

“Connection between pelvic floor disorders, lumbo pelvic pain and sacro iliac joint instability among women, aged 22-70”

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Abstract

Background

Lumbo-pelvic pain, or low back pain, is one of the most common musculoskeletal disorders people experience. Recent studies have shown a strong link between low back pain and pelvic floor muscle dysfunction. In Afghanistan, low back pain is one of the main reasons why patients, particularly women, seek medical help. The goal of this study is to explore the connection between pelvic floor muscle dysfunction and the development of low back pain, as well as sacroiliac joint instability. The study also aims to improve people's understanding of how pelvic floor muscle problems can contribute to lumbo-pelvic pain or low back pain.

Method:

A descriptive cross-sectional study was carried out by reviewing the medical records of 790 eligible cases registered in the physiotherapy departments of Ali Abad Academic and Educational Hospital, Kabul Orthopedic Organization (KOO), and Kohistani Physiotherapy Clinic in Kabul, Afghanistan, from January to December 2023. We examined the epidemiological and clinical characteristics of women aged 22-70 who were affected by pelvic floor dysfunction. The data were gathered from the information available in the register books. To collect this data, we developed a data extraction form to pull information from the registers and medical records. The data were then entered and managed using MS Excel and Epi Info version 7.2.

Result:

Out of 790 patients, 742 were eligible to be included in this study, while 48 were excluded. Among the participants, 15.5% (115 women) had low back pain (LBP) due to disc problems, and 84.5% (627 women) experienced LBP with pain radiating to one or both legs caused by pelvic floor muscle (PFM) dysfunction. Of these 627 women, 574 had LBP along with sacroiliac (SI) joint instability, and 511 had LBP along with some form of urinary incontinence. The age group most affected by PFM dysfunction was women aged 43-53 years, and the condition was more common in women who had given birth to 4-7 children.

Conclusion:

The study findings support that more than half of women suffer from LBP had some form of pelvic floor muscle dysfunction, rather than disc pathologies. Therefore it's essential that the knowledge and awareness of medical staff and the people should be raised about the connection between PFMD and LBP. This way we can help

women how to manage their LBP properly.

Key words: PFMD, LBP, Ali Abad educational hospital, Kabul Orthopedic Organization,

Introduction:

Low back pain (LBP) is one of the most common musculoskeletal disorders, affecting a large portion of the population. Studies show that around 70-80% of people will experience at least one episode of low back pain during their lifetime. Recent research has also found a link between LBP and urinary incontinence (UI), showing that women with UI are more likely to suffer from frequent low back pain compared to those without UI.

Low back pain can arise from various causes, some of which are easy to identify, while others are more deeply rooted, such as issues in the pelvic floor muscles. Understanding how the lumbar spine connects to the pelvic region can help guide treatment, improve patient outcomes, and enhance their quality of life.

The connection between low back pain and pelvic floor dysfunction (PFD), especially in women, is gaining recognition in the healthcare field. However, this link is not yet fully understood. Pelvic floor dysfunction occurs when the muscles in the pelvic floor do not function properly, leading to symptoms such as lower back pain, urinary incontinence, pelvic organ prolapse, and fecal incontinence. Other signs of PFD include difficulty turning in bed, pain during standing activities, and, in severe cases, a noticeable difference in leg length.

The pelvic floor is made up of muscles and connective tissues that support internal organs, provide stability to pelvic joints, and control the urethra and rectum to maintain continence. These muscles also work together with other abdominal and spinal muscles, like the transversus abdominis and multifidus, to support trunk stability. Pelvic floor dysfunction can also contribute to sacroiliac joint (SIJ) issues, causing bladder, bowel, and sexual dysfunction when these muscles are either too tight or weak.

Although men can also suffer from pelvic floor problems, it is more commonly seen in women. For example, men who cycle frequently may develop pelvic floor pain due to pressure on the pudendal nerve, while aging can lead to prostate-related urinary issues. In South India, a study on women 3 to 12 months after giving birth found that 54.7% had pelvic floor dysfunction, and 82% had urinary incontinence. Another study conducted in China on women with low back pain demonstrated that pelvic floor exercises combined with routine treatments were more effective in relieving pain than routine treatment alone.

Pelvic floor muscles can either be too tight or too weak in people with chronic low back pain, leading to issues such as lumbo-pelvic or sacroiliac joint dysfunction. In some cases, this manifests as either restricted movement or instability, although the exact cause is not always clear. A Canadian study on women with low back, hip, or pelvic pain revealed that 95.3% of them had pelvic floor dysfunction. Additionally, a 2018 study in Canada supported the strong connection between low back pain and pelvic floor dysfunction in women.

In Afghanistan, many women experience multiple pregnancies, engage in physically demanding activities during pregnancy, and often give birth at home. This leads us to believe that the prevalence of LBP and PFD among women in Afghanistan may be even higher than the 70-80% seen in other countries. This study aims to explore the role of pelvic floor dysfunction in developing low back pain and sacroiliac joint instability, and to improve understanding of how pelvic floor muscle issues can contribute to low back pain.

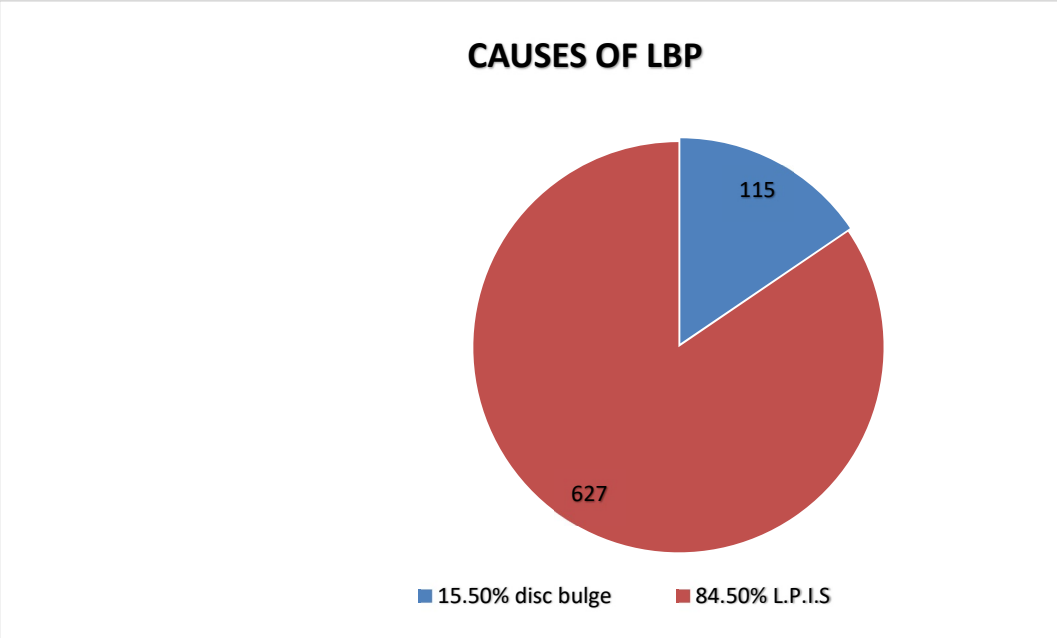
Methodology:

A descriptive cross-sectional study was conducted by reviewing medical records registered in the physiotherapy departments of Ali Abad Academic and Educational Hospital, the Kabul Orthopedic Organization (KOO), and Kohistani Physiotherapy Clinic in Kabul, Afghanistan. The study took place from January to December 2023 with the help of a formal request form prepared by the Afghan Association for Physical Therapists (AAPT). A total of 790 eligible cases were included during this period. We analyzed the epidemiological and clinical characteristics of women aged 22-70 who had pelvic floor dysfunction and suffered from low back pain, excluding those with spinal surgeries, spinal deformities, or pelvic, hip, or lower limb deformities. Women below the age of 22 or above 70 were also excluded. The data extracted were mainly from the registers, including details such as age, gender, location, physical examination results, severity of the condition, and childbirth frequency. The severity of pelvic floor dysfunction (PFD) and sacroiliac (SI) joint instability was assessed using six physical tests, along with vaginal biofeedback tests. However, due to the sensitive nature of vaginal biofeedback, this test was not performed on all patients, but physical tests were conducted for everyone. Data were collected using a data extraction form and entered into Excel and Epi Info version 7.2 for analysis and management.

Results:

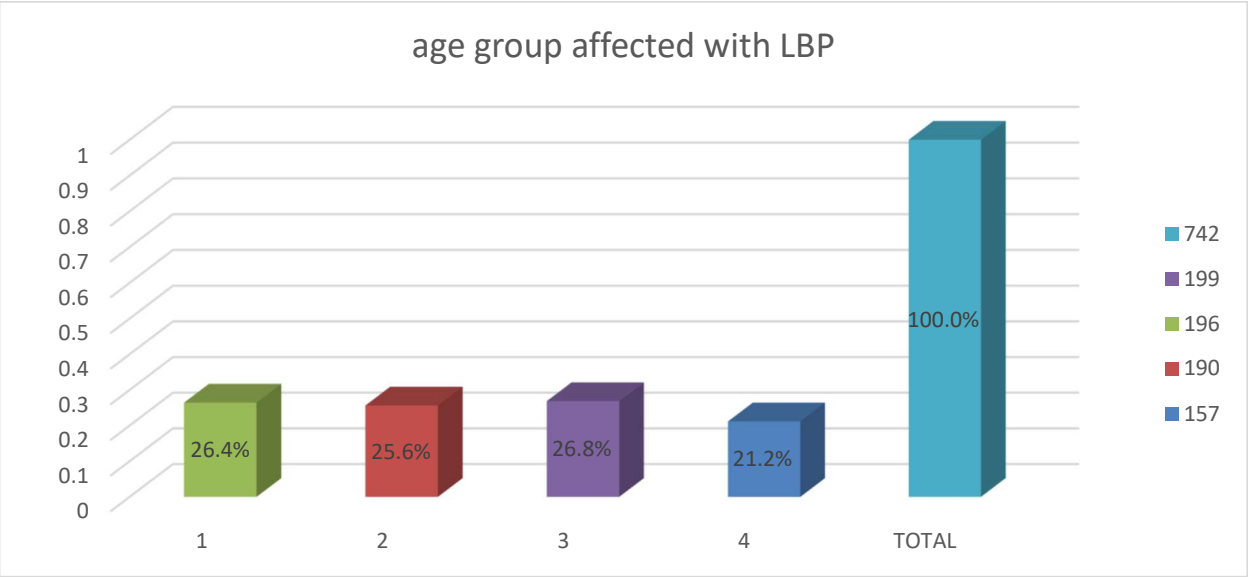
Out of 790 patients; 742 cases were eligible cases who were included in this study and 48 patients were excluded. Of 15, 5% (115) women had LBP caused by disc pathology 84, 5% (627) women had LBP with referred pain down to one or both lower limbs caused by PFM dysfunction. From these 627 patients (574) women had LBP with positive SI joint instability and (511) women had LBP with some forms of urine incontinence. The frequency of age group affected by PFM dysfunction were higher among women aged 43-53 years, and the frequency of women affected by PFM dysfunction were higher among those who delivered 4-7 children.

Variables	Frequency	(%)
Sex	742	100%
Female	0	0%
Male		
Age groups		
21-30	196	26.4%
31-40	190	25.6%
41-50	199	26.8%
51<	157	21.2%
Occupation		
Government Employee	49	6.60%
Health worker	36	4.85%
Housewife	479	64.56%
Teacher	148	19.95%
Tailor	14	1.89%
Student	8	1.08%
Other	8	1.07%
Provinces		
Badakhshan		0.13%
Balkh	1	0.13%
Kabul		98.6%
Kunduz	1	0.26%
Kapisa		0.26%
Parwan	732	0.13%
Paktia		0.13%
Samangan	2	0.26%
	2	
	1	
	1	



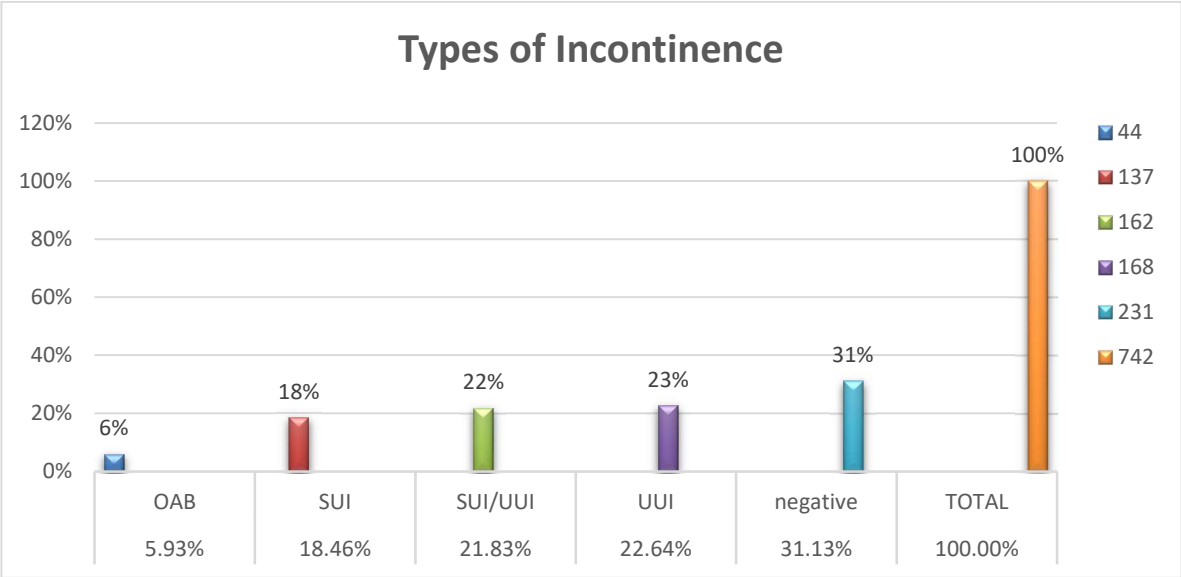
Findings:

This chart shows that the LBP factor in women is more the lumbo pelvic insufficient stability because of PFM dysfunction rather than disc pathologies.

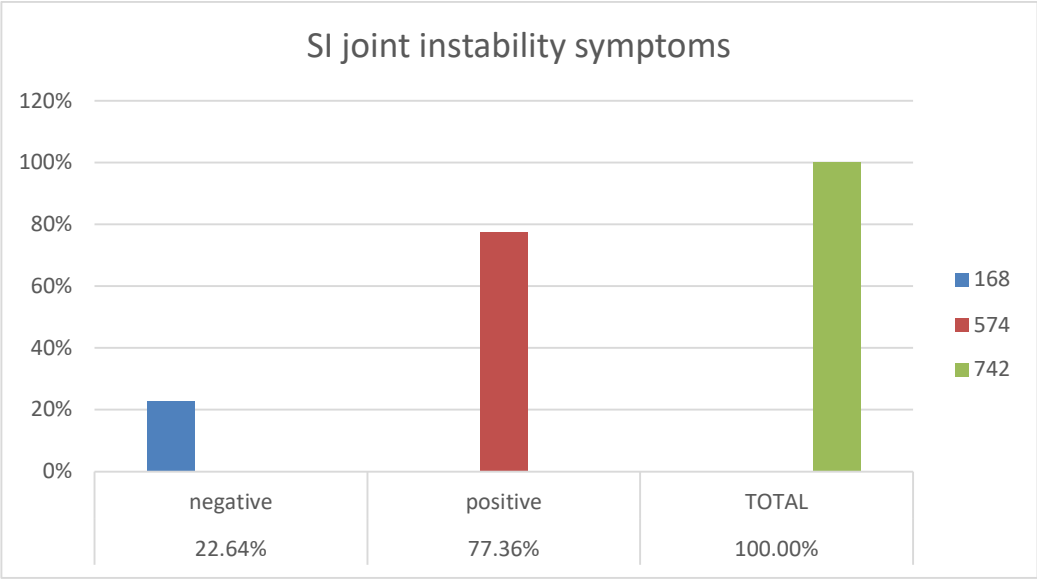


Category 1: ages from 22-32. Category 2: ages from 33-43. Category 3: ages from 44-54. Category 4: ages

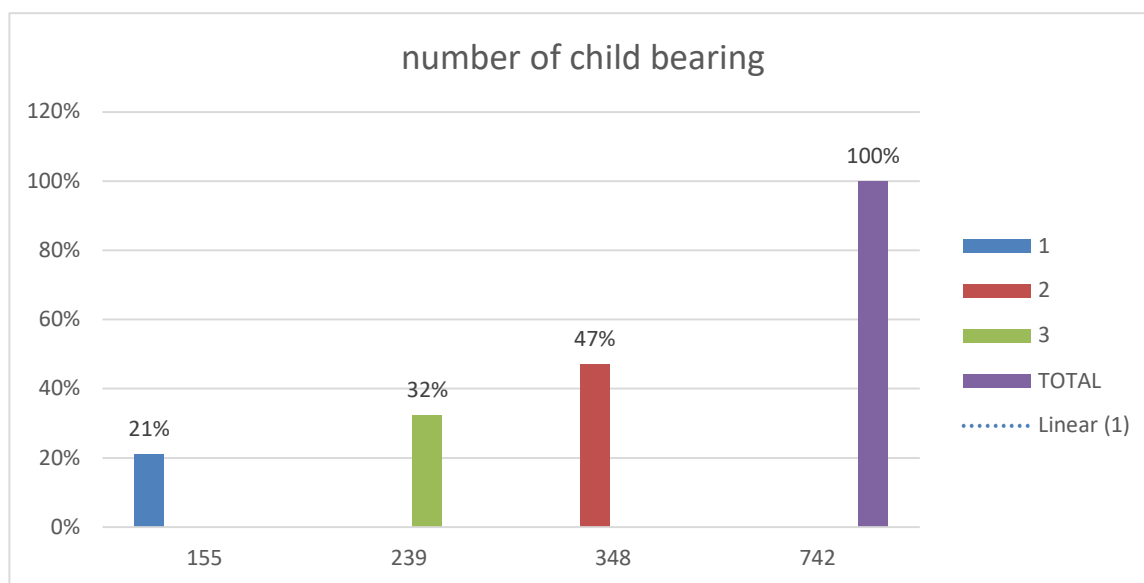
from 55- 70. This table shows that patients suffer from LBP had ages from 44- 54.



This table shows that of 100% patients with LBP only 31% of them had no symptoms of incontinence, the rest 69% had different types of incontinence which means that the main factor of their LBP was the PFM dysfunction.



This tables shoes that the percentage of SI joint instability among patients suffer from LBP is higher which means that sacro iliac joints instability also relates with pelvic floor dysfunction and LBP.



Category 1: child bearing from 0-3. Category 2: child bearing from 4-7. Category 3: child bearing from 8 above.

This table shows that those mothers who brought children from 4-7 had the highest percentage which means they suffer more of LBP.

Discussion & Challenges:

Evidence in this study suggests that the pelvic floor dysfunction is the most important factor in developing LBP in women. The results show that 84.5% of women suffering of LBP had PFMD and 15.5% had disc pathologies as a cause for their LBP. While this percentage was 76% in Iran, 54.7% in India and 60.8% in china. The percentage of PFMD is higher in Afghanistan, we suggest that multiparity could be a reason for. More researches needed to be developed accordingly, study shows that 47% of women brought more than 7 children, 32% brought 4-7 children and 21% brought 0-3 children. A study in India they mentioned that the major risk factors for pelvic floor dysfunction are: increasing weight, pregnancy and child birth, frequent lifting of heavy objects and having surgery or injury to pelvic floor.

69% of women with PFMD had some form of urine incontinence beside LBP, while 31% of them had no signs of incontinence. The urine incontinence and pelvic organ prolapse increases by number of child deliveries, especially vaginal deliveries. Based on the findings of the study 77.36% of patients suffer from LBP had sacro iliac joint instability as well that means PFMD as a cause for their LBP which is very considerable while providing treatment plan for them. The true prevalence of PFD is underestimated for several reasons: heterogeneity in study populations, lack of standardized definitions, and under-reported symptoms due to the sensitive nature.¹ There are 6 physical tests that clarify whether it's a disc problem that causes LBP or pelvic floor dysfunction? And physical therapists can perform these tests on any patients, but majority of people with LBP don't come to physiotherapist in one hand, neglecting to perform the 6 physical tests on all patients with LBP in the clinics in the other hand and lack of referring all patients with LBP for physiotherapy clinics by Doctors are the challenges, that is why estimating the prevalence of LBP caused by PFMD is difficult. Still within these challenges we could collect some data representing the prevalence of LBP caused by PFMD. We request the doctors to refer at least those patients suffering from LBP with or without urine or bowel incontinence to physiotherapists that they plan for surgeries, to be checked for PFM dysfunction, because if they have PFM dysfunction, then surgery will not help them, and rest after surgery will increase the risk of PFM dysfunction.

Conclusion:

From the findings of the study it could be concluded that over half of women suffer from LBP had some form of pelvic floor muscle dysfunction, rather than disc pathologies. There is strong relationship between pelvic floor muscle dysfunction and low back pain and sacro iliac joint instability, according to the study findings. As our study was limited to 3 physiotherapy centers at Kabul city, a wider study is required to determine the PFMD prevalence and its risk factors among women in the country and also it's essential to raise the current understanding of people and the orthopedic and neurologic doctors about the role of PFMD in developing LBP and SIJ instability and the way to provide treatment for them.

Acknowledgement

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