JHWCR JOURNAL OF HEALTH, WELLNESS AND COMMUNITY RESEARCH 3007-0570

https://doi.org/10.61919/gy004046

*Original Article*

# Prevalence of Pain and Functional Disability in Piriformis Syndrome Among Office Workers

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"Cite this Article" **Received**: 16 March 2026; **Accepted**: 27 May 2026; **Published**: 13 June 2026
**Author Contributions:** Concept and supervision: NI; design and methodology: NI and SN; data collection: TN, SAR, MN, HS, MS, MM and NIr; analysis and interpretation: NI, SN and TN; drafting and critical revision: all authors. **Ethical Approval**: Bahria University, Islamabad, Pakistan. **Informed Consent**: Written informed consent was obtained from all participants; **Conflict of Interest**: The authors declare no conflict of interest. **Funding**: No external funding; **Data Availability**: Available from the corresponding author on reasonable request; **Acknowledgments**: N/A.

## ABSTRACT

Background: Piriformis syndrome is an extra-spinal cause of buttock and sciatica-like pain that may affect workers exposed to prolonged sitting. Office workers may be vulnerable because sustained seated posture can increase mechanical stress around the deep gluteal region, but the pain and functional burden among clinically screened workers remains insufficiently described. Objective: To assess pain intensity and lower-extremity functional limitation among office workers with positive FAIR test findings suggestive of piriformis syndrome and to examine associations between pain intensity and selected functional activities. Methods: This cross-sectional observational study was conducted in Layyah, Punjab, Pakistan, among 73 office workers aged 26–50 years with prolonged sitting exposure and positive FAIR test findings. Pain intensity was measured using the Numeric Pain Rating Scale, and lower-extremity function was assessed using the Lower Extremity Functional Scale. Data were analyzed using descriptive statistics, normality testing, and correlation analysis, with $p < 0.05$ considered statistically significant. Results: The mean age was 37.9 ± 5.9 years; 34 participants (46.6%) were male and 39 (53.4%) were female. Mean NPRS score was 6.60 ± 1.71, with 37 participants (50.7%) reporting moderate pain and 36 (49.3%) reporting severe pain. Functional limitation was greatest for getting into or out of a car, running on uneven ground, rolling over in bed, sitting for one hour, lifting from the floor, and hopping. Pain intensity showed significant associations with squatting ($r = 0.262$, $p = 0.025$), walking two blocks ($r = -0.283$, $p = 0.015$), stair use ($r = 0.304$, $p = 0.009$), and sharp turns while running fast ($r = 0.361$, $p = 0.003$), although LEFS coding direction should be verified for final interpretation. Conclusion: FAIR-positive office workers demonstrated clinically meaningful pain and mild-to-moderate lower-extremity functional limitation. Early screening, ergonomic education, and targeted rehabilitation may help reduce functional burden in sedentary occupational groups. Keywords: Piriformis syndrome; office workers; prolonged sitting; Numeric Pain Rating Scale; Lower Extremity Functional Scale; functional disability.

## INTRODUCTION

Piriformis syndrome is an extra-spinal cause of buttock and radiating lower-limb pain that occurs when the piriformis muscle irritates or compresses the sciatic nerve because of muscle tightness, spasm, inflammation, hypertrophy, anatomical variation, or sustained mechanical loading. Although the syndrome is less frequently recognized than lumbar disc-related sciatica, it remains clinically important because its symptoms may overlap with low back pain, hip pathology, and radicular presentations, leading to delayed recognition and persistent functional limitation. Reported estimates vary widely across populations and diagnostic criteria, with annual occurrence ranging from 2.2% to 19.5% and lifetime occurrence from 12.2% to 27%, while the prevalence among individuals with low back pain has been reported at approximately 18.3% (1,2). This variability indicates that piriformis syndrome remains diagnostically challenging and that occupational groups exposed to sustained sitting may require more focused clinical evaluation.

The clinical presentation of piriformis syndrome commonly includes deep gluteal pain, tenderness around the greater sciatic notch, reduced hip mobility, radiating pain along the posterior thigh or leg, discomfort during stair climbing, and symptom aggravation during prolonged sitting or movements that place the hip in flexion, adduction, and internal rotation. These features are particularly relevant for office workers, whose occupational routine often requires prolonged seated postures, limited movement variability, and sustained hip flexion. Sustained sitting may increase mechanical pressure over the deep gluteal region, promote adaptive shortening or irritability of the piriformis muscle, and aggravate sciatic nerve irritation in susceptible individuals. Previous literature has also reported that piriformis syndrome may account for a clinically meaningful proportion of sciatica-like and low back pain presentations, although estimates differ according to study design, population characteristics, and diagnostic approach (3).

Diagnosis of piriformis syndrome is primarily clinical and requires careful history-taking and physical examination because no single universally accepted diagnostic standard is available for routine clinical use. Provocative tests such as the flexion, adduction, and internal rotation test, straight leg raise, Lasègue test, Slump test, Bowstring test, and piriformis stretch tests are used to reproduce symptoms and differentiate piriformis-related pain from lumbar or hip-origin disorders. Imaging modalities such as ultrasound, radiography, or magnetic resonance imaging may assist in excluding alternative causes or assessing muscle and sciatic nerve relationships, but clinical assessment remains central in many outpatient and field-based settings (4,5). Because piriformis syndrome can impair daily activities, its evaluation should not be limited to symptom presence alone; pain intensity and lower-extremity functional performance are both necessary to understand its clinical burden.

Management of piriformis syndrome commonly includes pharmacological and non-pharmacological approaches. Analgesics and non-steroidal anti-inflammatory drugs may be used for pain control, whereas physiotherapy, ergonomic education, posture correction, activity modification, stretching, strengthening, myofascial techniques, and physical modalities are often used to address mechanical and functional contributors. Evidence also suggests that selected patients may benefit from image-guided injections or botulinum toxin in resistant cases, but conservative rehabilitation remains central for occupationally related symptoms where prolonged sitting and postural strain are modifiable factors (6,7). For office workers, early recognition of pain intensity and activity limitation can help guide workplace education, movement-break strategies, ergonomic modification, and targeted rehabilitation.

Recent studies have examined piriformis syndrome in populations exposed to prolonged sitting or musculoskeletal strain, including tailoring professionals, educational-center workers, college students, and patients with low back pain. In tailoring professionals, longer continuous sitting was significantly associated with piriformis syndrome and higher pain severity, supporting the relevance of sustained seated work as an occupational exposure (8). A study among females in educational centers also reported piriformis syndrome with moderate pain intensity and reduced quality of life, suggesting that prolonged sitting environments may influence both symptoms and function (9). A systematic review of piriformis syndrome case reports highlighted the diversity of clinical presentations and the need for careful diagnostic reasoning, while other literature has emphasized the broad epidemiological range and clinical overlap between piriformis syndrome and other causes of sciatica-like pain (10,11). Among office workers, prolonged sitting has also been linked with piriformis syndrome and reduced physical activity or quality of life, but further data are needed to clarify the pattern of pain intensity and lower-extremity functional difficulty in workers with positive clinical screening findings (12).

Despite the growing literature, important gaps remain. Many studies focus on general prevalence or diagnostic descriptions, while fewer quantify the functional burden of piriformis-related symptoms in office workers using standardized pain and lower-extremity function measures. In addition, the relationship between pain intensity and specific lower-extremity activities, such as squatting, stair use, walking, and turning movements, is not consistently reported. This study was therefore designed to evaluate pain intensity and lower-extremity functional disability among office workers with positive FAIR test findings suggestive of piriformis syndrome. The objective was to determine the level of pain and functional limitation in this occupational group and to examine whether pain intensity was associated with selected lower-extremity functional activities. The study hypothesized that office workers with FAIR-positive findings would demonstrate clinically meaningful pain and functional limitations, and that higher pain intensity would be significantly associated with greater difficulty in selected lower-extremity activities.

## MATERIALS AND METHODS

This cross-sectional observational study was conducted in Layyah, Punjab, Pakistan, over a period of six months after approval of the research synopsis. The design was selected to assess pain intensity and lower-extremity functional disability at a single point in time among office workers with clinical findings suggestive of piriformis syndrome. The study population consisted of male and female office workers aged 26–50 years who had a history of prolonged sitting on a hard surface for at least one year, with a minimum sitting exposure of six hours per day, and who demonstrated a positive flexion, adduction, and internal rotation test. Participants were selected through a non-probability convenient sampling technique from accessible office-worker populations in the study setting. Workers were excluded if they had a history of previous spinal or lower-limb surgery, known metabolic disease, trauma or fracture involving the lower limb, known psychological disorder, or refusal to provide written informed consent.

The sample size was 73 participants and was calculated using EpiTool based on the expected frequency of piriformis syndrome reported in previous occupational and clinical literature. Eligible participants were approached after initial screening against the inclusion and exclusion criteria. The purpose, nature, and procedures of the study were explained before data collection, and written informed consent was obtained from each participant. Participant anonymity and confidentiality were maintained throughout data collection and analysis. Participation was voluntary, and participants retained the right to withdraw from the study at any stage without penalty. The study followed the ethical requirements of the GCUF Layyah ethical committee and was conducted in accordance with standard principles for human-subject research.

Data collection included demographic information, clinical screening for piriformis-related symptoms, pain intensity assessment, and lower-extremity functional assessment. Age and gender were recorded as baseline demographic variables. Pain intensity was assessed using the Numeric Pain Rating Scale, an 11-point scale ranging from 0 to 10, where 0 indicates no pain and 10 indicates the worst imaginable pain. Scores were interpreted as no pain at 0, mild pain at 1–3, moderate pain at 4–6, and severe pain at 7–10 (13). Functional limitation was assessed using the Lower Extremity Functional Scale, which contains 20 activity-based items related to routine work, recreational activity, mobility, stair use, squatting, transfers, running, hopping, and bed mobility. Each LEFS item is scored from 0 to 4, where 0 indicates extreme difficulty or inability to perform the activity and 4 indicates no difficulty, producing a maximum possible total score of 80, with lower scores representing greater functional limitation (14).

Piriformis-related clinical screening was performed using the FAIR test. Participants were positioned in side-lying with the tested hip placed uppermost. The examiner passively moved the hip into approximately 90 degrees of flexion, adduction, and internal rotation while stabilizing the pelvis and applying controlled pressure to place the piriformis muscle under stretch. The test was considered positive when the maneuver reproduced pain in the gluteal or sciatic distribution, consistent with piriformis-related irritation (15). To reduce measurement bias, the same standardized test position, instructions, and scoring approach were applied across participants. The questionnaires were administered using uniform instructions, and data were checked for completeness before entry.

The main study variables were pain intensity measured by NPRS and lower-extremity functional limitation measured by LEFS item responses and functional activity scores. Demographic variables included age and gender. Operationally, pain intensity was treated as an ordinal clinical score and also summarized using established severity categories. LEFS responses were interpreted according to the original scoring direction, where lower scores indicate greater activity limitation. Functional disability was therefore understood as reduced LEFS performance rather than higher LEFS score. Selected functional activities, including squatting, walking two blocks, stair use, sharp turns while running fast, and usual work or dressing-related tasks, were examined in relation to pain intensity because these activities involve hip mobility, dynamic lower-limb control, or routine functional performance.

Data were entered and analyzed using Statistical Package for the Social Sciences version 27.0 for Microsoft Windows, with Microsoft Excel and Word used for tabulation and figure preparation. Continuous variables were summarized using mean and standard deviation when appropriate, while categorical variables were summarized using frequencies and percentages. Normality was assessed using Kolmogorov–Smirnov and Shapiro–Wilk tests. Because NPRS and LEFS item-level responses were ordinal and the normality tests indicated non-normal distribution, non-parametric correlation analysis was the preferred analytical approach for examining associations between pain intensity and selected LEFS functional activities. Correlation coefficients were interpreted according to direction, magnitude, and statistical significance. A two-tailed p-value of less than 0.05 was considered statistically significant. Data accuracy was supported through standardized coding, verification of frequencies against the total sample size, and review of entered values for missing or inconsistent responses before final analysis.

## RESULTS

A total of 73 office workers with positive FAIR test findings suggestive of piriformis syndrome were included in the analysis. The mean age of participants was 37.9 ± 5.9 years. Of the total sample, 34 participants were male, representing 46.6% of the study population, while 39 participants were female, representing 53.4%. The gender distribution was therefore slightly female-predominant, although both male and female office workers were well represented in the sample.

*Table 1. Baseline Sociodemographic Characteristics of Participants*

| Variable | Category / Measure | Value |
|---|---|---|
| **Sample size** | N | 73 |
| **Age, years** | Mean ± SD | 37.9 ± 5.9 |
| **Male** | n (%) | 34 (46.6%) |
| **Female** | n (%) | 39 (53.4%) |

Pain intensity was assessed using the Numeric Pain Rating Scale. The mean NPRS score was 6.60 ± 1.71, indicating that the overall sample experienced moderate-to-severe pain. The observed scores ranged from 4 to 9, meaning that none of the included participants reported absent or mild pain. When NPRS scores were categorized according to severity, 37 participants, representing 50.7% of the sample, reported moderate pain with scores between 4 and 6, while 36 participants, representing 49.3%, reported severe pain with scores between 7 and 10. The most frequently reported individual pain score was 9, observed in 17 participants (23.3%), followed by a score of 5, observed in 16 participants (21.9%).

Lower-extremity function was assessed using the Lower Extremity Functional Scale. In the LEFS, lower scores indicate greater difficulty, while higher scores indicate better functional ability. The lowest mean score was observed for getting into or out of a car (1.73 ± 1.41), indicating that this was the most affected functional activity. Other activities with relatively low mean scores included running on uneven ground (1.88 ± 1.43), rolling over in bed (1.97 ± 1.42), usual hobbies or recreational activities (1.99 ± 1.38), lifting an object from the floor (2.01 ± 1.48), sitting for one hour (2.01 ± 1.44), and hopping (2.01 ± 1.47). The highest mean score was observed for putting on shoes or socks (2.60 ± 1.35), suggesting comparatively less difficulty in this activity than in car transfers and dynamic lower-limb tasks. Overall, item-level LEFS findings indicated mild-to-moderate functional limitation, with greater difficulty in activities requiring hip control, transfer ability, dynamic balance, or sustained lower-limb loading.

*Table 2. Distribution of Pain Intensity According to NPRS*

| NPRS Score | Frequency | Percentage |
|---|---|---|
| 4 | 8 | 11.0% |
| 5 | 16 | 21.9% |
| 6 | 13 | 17.8% |
| 7 | 13 | 17.8% |
| 8 | 6 | 8.2% |
| 9 | 17 | 23.3% |
| Total | 73 | 100.0% |

*Table 3. Pain Severity Categories Based on NPRS*

| Pain Category | NPRS Range | Frequency | Percentage |
|---|---|---|---|
| No pain | 0 | 0 | 0.0% |
| Mild pain | 1–3 | 0 | 0.0% |
| Moderate pain | 4–6 | 37 | 50.7% |
| Severe pain | 7–10 | 36 | 49.3% |
| Total | — | 73 | 100.0% |

*Table 4. Item-Level LEFS Scores Among Office Workers With FAIR-Positive Findings*

| LEFS Activity | Mean | SD |
|---|---|---|
| Any usual work, housework or school activities | 2.38 | 1.33 |
| Usual hobbies, recreational or sporting activities | 1.99 | 1.38 |
| Getting into or out of the bath | 2.10 | 1.37 |
| Walking between rooms | 2.33 | 1.46 |
| Putting on shoes or socks | 2.60 | 1.35 |
| Squatting | 2.14 | 1.31 |
| Lifting an object from the floor | 2.01 | 1.48 |
| Light activities around home | 2.25 | 1.35 |
| Heavy activities around home | 2.10 | 1.36 |
| Getting into or out of a car | 1.73 | 1.41 |
| Walking two blocks | 2.21 | 1.41 |
| Walking a mile | 2.37 | 1.33 |
| Going up or down stairs | 2.38 | 1.38 |
| Standing for one hour | 2.15 | 1.36 |
| Sitting for one hour | 2.01 | 1.44 |
| Running on even ground | 2.15 | 1.32 |
| Running on uneven ground | 1.88 | 1.43 |
| Making sharp turns while running fast | 2.16 | 1.46 |
| Hopping | 2.01 | 1.47 |
| Rolling over in bed | 1.97 | 1.42 |

The frequency distribution of LEFS responses further showed that functional limitations were not restricted to high-demand activities. For getting into or out of a car, 21 participants (28.8%) reported extreme difficulty, making it the activity with the highest proportion of severe limitation. Running on uneven ground and hopping were also notably affected, with 17 participants (23.3%) reporting extreme difficulty in each activity. Sitting for one hour was difficult for a substantial proportion of participants, with 15 participants (20.5%) reporting extreme difficulty and 13 participants (17.8%) reporting quite a bit of difficulty. These findings support the clinical relevance of piriformis-related symptoms in both occupationally relevant postures and dynamic lower-extremity activities.

*Table 5. Frequency Distribution of Selected LEFS Functional Limitations*

| LEFS Activity | Extreme Difficulty n (% | Quite a Bit of Difficulty n (%) | Moderate Difficulty n (%) | A Little Bit of Difficulty n (%) | No Difficulty n (%) |
|---|---|---|---|---|---|
| Any usual work, housework or school activities | 9 (12.3%) | 11 (15.1%) | 14 (19.2%) | 21 (28.8%) | 18 (24.7%) |
| Usual hobbies, recreational or sporting activities | 15 (20.5%) | 12 (16.4%) | 18 (24.7%) | 15 (20.5%) | 13 (17.8%) |
| Getting into or out of the bath | 11 (15.1%) | 16 (21.9%) | 17 (23.3%) | 13 (17.8%) | 16 (21.9%) |
| Walking between rooms | 12 (16.4%) | 9 (12.3%) | 19 (26.0%) | 9 (12.3%) | 24 (32.9%) |
| Putting on shoes or socks | 11 (15.1%) | 9 (12.3%) | 20 (27.4%) | 16 (21.9%) | 17 (23.3%) |
| Squatting | 10 (13.7%) | 13 (17.8%) | 22 (30.1%) | 13 (17.8%) | 15 (20.5%) |
| Lifting an object from the floor | 16 (21.9%) | 13 (17.8%) | 16 (21.9%) | 10 (13.7%) | 18 (24.7%) |
| Light activities around home | 8 (11.0%) | 16 (21.9%) | 18 (24.7%) | 12 (16.4%) | 19 (26.0%) |
| Heavy activities around home | 11 (15.1%) | 17 (23.3%) | 13 (17.8%) | 18 (24.7%) | 14 (19.2%) |
| Getting into or out of a car | 21 (28.8%) | 12 (16.4%) | 16 (21.9%) | 14 (19.2%) | 10 (13.7%) |
| Walking two blocks | 11 (15.1%) | 15 (20.5%) | 13 (17.8%) | 16 (21.9%) | 18 (24.7%) |
| Walking a mile | 8 (11.0%) | 13 (17.8%) | 15 (20.5%) | 18 (24.7%) | 19 (26.0%) |
| Going up or down stairs | 11 (15.1%) | 8 (11.0%) | 15 (20.5%) | 20 (27.4%) | 19 (26.0%) |
| Standing for one hour | 12 (16.4%) | 10 (13.7%) | 22 (30.1%) | 13 (17.8%) | 16 (21.9%) |
| Sitting for one hour | 15 (20.5%) | 13 (17.8%) | 18 (24.7%) | 10 (13.7%) | 17 (23.3%) |
| Running on even ground | 10 (13.7%) | 14 (19.2%) | 19 (26.0%) | 15 (20.5%) | 15 (20.5%) |
| Running on uneven ground | 17 (23.3%) | 15 (20.5%) | 14 (19.2%) | 14 (19.2%) | 13 (17.8%) |
| Hopping | 17 (23.3%) | 10 (13.7%) | 18 (24.7%) | 11 (15.1%) | 17 (23.3%) |
| Rolling over in bed | 14 (19.2%) | 16 (21.9%) | 17 (23.3%) | 10 (13.7%) | 16 (21.9%) |

Normality testing showed that NPRS and all assessed LEFS item scores were not normally distributed. The Shapiro–Wilk p-values were less than 0.05 for NPRS and all LEFS variables, supporting the use of non-parametric correlation analysis for evaluating relationships between pain intensity and functional activity scores. NPRS showed a Shapiro–Wilk statistic of 0.894 with $p < 0.001$, indicating significant deviation from normality. Similar non-normal distributions were observed across LEFS items, with Shapiro–Wilk statistics ranging approximately from 0.858 to 0.902.

*Table 6. Normality Testing for NPRS and LEFS Variables*

| Variable Group | Main Finding |
|---|---|
| **NPRS pain intensity** | $p < 0.001$ |
| **LEFS item scores** | $p < 0.05$ for all items |
| **Recommended association test** | Non-parametric correlation |

Correlation analysis showed statistically significant associations between pain intensity and selected lower-extremity functional activities. Pain intensity was weakly and positively correlated with squatting scores ($r = 0.262$, $p = 0.025$), stair-use scores ($r = 0.304$, $p = 0.009$), and making sharp turns while running fast ($r = 0.361$, $p = 0.003$). Pain intensity was weakly and negatively correlated with walking two blocks ($r = -0.283$, $p = 0.015$). Because LEFS scoring assigns higher values to better function, these correlations require cautious interpretation. The negative association with walking two blocks is directionally consistent with greater pain being associated with poorer walking function. However, the positive correlations observed for squatting, stair use, and sharp turns are not directionally consistent with the original LEFS scoring direction and may reflect coding variation, reverse scoring, response-pattern effects, or data-entry issues. These relationships should therefore be interpreted only after confirming the coding direction used during statistical analysis.

*Table 7. Correlation Between Pain Intensity and Selected LEFS Functional Activities*

| Independent Variable | Functional Activity | Correlation Coefficient | p-value |
|---|---|---|---|
| **Pain intensity** | Squatting | 0.262 | 0.025 |
| **Pain intensity** | Walking two blocks | −0.283 | 0.015 |
| **Pain intensity** | Going up or down stairs | 0.304 | 0.009 |
| **Pain intensity** | Making sharp turns while running fast | 0.361 | 0.003 |

A separate correlation analysis examined the relationship between usual work, housework, or school activities and putting on shoes or socks. A weak negative correlation was observed between these two LEFS activities ($r = -0.234$, $p = 0.047$). This association reached statistical significance but was small in magnitude. Because both variables belong to the same LEFS scoring system, the negative direction should be interpreted cautiously and should be verified against the coding scheme used during analysis.

*Table 8. Correlation Between Selected Daily-Life Functional Activities*

| Variable 1 | Variable 2 | Correlation Coefficient | p-value |
|---|---|---|---|
| Any usual work, housework or school activities | Putting on shoes or socks | −0.234 | 0.047 |

Overall, the results indicate that office workers with FAIR-positive findings suggestive of piriformis syndrome experienced clinically meaningful pain and functional limitation. The pain profile was concentrated entirely in the moderate-to-severe range, with 50.7% reporting moderate pain and 49.3% reporting severe pain. Functional limitation was most pronounced in car transfers, uneven-ground running, hopping, sitting for one hour, lifting from the floor, and rolling over in bed, indicating that piriformis-related symptoms may affect both occupational postures and dynamic lower-limb activities. The statistically significant associations between pain intensity and selected LEFS activities suggest a measurable relationship between pain and function, but the direction of several correlations should be confirmed through review of the original coding before final clinical interpretation.

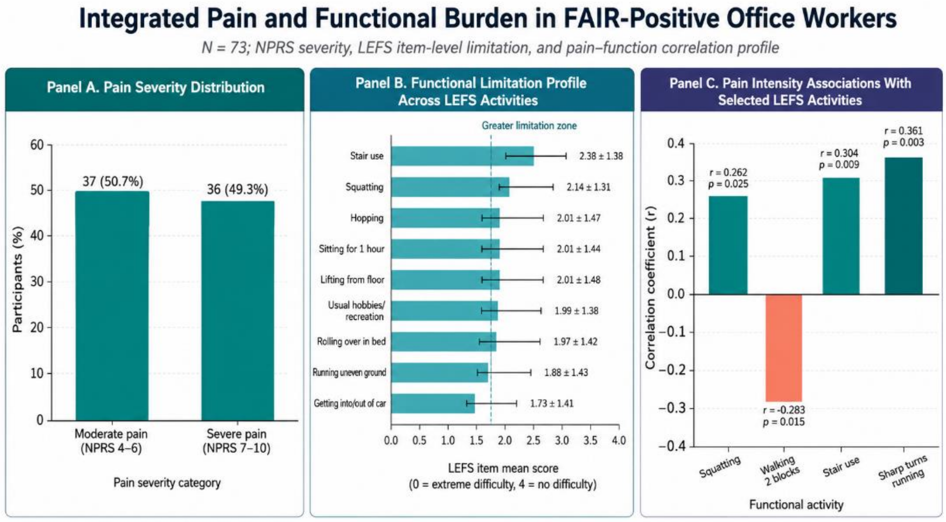


*Figure 1 Integrated Pain and Functional Burden in FAIR-Positive Office Workers*

The panelled figure demonstrates that pain burden was concentrated entirely in the moderate-to-severe range among FAIR-positive office workers, with 37 participants (50.7%) reporting moderate pain and 36 participants (49.3%) reporting severe pain. The LEFS activity profile showed the greatest functional limitation for getting into or out of a car (mean 1.73 ± 1.41), followed by running on uneven ground (1.88 ± 1.43), rolling over in bed (1.97 ± 1.42), usual hobbies or recreational activities (1.99 ± 1.38), lifting from the floor (2.01 ± 1.48), sitting for one hour (2.01 ± 1.44), and hopping (2.01 ± 1.47), indicating clinically meaningful difficulty across transfer, sustained sitting, and dynamic lower-limb tasks. Pain intensity showed statistically significant but weak associations with selected functional activities, including squatting ($r = 0.262$, $p = 0.025$), walking two blocks ($r = −0.283$, $p = 0.015$), stair use ($r = 0.304$, $p = 0.009$), and sharp turns while running fast ($r = 0.361$, $p = 0.003$), although the positive direction of several LEFS correlations should be interpreted cautiously because higher LEFS scores indicate better function unless reverse coding was used.

## DISCUSSION

The present cross-sectional observational study evaluated pain intensity and lower-extremity functional limitation among office workers with positive FAIR test findings suggestive of piriformis syndrome. The findings demonstrate a clinically relevant pain burden in this occupational group, as the mean NPRS score was 6.60 ± 1.71 and all participants reported pain within the moderate-to-severe range. Specifically, 37 participants (50.7%) reported moderate pain and 36 participants (49.3%) reported severe pain, indicating that FAIR-positive office workers in this sample were not merely experiencing mild discomfort but a level of pain likely to affect sitting tolerance, occupational productivity, and routine mobility. These findings are consistent with previous literature describing piriformis syndrome as an under-recognized extra-spinal cause of gluteal and sciatica-like pain, particularly in individuals exposed to prolonged sitting or recurrent mechanical loading of the deep gluteal region (2,3,11).

The functional findings further support the clinical significance of piriformis-related symptoms in office workers. LEFS item-level scores indicated mild-to-moderate functional limitation, with the lowest mean scores observed for getting into or out of a car, running on uneven ground, rolling over in bed, usual hobbies or recreational activities, lifting from the floor, sitting for one hour, and hopping. Because LEFS scoring assigns lower values to greater difficulty, these activities represent the most affected functional domains in the present sample. The prominence of transfer-related tasks, dynamic lower-limb activities, and sustained sitting is clinically plausible because these movements require coordinated hip mobility, pelvic control, gluteal muscle function, and tolerance to compression or stretch in the deep gluteal region. These patterns correspond with the established symptom profile of piriformis syndrome, in which pain may be aggravated by hip flexion, adduction, internal rotation, stair climbing, sitting, and activities that increase tension across the piriformis muscle or sciatic nerve interface (4,5,10).

The observed pain distribution is comparable to findings from previous studies that identified substantial pain levels in populations exposed to prolonged seated postures. Faryad et al. reported a significant association between longer continuous sitting and piriformis syndrome among tailoring professionals, with higher pain severity among individuals with prolonged occupational exposure (8). Although tailors and office workers differ in work demands, both groups share sustained sitting as a common mechanical exposure. Similarly, Ali et al. reported piriformis syndrome among prolonged-sitting office workers and described its effect on physical activity and quality of life (12). The present study extends this occupational perspective by quantifying pain intensity and specific LEFS activity limitations among FAIR-positive office workers, thereby adding functional detail to the clinical burden associated with suspected piriformis syndrome in sedentary work settings.

Correlation analysis showed statistically significant associations between pain intensity and selected LEFS functional activities. Pain intensity was associated with squatting ($r = 0.262$, $p = 0.025$), walking two blocks ($r = -0.283$, $p = 0.015$), stair use ($r = 0.304$, $p = 0.009$), and making sharp turns while running fast ($r = 0.361$, $p = 0.003$). The negative association between pain intensity and walking two blocks is directionally consistent with the original LEFS scoring system, indicating that higher pain was associated with poorer walking-related functional ability. However, the positive correlations observed for squatting, stair use, and sharp turns require cautious interpretation because higher LEFS item scores represent better function unless reverse coding was used during analysis. These findings may therefore reflect coding variation, response-pattern effects, or data-entry direction rather than a direct clinical relationship. Before final publication, the original coding scheme should be verified and, if necessary, the correlation analysis should be repeated using correctly oriented LEFS scores or reverse-coded disability scores. This correction is essential because interpretation of the pain–function relationship depends on whether higher values represent functional ability or functional limitation.

Despite this caution, the pattern of affected activities remains clinically meaningful. Tasks such as car transfers, uneven-ground running, hopping, squatting, stair use, and sharp turns require hip stabilization, dynamic balance, weight transfer, and rotational control. In individuals with piriformis-related pain, these movements may provoke symptoms through increased demand on the deep external rotators, altered neuromuscular control, or mechanical irritation near the sciatic nerve. The systematic review by Monteleone et al. emphasized that piriformis syndrome may present with diverse clinical features and often requires careful correlation of symptoms, provocative testing, and functional aggravating factors (10). The present findings support the need to evaluate not only pain intensity but also activity-specific limitation when assessing office workers with suspected piriformis syndrome.

The study has important clinical implications for occupational health and rehabilitation practice. Office workers with prolonged sitting exposure may benefit from early screening when they report buttock pain, posterior thigh symptoms, sitting intolerance, or difficulty with hip-demanding activities.

Workplace interventions should emphasize ergonomic modification, posture variation, scheduled movement breaks, avoidance of sustained pressure over the gluteal region, and education regarding sitting habits. Physiotherapy management may include piriformis stretching, hip mobility exercises, gluteal strengthening, lumbopelvic stabilization, neural mobility where appropriate, and progressive functional retraining. However, because the present study was cross-sectional, these recommendations should be viewed as clinically reasonable implications rather than causal conclusions.

Several limitations must be acknowledged. First, the study used a non-probability convenient sampling technique, which limits generalizability. Second, all participants were selected on the basis of positive FAIR test findings, so the study cannot estimate the true prevalence of piriformis syndrome among all office workers unless the total number screened and the number testing positive are reported. Therefore, the results should be interpreted as describing pain and functional limitation among FAIR-positive office workers rather than as a population prevalence estimate. Third, the study did not include a comparison group of FAIR-negative office workers or non-sedentary workers, limiting causal inference regarding prolonged sitting. Fourth, potential confounders such as body mass index, duration of employment, total sitting hours, workstation ergonomics, physical activity level, and history of low back pain were not analyzed. Fifth, the LEFS correlation direction requires verification because the interpretation depends on whether the original or reverse-coded scoring direction was used. Future studies should use probability-based sampling where feasible, report the total screened denominator, include ergonomic and exposure variables, calculate total LEFS scores, adjust for potential confounders, and present confidence intervals for key estimates.

In summary, the findings indicate that office workers with FAIR-positive findings suggestive of piriformis syndrome experienced substantial pain and measurable functional limitation, particularly in transfer-related, sitting-related, and dynamic lower-limb activities. The study contributes useful descriptive evidence regarding the clinical burden of suspected piriformis syndrome in a sedentary occupational group, but the results should be interpreted cautiously because of the cross-sectional design, convenience sampling, absence of a screened denominator, and the need to verify LEFS coding before final interpretation of the pain–function correlations.

## CONCLUSION

Office workers with positive FAIR test findings suggestive of piriformis syndrome demonstrated clinically meaningful pain and mild-to-moderate lower-extremity functional limitation, with pain scores concentrated entirely in the moderate-to-severe range and functional difficulty most evident in car transfers, uneven-ground running, hopping, sitting for one hour, lifting from the floor, and rolling over in bed. Significant associations were observed between pain intensity and selected LEFS activities, although the direction of some correlations should be interpreted cautiously and verified against the original LEFS coding scheme. These findings suggest that FAIR-positive office workers may experience an important functional burden that warrants early clinical screening, ergonomic education, movement-based workplace strategies, and targeted rehabilitation; however, the study should be interpreted as a descriptive analysis of FAIR-positive office workers rather than a true prevalence estimate unless the total screened office-worker population is reported.

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