

KNOWLEDGE, ATTITUDE AND AWARENESS TOWARDS PRENATAL AND POSTPARTUM PHYSIOTHERAPY AMONG OBSTETRICIANS AND GYNAECOLOGISTS IN PESHAWAR: A CROSS-SECTIONAL STUDY

Original Research

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ABSTRACT

Background: Physiotherapy is an essential component of comprehensive obstetric and gynecological care, contributing to the prevention and management of pregnancy-related, intrapartum, and postpartum complications. Evidence supports its role in improving musculoskeletal function, pelvic floor strength, pain control, and overall maternal well-being. Despite these benefits, the effective utilization of physiotherapy services largely depends on obstetricians' and gynecologists' awareness, knowledge, and referral practices. Limited integration within routine maternity care may compromise optimal maternal outcomes.

Objective: To assess the knowledge, attitudes, and awareness of obstetricians and gynecologists in Peshawar regarding prenatal and postpartum physiotherapy.

Methods: An observational cross-sectional study was conducted using non-probability convenience sampling. A total of 178 obstetricians and gynecologists from public and private healthcare institutions in Peshawar were approached. Data were collected using a 28-item self-administered English-language questionnaire adapted from a validated instrument. The tool assessed knowledge, attitudes, awareness, and referral practices related to obstetric and gynecological physiotherapy. Data analysis was performed using SPSS version 25. Descriptive statistics were used for categorical variables, and associations were examined using the Chi-square test, with a p-value <0.05 considered statistically significant.

Results: Of the participants, 53% were affiliated with government hospitals and 47% with private institutions. All respondents were female, with 44.3% holding MBBS, 48.7% FCPS, and 7.0% MCPS qualifications. The mean age was 31.96 ± 9.59 years, and mean clinical experience was 7.92 ± 9.50 years. Awareness of physiotherapy was reported for antenatal care (61.7%), labor and parturition (67.8%), and postnatal care (89.6%). Knowledge regarding gynecological conditions varied, with higher awareness for uterine prolapse (76.5%) and lower awareness for pelvic inflammatory disease (27%). Regular and occasional referrals during pregnancy were reported by 10.4% and 57.4% of participants, respectively, while postnatal referrals were more frequent (35.7% regular, 36.5% occasional). Workplace setting showed a significant association with physiotherapy awareness ($p < 0.05$), whereas qualification did not influence referral practices ($p > 0.05$).

Conclusion: Obstetricians and gynecologists demonstrated better awareness of postnatal physiotherapy compared to antenatal and intrapartum care, with notable gaps in gynecological rehabilitation knowledge. Private sector practitioners showed stronger awareness and referral behaviors than those in public hospitals. Strengthening interprofessional collaboration and integrating specialized physiotherapy services within obstetric and gynecological departments may enhance maternal healthcare outcomes.

Keywords: Awareness, Gynecology, Knowledge, Obstetrics, Physical Therapy Modalities, Postpartum Period, Prenatal Care.



Knowledge and Attitudes of Obstetricians and Gynecologists Regarding Prenatal and Postpartum Physiotherapy



BACKGROUND

- Role of Physiotherapy in Maternal Health
- Limited Knowledge & Referrals
- Need for Improved Integration



METHODS



RESULTS



CONCLUSION



Enhanced
Collaboration



Specialized
Physio Services



Improved
Patient Care

INTRODUCTION

Pregnancy and the postpartum period represent a phase of profound physiological and psychological transition, during which adaptive changes extend beyond childbirth and commonly persist for four to six weeks or longer (1). These changes, particularly within the abdominal, pelvic, and thoracic regions, are essential for supporting fetal growth and delivery; however, they may also predispose women to a range of musculoskeletal, metabolic, and psychosocial complications if not appropriately addressed. As maternal health increasingly shifts toward a holistic and preventive care model, the need to support functional recovery and long-term well-being during this critical period has become a growing clinical priority. Physiotherapy plays a well-established role across the lifespan in promoting, restoring, and maintaining physical function, with obstetric and gynaecological physiotherapy uniquely positioned to address the specific biomechanical and functional demands of pregnancy, childbirth, and the postpartum period (2,3). Commonly reported conditions during this time include diastasis recti abdominis, low back and pelvic girdle pain, urinary incontinence, postpartum pain and edema, weight retention, mood disturbances, and overall reductions in physical capacity and quality of life (4–6). These conditions not only affect maternal health but also influence caregiving ability, return to daily activities, and long-term participation in physical and social roles. A growing body of evidence supports the effectiveness of physiotherapy-led interventions in mitigating these complications. Structured exercise programs, core stabilization training, and targeted rehabilitation have been shown to reduce the severity of diastasis recti abdominis, improve functional outcomes, and enhance quality of life among postpartum women (5). Similarly, non-pharmacological approaches such as hydrotherapy, therapeutic exercise, and movement-based pain management strategies have demonstrated benefits during labor and in the postpartum recovery phase, offering safe and cost-effective alternatives to pharmacological interventions (7). Despite these documented benefits, access to and utilization of physiotherapy services during maternity care remain inconsistent.

Globally, and particularly in low- and middle-income countries, awareness regarding the role of physiotherapy in prenatal and postpartum care is limited. Many women receive little guidance on safe resumption of physical activity after childbirth, and only a small proportion seek professional advice regarding postpartum exercise and rehabilitation (8). In Pakistan, the integration of physiotherapy into maternal healthcare largely depends on physician referral pathways, placing obstetricians and gynaecologists in a pivotal position as gatekeepers to these services (9). Constraints such as limited resources, lack of structured referral systems, and insufficient interprofessional collaboration further contribute to the underutilization of physiotherapy within routine maternity care (10). Although evidence supporting physiotherapy in improving maternal outcomes continues to expand, little is known about the level of knowledge, attitudes, and awareness of obstetricians and gynaecologists regarding prenatal and postpartum physiotherapy, particularly in regional healthcare settings. This gap is clinically significant, as physicians' perceptions and understanding directly influence referral practices and service integration. Therefore, the present study seeks to address this gap by evaluating the knowledge, attitudes, and awareness of obstetricians and gynaecologists in Peshawar regarding physiotherapy during pregnancy and the postpartum period, with the objective of identifying existing deficiencies and informing strategies for the effective integration of physiotherapy into comprehensive maternal healthcare services.

METHODS

Following approval from the Northwest College of Physical Therapy Departmental Research Board, this cross-sectional survey was conducted over a six-month period. The study was carried out in major tertiary care hospitals of Peshawar, including Northwest General Hospital, Hayatabad Medical Complex, Rehman Medical Institute, Khyber Teaching Hospital, Lady Reading Hospital, and Kuwait Teaching Hospital. These institutions were selected to ensure representation of both public and private healthcare settings where obstetric and gynecological services are routinely provided. The study population comprised obstetricians and gynaecologists working in gynecological wards and labor rooms of the selected hospitals. From a total pool of 329 eligible clinicians, the sample size was calculated using the OpenEPI sample size calculator, yielding a required sample of 178 participants. Non-probability convenience sampling was employed to recruit participants. Both male and female clinicians with a minimum of two years of active patient care experience were included to ensure adequate clinical exposure to maternity care. House officers, non-practicing professionals, and those who declined participation were excluded from the study (6). Data were collected using a self-administered, English-language questionnaire consisting of 28 items designed to assess knowledge, attitudes, and awareness regarding obstetric and gynaecological physiotherapy. The questionnaire was adapted from a previously validated instrument and modified to align with the local clinical context. Prior to data collection ethical approval for the study was obtained from the relevant Institutional Review Board (IRB) and all participants were informed about the objectives, significance, and voluntary nature of the study, and written informed consent was obtained.

Confidentiality and anonymity were maintained throughout the research process. The internal consistency of the questionnaire was assessed, and it demonstrated acceptable reliability with a Cronbach's alpha value of 0.71. Collected data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Categorical variables were summarized using frequencies and percentages, while descriptive statistics were applied where appropriate. The Chi-square test was used to assess associations between relevant variables, and a p-value of less than 0.05 was considered statistically significant, indicating meaningful statistical associations.

RESULTS

A total of 178 obstetricians and gynaecologists were recruited for analysis; however, complete demographic data were available for 115 respondents, all of whom were female. Of these, 61 (53.0%) were employed in government hospitals and 54 (47.0%) in private healthcare institutions. In terms of professional designation, the majority were trainee medical officers (57.4%), followed by medical officers (13.0%) and senior registrars (13.0%), while assistant professors (6.1%), consultants (6.1%), supervisors (1.7%), registrars (0.9%), and professors (0.9%) constituted smaller proportions. Regarding academic qualifications, 44.3% held an MBBS degree, 48.7% were FCPS-qualified, and 7.0% possessed MCPS certification. The mean age of participants was 31.96 ± 9.59 years, with an average clinical experience of 7.92 ± 9.50 years, reflecting a predominantly early- to mid-career cohort. Attitudinal assessment demonstrated an overall favorable perception of physiotherapy services. A substantial proportion of respondents disagreed with the notion that physiotherapy could cause harm, with 59.1% disagreeing and 26.1% strongly disagreeing. Similarly, 71.3% disagreed and 8.7% strongly disagreed that physiotherapists were incompetent to manage obstetric and gynaecologic patients. While physiotherapy was perceived as time-demanding by nearly half of the participants (49.6% agreed and 7.0% strongly agreed), this perception did not translate into negative attitudes toward its clinical value. Notably, support for interprofessional integration was evident, as 34.8% strongly agreed and 24.3% agreed that physiotherapists should be allowed to attend labor wards, and 27.0% strongly agreed with their involvement in selected gynecological surgeries. However, a minority expressed reservations regarding interprofessional interactions, with 13.9% strongly disagreeing and 7.0% disagreeing with physiotherapist presence in labor wards. Knowledge and awareness regarding the role of physiotherapy varied across clinical domains. Awareness of physiotherapy involvement was highest in postnatal care (89.6%), followed by labor and parturition (67.8%), and antenatal care (61.7%). In gynecological conditions, awareness was highest for uterine prolapse (76.5%), moderate for hysterectomy (48.9%) and cervical incompetence (40.0%), and lowest for pelvic inflammatory disease (27.0%). Referral practices reflected this pattern, with 10.4% of respondents reporting regular referrals during pregnancy and 57.4% referring occasionally, whereas referrals during the postnatal period were more frequent, with 35.7% referring regularly and 36.5% occasionally.

Factors influencing utilization of physiotherapy services highlighted structural and experiential elements. Only 40.9% of participants perceived physiotherapy services as affordable, while 55.7% reported no prior experience of physiotherapy worsening patient outcomes. Interprofessional exposure was limited, as only 26.1% had worked directly with physiotherapists in managing gynecological patients or participated in physiotherapist-led ward rounds, despite 79.1% reporting the presence of physiotherapy training programs or departments within their institutions. With respect to perceived clinical role, 94.8% considered physiotherapists an integral part of the rehabilitation team alongside obstetricians and gynaecologists. A majority acknowledged the therapeutic benefits of physiotherapy, with 97.4% agreeing that physiotherapy strengthens pelvic floor muscles and 93.9% recognizing its role in managing antenatal urinary incontinence. Overall, 88.7% reported referring patients for physiotherapy, and 63.5% believed that physiotherapy was necessary for all pregnancies. Awareness of structured exercise sessions was higher for postnatal care (66.1%) than prenatal care (51.3%). Inferential analysis demonstrated no statistically significant association between professional qualification and most attitudinal statements ($p > 0.05$), indicating consistent perceptions across MBBS, FCPS, and MCPS groups. The only exception was the attitude toward physiotherapist participation in labor wards, which differed significantly by qualification ($p = 0.011$). Workplace setting exerted a notable influence on perceptions, with private hospital practitioners showing significantly greater support for physiotherapy's contribution to obstetric and gynecological care, safety, and interprofessional collaboration (p values ranging from <0.001 to 0.029), whereas perceptions regarding the time-demanding nature of physiotherapy did not differ significantly between public and private institutions ($p = 0.567$).

Table 1: Demographic and Professional Characteristics of Obstetricians and Gynecologists

Characteristics		Frequency	%age
Hospitals	Govt.	61	53.0
	Private	54	47.0
Gender	Female	115	100
	Male	0	0
Designation	TMO	66	57.4
	MO	15	13.0
	AP	7	6.1
	SR	15	13.0
	Supervisor	2	1.7
	Consultant	7	6.1
	Registrar	1	0.9
	Professor	1	0.9
Qualification	MBBS	51	44.3
	FCPS	56	48.7
	MCPS	8	7.0
Age	Mean + SD		
		31.96 + 9.59	
Experience		7.92 + 9.5	

Table 2: Participants Attitude Towards Physiotherapy Services

Characteristics	SA (%)	Count	A (%)	Count	SW (%)	Count	D (%)	Count	SD (%)	Count
Physiotherapy may not contribute significantly to completing the well-being of obstetric patients	3(2.6)		19(16.5)		35(30.4)		37(32.2)		21(18.3)	
Physiotherapy may not contribute significantly to complete the well-being of gynaecologic patients	5(4.3)		18(15.7)		25(21.7)		46(40.0)		21(18.3)	
Physiotherapy may not contribute significantly to complete well-being with drugs and instructions	1(0.9)		23(20.0)		33(28.7)		57(49.6)		1(0.9)	
Physiotherapy is time-demanding	8(7.0)		57(49.6)		44(38.3)		5(4.3)		1(0.9)	
Physiotherapists should be allowed to attend the labor ward	40(34.8)		28(24.3)		23(20.0)		8(7.0)		16(13.9)	
Physiotherapy should be allowed to attend some surgical operations for gynaecologic patients	31(27.0)		32(27.8)		29(25.2)		22(19.1)		1(0.9)	

Characteristics	SA (%)	Count	A (%)	Count	SW (%)	Count	D (%)	Count	SD (%)	Count
Physiotherapists are not competent to manage my patients	1(0.9)		6(5.2)		16(13.9)		82(71.3)		10(8.7)	
Physiotherapy will cause harm to my patients	5(4.3)		1(0.9)		11(9.6)		68(59.1)		30(26.1)	
Physiotherapists have been adequate in their interprofessional relationships	0(0)		41(35.7)		58(50.4)		12(10.4)		4(3.5)	

Table 3: Factors Affecting Utilization of Physiotherapy by Participants

CHARACTERISTICS		Frequency	%age
Physiotherapy service is too expensive	YES	19	16.5
	NO	47	40.9
	NOT SURE	49	42.6
Physiotherapy has worsened the condition of my patient in the previous history	YES	0	0
	NO	64	55.7
	NOT SURE	51	44.3
Does the physiotherapist go on a ward round with doctors	YES	30	26.1
	NO	74	64.3
	NOT SURE	11	9.6
Worked with a physiotherapist in the management of gynaecology patient	YES	30	26.1
	NO	59	51.3
	NOT SURE	26	22.6
Is there any physiotherapy training/clinical department in your hospital	YES	91	79.1
	NO	17	14.8
	NOT SURE	7	6.1

Table 4: Role of Physiotherapy in Various Obstetric Conditions and Its Referrals

CHARACTERISTICS		Frequency	%age
Do you refer your patients for physical therapy?	YES	102	88.7
	NO	12	10.4
Do you consider a physiotherapist as a part of the gynaecologists/obstetricians	YES	109	94.8
	NO	6	5.2
Does every woman need physiotherapy during the antenatal period?	YES	73	63.5
	NO	42	36.5

CHARACTERISTICS		Frequency	%age
physiotherapy exercises help strengthen pelvic floor muscles.	YES	112	97.4
	NO	3	2.6
Physiotherapy helps cope with urinary incontinence during the antenatal period	YES	108	93.9
	NO	7	6.1
Are you aware of prenatal physiotherapy exercise sessions?	YES	59	51.3
	NO	56	48.7
Are you aware of postnatal physiotherapy exercise sessions	YES	76	66.1
	NO	39	33.9

Table 5: Association of Qualification with Referral

Characteristics	Qualification	SA	A	SW	D	SD	P-value
Physiotherapy may not contribute significantly to completing the well-being of obstetric patients	MBBS (n=51)	1	5	14	20	11	0.086
	FCPS (n=56)	2	14	15	16	9	
	MCPS (n=8)	0	19	35	37	21	
Physiotherapy may not contribute significantly to complete the well-being of gynaecologic patients	MBBS	2	2	12	24	11	0.055
	FCPS	3	14	9	21	9	
	MCPS	0	2	4	1	1	
Physiotherapy may not contribute significantly to complete well-being with drugs and instructions	MBBS	1	5	18	26	1	0.139
	FCPS	0	17	11	28	0	
	MCPS	0	1	4	3	0	
Physiotherapy is time-demanding	MBBS	4	24	22	0	1	0.533
	FCPS	4	29	19	4	0	
	MCPS	0	4	3	1	0	
Physiotherapists should be allowed to attend the labor ward	MBBS	17	18	9	2	5	0.011
	FCPS	23	8	9	6	10	
	MCPS	0	2	5	0	1	
Physiotherapy should be allowed to attend some surgical operations for gynaecologic patients	MBBS	11	20	9	10	1	0.46
	FCPS	20	10	15	11	0	
	MCPS	0	2	5	1	0	
Physiotherapists are not competent to manage my patients	MBBS	1	4	7	32	7	0.347
	FCPS	0	1	7	45	3	
	MCPS	0	1	2	5	0	

Characteristics	Qualification	SA	A	SW	D	SD	P-value
Physiotherapy will cause harm to my patients	MBBS	2	1	5	29	14	0.817
	FCPS	3	0	4	35	14	
	MCPS	0	0	2	4	2	
Physiotherapists have been adequate in their interprofessional relationships	MBBS	0	16	26	5	4	0.255
	FCPS	0	23	28	5	0	
	MCPS	0	2	4	2	0	

Table 6: Association of workplace with awareness of physiotherapy

Characteristics	Hospitals	SA	A	SW	D	SD	P-value
Physiotherapy may not contribute significantly to completing the well-being of obstetric patients	Govt (61)	1	17	15	18	10	0.013
	Private (54)	2	2	20	19	11	
Physiotherapy may not contribute significantly to complete the well-being of gynaecologic patients	Govt	4	15	10	21	11	0.029
	Private	1	3	15	25	10	
Physiotherapy may not contribute significantly to complete well-being with drugs and instructions	Govt	0	18	7	36	0	0.000
	Private	1	5	26	21	1	
Physiotherapy is time-demanding	Govt	6	30	22	3	0	0.567
	Private	2	27	22	2	1	
Physiotherapists should be allowed to attend the labor ward	Govt	31	17	4	5	4	0.000
	Private	9	11	19	3	12	
Physiotherapy should be allowed to attend some surgical operations for gynaecologic patients	Govt	22	21	8	10	0	0.004
	Private	9	11	21	12	1	
Physiotherapists are not competent to manage my patients	Govt	0	2	5	48	6	0.178
	Private	1	6	16	82	10	
Physiotherapy will cause harm to my patients	Govt	4	0	5	44	8	0.005
	Private	1	1	6	24	22	
Physiotherapists have been adequate in their interprofessional relationships	Govt	0	16	36	5	4	0.026
	Private	0	25	22	7	0	

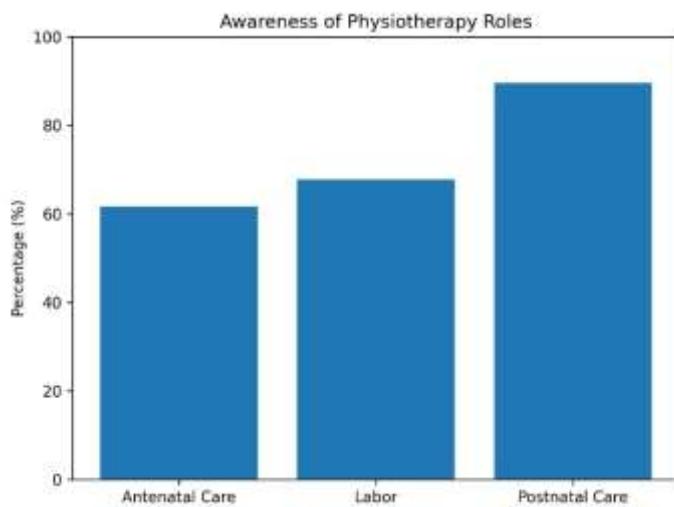


Figure 2 Awareness of Physiotherapy Roles

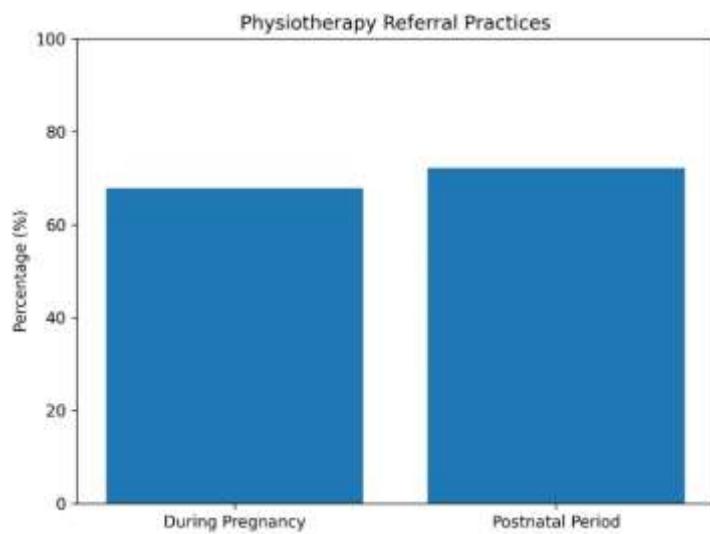


Figure 2 Physiotherapy Referral Practices

DISCUSSION

The present findings underscored the central role of obstetricians' and gynaecologists' knowledge and awareness in shaping the utilization of prenatal and postpartum physiotherapy within maternal healthcare. Overall, the results demonstrated a broadly positive attitude toward physiotherapy, with most participants recognizing its safety, clinical relevance, and contribution to maternal recovery. However, this favorable perception was not consistently accompanied by comprehensive knowledge or routine referral practices, highlighting a persistent gap between awareness and clinical integration. This pattern aligns with existing evidence from comparable healthcare settings, where clinicians acknowledged the value of physiotherapy but demonstrated limited understanding of its full scope within obstetric and gynaecological care, ultimately restricting referrals and multidisciplinary collaboration (11-13). In the current study, awareness of physiotherapy was highest in the postnatal period, followed by labor and antenatal care, while knowledge regarding its application in specific gynaecological conditions remained variable. Similar trends have been reported in regional and international studies, where clinicians were more familiar with postpartum rehabilitation than with preventive or condition-specific physiotherapy during pregnancy and gynecological management (14-16). The relatively lower awareness of physiotherapy's role in conditions such as pelvic inflammatory disease and cervical incompetence suggests that physiotherapy continues to be perceived primarily as a supportive or rehabilitative modality rather than an integral component of comprehensive maternal care (17,18). An important observation was the influence of workplace setting on attitudes and perceived integration. Participants from private healthcare institutions demonstrated greater support for physiotherapist involvement in labor wards, surgical settings, and interprofessional collaboration compared to those in public hospitals. This finding mirrors earlier reports indicating that private institutions often have better-established referral pathways, greater access to specialized services, and more flexible multidisciplinary models than public sector facilities (19,20). Conversely, public hospitals may face structural barriers, including workforce shortages, limited resources, and lack of formalized referral systems, which constrain the routine involvement of physiotherapists despite generally positive clinician attitudes.

The study also revealed that professional qualification had minimal impact on perceptions of physiotherapy, with attitudes remaining largely consistent across MBBS, FCPS, and MCPS groups. This suggests that gaps in knowledge are systemic rather than qualification-specific, likely reflecting limited exposure to obstetric and gynaecological physiotherapy during undergraduate and postgraduate medical training. The singular association observed between qualification and attitudes toward physiotherapist participation in labor wards may reflect differing levels of clinical responsibility and perceived medico-legal concerns rather than fundamental disagreement regarding physiotherapy's role. The strengths of this study included its multi-center design across major tertiary care hospitals and its focus on both public and private institutions, allowing for meaningful comparison of practice settings. The use of a structured and reliable questionnaire further enhanced the consistency of data collection. Nevertheless, several limitations warrant consideration. The use of

non-probability convenience sampling and the predominance of female respondents may limit the generalizability of findings. Additionally, reliance on self-reported responses may have introduced social desirability bias, potentially overestimating positive attitudes toward physiotherapy. The cross-sectional design also precluded causal inferences regarding factors influencing referral behavior. Future research should adopt longitudinal or mixed-method approaches to explore how targeted educational interventions, structured referral pathways, and interprofessional training influence physiotherapy utilization over time. Incorporating qualitative insights from clinicians and physiotherapists may further clarify contextual barriers and facilitators to integration. Strengthening formal collaboration between obstetricians, gynaecologists, and physiotherapists—particularly in public sector settings—remains essential to translating positive attitudes into consistent clinical practice. Addressing identified knowledge gaps and system-level constraints may ultimately enhance maternal health outcomes through the effective and timely incorporation of physiotherapy into routine obstetric and gynaecological care (21).

CONCLUSION

This study highlighted that obstetricians and gynaecologists in Peshawar generally recognized and supported the use of prenatal and postpartum massage, reflecting a positive inclination toward physiotherapy in maternal care. While awareness was comparatively stronger for postnatal interventions, understanding of physiotherapy during pregnancy, labor, and gynecological rehabilitation remained limited, which contributed to inconsistent referral practices. Clinicians working in private healthcare settings demonstrated greater familiarity with physiotherapy services and were more proactive in recommending them than those in public institutions, underscoring the influence of system-level support and interprofessional exposure. These findings emphasize the need to broaden understanding of physiotherapy as a comprehensive women's health intervention rather than a supportive or optional service. Strengthening collaboration among obstetricians, gynaecologists, and physiotherapists, alongside the integration of dedicated maternity and gynecological physiotherapy services within obstetric departments, may substantially enhance maternal healthcare delivery. Improving awareness and structured referral pathways has the potential to optimize functional recovery, promote holistic maternal well-being, and reinforce physiotherapy as an essential component of women's health care.

AUTHOR CONTRIBUTIONS

Author	Contribution
Maria Mehmood	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Syed Muhammad Hammad	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Saba Khan	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published
Tayyab Awan*	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Sara Akbar	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published

REFERENCES

1. MacArthur C, Bick D, Salmon V, Jones E, Hay-Smith J, Bishop J, et al. Antenatal pelvic floor muscle exercise intervention led by midwives in England to reduce postnatal urinary incontinence: APPEAL feasibility and pilot randomised controlled cluster trial. *BMJ Open*. 2025;15(1):e091248.
2. Villani F, Furau C, Mazzucato B, Cavalieri A, Todut OC, Ciobanu V, et al. Antenatal Perineal Training for Injuries Prevention: Follow Up after Puerperium. *Medicina (Kaunas)*. 2024;60(8).
3. Lallement M, Ferdinando Ruffolo A, Kerbage Y, Garadebian C, Ghesquiere L, Rubod C, et al. Clinical practices in the management and follow-up of obstetric anal sphincter injuries: a comprehensive review. *Eur J Obstet Gynecol Reprod Biol*. 2024;302:362-9.
4. Zhu H, Zhang D, Gao L, Liu H, Di Y, Xie B, et al. Effect of Pelvic Floor Workout on Pelvic Floor Muscle Function Recovery of Postpartum Women: Protocol for a Randomized Controlled Trial. *Int J Environ Res Public Health*. 2022;19(17).
5. Buran G, Erim Avcı S. The effect of pregnancy pilates-assisted childbirth preparation training on urinary incontinence and birth outcomes: a randomized-controlled study. *Arch Gynecol Obstet*. 2024;310(5):2725-35.
6. Wang X, Sun Z, Xu T, Fan G. Efficacy of supervised pelvic floor muscle training with a home-based biofeedback device for urinary incontinence in postpartum women: protocol for a multicentre randomised controlled trial. *BMJ Open*. 2023;13(4):e069874.
7. Guo Y, Kehoe P, Pimentel P, Rousseau J, Axelin A, Rahmani AM, et al. Exercise and Stress in At-Risk Women during Pregnancy and Postpartum. *MCN Am J Matern Child Nurs*. 2021;46(4):217-22.
8. Saccone G, Buonomo G, Ammendola A, Bardi L, Motta M, Gragnano E, et al. Exercise in Pregnancy and Risk of Postpartum Depression: A Randomised Controlled Trial. *Bjog*. 2026;133(2):211-7.
9. He J, Tang Y, Wang G, Wang Y, Chen Z, Zuo Y, et al. Impact of the warm and calm breathing pattern on delivery outcomes in pregnant Chinese women: a retrospective cohort study. *Sci Rep*. 2025;15(1):13200.
10. Ahmed HS. Limb-girdle muscular dystrophy in pregnancy: a narrative review. *Arch Gynecol Obstet*. 2024;310(5):2373-86.
11. Yalçınkaya B, Sezgin EA, Saçıntı KG, Özçakar L. Neuromusculoskeletal disorders in pregnancy revisited: Insights and clinical implications. *Jt Dis Relat Surg*. 2025;36(3):741-50.
12. Jericevic Schwartz D, Cervantes I, Nwaba AUA, Duarte Thibault M, Siddique M. Obstetric Anal Sphincter Injury and Female Sexual Dysfunction: A Systematic Review. *Urogynecology (Phila)*. 2025;31(3):292-300.
13. Zipp CR, Semlitsch T, Tögel G, Krenn C, Loder C, Jeitler K, et al. An overview of systematic reviews on the efficacy and safety of osteopathic techniques. *J Bodyw Mov Ther*. 2025;42:1186-97.
14. Anastasio MK, Anastasio AT, Kuller JA. Peripartum Pubic Symphysis Diastasis. *Obstet Gynecol Surv*. 2023;78(6):369-75.
15. Von Aarburg N, Veit-Rubin N, Boulvain M, Bertuit J, Simonson C, Desseauve D. Physical activity and urinary incontinence during pregnancy and postpartum: A systematic review and meta-analysis. *Eur J Obstet Gynecol Reprod Biol*. 2021;267:262-8.
16. Koranteng YB, Adu-Bonsaffoh K, Oppong-Yeboah B. Physiotherapy practice in women's health: awareness and attitudes of obstetricians and gynecologists in Ghana. *BMC Womens Health*. 2023;23(1):666.
17. Johannessen HH, Frøshaug BE, Lysåker PJG, Salvesen K, Lukasse M, Mørkved S, et al. Regular antenatal exercise including pelvic floor muscle training reduces urinary incontinence 3 months postpartum-Follow up of a randomized controlled trial. *Acta Obstet Gynecol Scand*. 2021;100(2):294-301.
18. Syngelaki A, Mitsiogiorgi R, Goadsby J, Hamed K, Akolekar R, Nicolaides KH. Routine 36-week scan: diagnosis of fetal abnormalities. *Ultrasound Obstet Gynecol*. 2025;65(4):427-35.
19. SOGC Guideline Retirement Notice No. 2. *J Obstet Gynaecol Can*. 2022;44(10):1104-12.

20. Diz-Teixeira P, Alonso-Calvete A, Justo-Cousiño LA, González-González Y, Cuña-Carrera ID. Update on Physiotherapy in Postpartum Urinary Incontinence. A Systematic Review. *Arch Esp Urol*. 2023;76(1):29-39.
21. Nazar G. Awareness about the role of physical therapy in post-partum females among gynecologists. *The Healer Journal of Physiotherapy and Rehabilitation Sciences*. 2021;1(1):21-6.