOOTNOTES

Contributions

Concept: I.A.A., A.M.Y., J.M.N., M.S.D., Design: I.A.A., H.N., Data Collection or Processing: A.T.O., M.S.D., A.M.Y., J.M.N., Analysis or Interpretation: H.N., A.T.O., Literature Search: A.M.Y., I.A.A., M.S.D., Writing: A.M.Y., J.M.N., H.N., A.T.O.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

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