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Exploring the Prevalence of Patellofemoral Pain Syndrome and Its Psychological Impact on Health among Teachers: A Cross-Sectional Study

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ABSTRACT

Educators spend extended hours on their feet, seated, and engaging in repetitive activities that lead to ergonomic strain. Educating is a challenging profession. Musculoskeletal problems, especially Patellofemoral Pain Syndrome (PFPS), a prevalent knee issue, could arise from these workouts. It appears as pain in the kneecap when carrying weight or sitting for long durations. Educators face hazards from extended periods of standing, improper posture, and continuous high levels of physical and emotional strain. The effects of PFPS are intensified by weakness, ineffective mechanics, and strain.This study aims to evaluate patellofemoral pain syndrome and its psychological impact on health among schoolteachers. To determine the prevalence of Patellofemoral Pain Syndrome (PFPS) and its associated psychological impact among schoolteachers, a cross-sectional study was conducted for six months in eight schools. Using convenience sampling, teachers aged 18-40, having worked for at least a year, will be selected. Data were collected in person through SNAPPS for PFPS, and the SF-12 Health Survey for psychological and general health surveys. Descriptive statistics and Chi-square tests were applied using SPSS 26 to evaluate the data, with a significance level of $p < 0.05$.The study evaluated 127 school teachers to assess the prevalence of patellofemoral pain (PFP) and its relationship with mental health. Most participants were young females (21–30 years) working over five hours daily. Around 38–39% reported knee pain, with difficulties in sitting, stair climbing, squatting, and walking. Mental health was moderate overall. PFP showed a strong negative correlation with mental health ($r = -0.671$) and was significantly associated with marital status ($p < 0.05$). The findings highlight that PFP is common among teachers and is linked to functional limitations and poorer mental health. This emphasizes the need for early identification and a holistic treatment approach, including both physical and psychological support, to improve overall wellbeing and job performance.The study's results indicate that patellofemoral pain is prevalent among teachers and is associated with significant functional limitations and mental health issues. PFP and mental well-being are significantly negatively correlated, highlighting the need for prompt identification and comprehensive treatment approaches. To enhance overall wellbeing, these strategies must incorporate psychological assistance alongside the management of knee pain and physical functionality. The findings underscore the importance of adopting a proactive and holistic strategy for occupational health in teachers to improve long-term musculoskeletal and mental health results, job performance, and overall quality of life.

Keywords: *Patellofemoral pain syndrome, Knee disorder, Musculoskeletal pain, Quality of life, Anterior knee pain, Mental health*

INTRODUCTION

The teaching profession requires a high level of mental, physical, and emotional commitment. Teachers are responsible for planning, delivering, and assessing lessons, which include activities such as lesson preparation, classroom teaching, writing on boards, and grading students' work. These tasks often involve prolonged standing, repetitive movements, and maintaining awkward postures, which place stress on different body joints.

In addition to physical demands, teaching also involves significant work-related stress. Teachers manage large classrooms, often with more than thirty students, requiring constant multitasking and divided attention. They must answer questions, guide students, and use teaching tools like whiteboards and computers simultaneously. Furthermore, administrative duties and extracurricular activities increase their workload, leading to fatigue and mental pressure.

This combination of physical strain and psychological stress makes teachers more vulnerable to musculoskeletal disorders. While lower back pain is common, another important condition is Patellofemoral Pain Syndrome (PFPS). PFPS is a condition that causes pain around or behind the kneecap and is associated with activities such as walking, climbing stairs, squatting, running, and prolonged sitting.

PFPS, also known as "runner's knee," affects both active and working individuals. It may result from overuse, muscle weakness, joint misalignment, or soft tissue problems. Teachers are particularly at risk because their daily activities involve continuous stress on the knee joint through standing, walking, and sitting for long periods.

The symptoms of PFPS include pain during movement, especially when bending the knee, climbing stairs, or squatting. Some individuals may also experience a grinding or clicking sensation in the knee. In severe cases, PFPS can cause functional limitations, making it difficult to perform daily tasks and professional responsibilities. This can reduce participation in physical activities and negatively impact overall quality of life.

The causes of PFPS are multifactorial. Physical factors include weak muscles (such as quadriceps and hamstrings), tight soft tissues, and poor posture, all of which affect knee movement and increase stress on the joint. Repetitive strain and poor ergonomic practices also contribute to its development. Alongside physical factors, psychological aspects like stress, anxiety, and depression can worsen pain perception and reduce coping ability.

Ergonomic factors in teaching environments further increase the risk. Teachers often adopt poor postures, such as bending the neck while writing on boards or leaning forward while marking papers. Prolonged standing, improper seating, repetitive movements, and carrying heavy materials like books and laptops add to the strain. Nursery teachers face even greater physical demands due to frequent bending and continuous movement.

To reduce the risk of PFPS, preventive strategies are essential. Improving classroom ergonomics, such as proper board positioning and supportive furniture, can help minimize strain. Maintaining correct posture, avoiding prolonged standing, and wearing comfortable footwear are also important steps.

Physical activity plays a key role in prevention and management. Strengthening exercises for the quadriceps, hamstrings, and hip muscles, along with flexibility training, can improve joint stability. Taking regular breaks and avoiding long periods of static posture can also reduce stress on the body. Early physiotherapy intervention can help manage symptoms and prevent worsening of the condition.

Addressing psychological health is equally important. Stress management, balanced workload, and a healthy work-life balance can reduce mental pressure and its effects on physical health. Awareness and early diagnosis are crucial in preventing long-term complications.

In conclusion, teaching is a demanding profession that exposes individuals to both physical and psychological stress, increasing the risk of PFPS and other musculoskeletal disorders. A comprehensive approach that includes ergonomic improvements, physical exercise, stress management, and early treatment is essential. These measures can improve teachers' health, enhance their performance, and promote a better quality of life.

METHODOLOGY

Study Design:

This study followed a cross-sectional design.

Sampling Technique:

A non- probability convenience sampling technique was employed to recruit eligible school teachers from different schools across Karachi.

Outcome Measure:

Musculoskeletal discomfort was evaluated in this study, revealing a high prevalence of pain related to occupational strain. These findings are relevant to Patellofemoral Pain Syndrome (PFPS), as prolonged standing, repetitive movements, and poor ergonomics increase stress on the knee joint, contributing to PFPS.

Data Analysis:

Data analysis was performed using SPSS software. Graphic measurements, such as means and standard deviations, were used to account for quantitative factors. To determine any importance association between subjective variables, the Chi-square test was used. (A P-value of 0.05 is considered enormous).

Ethical Considerations:

Ethical approval for this study was obtained from the institutional review board of the respective schools involved. All participants were clearly informed about the purpose, procedures, and voluntary nature of the research before data collection. Participation was completely voluntary, and teachers were given the option to withdraw at any point without any consequences. Written informed consent was obtained from each participant, and anonymity and confidentiality of the data were strictly maintained. The data collected was stored securely and used solely for academic research purposes. The study involved no physical or psychological risk to the participants and did not interfere with their academic or personal activities. There were no conflicts of interest declared by the researchers.

Reliability:

The reliability of the SNAPPS and SF-12 questionnaires was assessed using Cronbach's alpha in SPSS. Values above 0.70 indicate acceptable to excellent internal consistency. In this study, both tools showed satisfactory reliability, confirming they were consistent and suitable for measuring patellofemoral pain and

quality of life.

RESULTS AND FINDINGS

Introduction:

This chapter presents the statistical analysis of variables and their relationships. It includes descriptive statistics, data visualization, correlation, and chi-square tests. Diagnostic tests like reliability and normality are also performed to ensure data validity. The chapter ends with a summary of findings and hypothesis results.

Descriptive Statistics:

Table 1: Descriptive Analysis of demographics Scale:

Elements	N	Min.	Max.	Mean	SD	Variance
Age	127	1	4	2.10	0.70	0.49
Gender	127	1	2	1.82	0.39	0.15
Marital	127	1	2	1.36	0.48	0.23
Working Hours	127	1	2	1.69	0.47	0.22
Working days	127	5	8	5.71	0.54	0.29
Years of Experience	127	1	3	1.26	0.55	0.30

Table 1 presents the descriptive statistics of 127 participants. The sample mainly consisted of young individuals, with a majority being female and single. Most participants worked more than 5 hours per day and around 5–6 days per week. Additionally, the majority had up to 5 years of professional experience.

Overall, the data reflects a predominantly early-career demographic profile.

Table 2: Descriptive Analysis of SNAPPS Scale:

Elements	N	Min.	Max.	Mean	SD	Variance
Are you aged over 18?	127	1	1	1.00	0.00	0.00
Are you aged under 40?	127	0	1	0.96	0.20	0.04
Have you ever been to doctor because of knee problem?	127	0	1	0.38	0.49	0.24
Have you had pain or problem in the last year in or around the knee?	127	0	1	0.39	0.49	0.24

In which knee have you had pain or problem?	127	0	1	0.66	0.48	0.23
Have you had surgery on your knee?	127	0	1	0.05	0.21	0.05
Have you ever had a kneecap?	127	0	1	0.10	0.30	0.09
Since starting with your knee problem, does your knee ever swell up?	127	0	1	0.27	0.44	0.20
Have you had pain and discomfort for more than one month?	127	0	1	0.49	0.50	0.25
Would you suffer from pain or difficulty in sitting for a long time?	127	0	1	0.56	0.50	0.25
Would you suffer from pain or difficulty with going up stairs?	127	0	1	0.58	0.50	0.25
Would you suffer from pain or difficulty with going downstairs?	127	0	1	0.45	0.50	0.25
Would you suffer from pain or difficulty with squatting?	127	0	1	0.48	0.50	0.25
Would you suffer from pain or difficulty standing for long periods?	127	0	1	0.56	0.50	0.25
Would you suffer from pain or difficulty with walking un a level surface?	127	0	1	0.33	0.47	0.22
Would you suffer from pain or difficulty with getting up out of a chair?	127	0	1	0.48	0.50	0.25
Would you suffer from pain or difficulty with kneeling?	127	0	1	0.54	0.50	0.25

Would you suffer from pain or difficulty with walking on uneven surfaces?	127	0	1	0.54	0.50	0.25
Would you suffer from pain or difficulty with walking down slopes?	127	0	1	0.39	0.49	0.24
Would you suffer from pain or difficulty with walking up slopes?	127	0	1	0.47	0.50	0.25
Would you suffer from pain or difficulty with hopping?	127	0	1	0.39	0.49	0.24
Would you suffer from pain or difficulty with jumping?	127	0	1	0.44	0.50	0.25
Would you suffer from pain or discomfort with running?	127	0	1	0.44	0.50	0.25
Thinking about your right knee, what do you consider your main problem with your knee?	127	0	3	1.26	1.39	1.94
Thinking about your right knee, did your current knee problem come on?	127	0	4	1.03	1.33	1.78
Thinking about your left knee, what do you consider your main problem with your knee?	127	0	3	1.13	1.37	1.89
Thinking about your left knee, did your current knee problem come on?	127	0	4	0.98	1.35	1.81
Considering both your knees, which would you say is the knee that gives you the most problems?	127	1	5	2.20	1.33	1.78

Table 2 shows that all participants were over 18 years old, with most under 40. Around 38–39% reported knee pain or doctor visits, while surgery and severe knee issues were rare. Many participants experienced functional difficulties such as sitting for long periods, climbing stairs, squatting, and standing. Moderate difficulty was also reported in activities like kneeling and walking on uneven surfaces. Overall, the results indicate that knee pain and related functional limitations are common and affect daily as well as physical activities.

Table 3: Descriptive Analysis of SF-12 Scale

Elements	N	Min.	Max.	Mean	SD	Variance
In general, would you say your health is:	127	1	4	2.41	0.98	0.96
Activities you might do during a typical day. Does your health now limit you in these activities?	127	1	3	2.17	0.68	0.46
Moderate activities such as moving a table, pushing a vacuum cleaner, bowling.	127	1	3	2.23	0.78	0.61
Climbing several lights of stairs	127	1	3	2.10	0.74	0.55
Emotional problems (such as feeling depressed or anxious?	127	1	2	1.43	0.50	0.25
Did work or activities less carefully than usual?	127	1	2	1.48	0.50	0.25
Problems with your work or other regular daily activities as a result of any physical health?	127	1	2	1.46	0.50	0.25
Were limited in the kind of work or other activities.	127	1	2	1.51	0.50	0.25
Interfere with your normal work (including work outside the home and housework)?	127	1	4	2.96	0.85	0.72
How much time during the past 4 weeks have you felt calm and peaceful?	127	1	6	3.76	1.44	2.09
How much time during the past 4 weeks did you have a lot of energy?	127	1	6	3.72	1.40	1.95
How much time during the past 4 weeks have you felt downhearted and blue?	127	1	6	4.25	1.37	1.87
Physical health or emotional problems interfered with your social activities	127	1	5	3.40	1.02	1.04

Table 3 shows that participants had a moderate level of overall health, generally between "good" and "fair." They experienced mild to moderate limitations in physical activities like daily tasks and climbing stairs. Work-related limitations due to physical and emotional health were mostly minor, although some reported moderate interference in normal work. Mental health was generally moderate, with some signs of mild emotional distress. Social activities were also slightly affected. Overall, physical limitations were mild, while emotional and social well-being showed more variation.

Correlation Matrix

Correlation is a statistical technique that ascertains whether and how strongly set of variables are related. In this research, correlation coefficient computed from the sample data measures the strength and direction (positive or negative) of a linear relationship between dependent and independent variables. If the value of the correlation coefficient is significant among the variable (s), we would have to go to evaluate the level of parity between the actual and expected results through Chi- square.

Table 4: Correlation Analysis of SNAPPS:

The correlation analysis shows that age has little impact on PFP symptoms. However, visiting a doctor is moderately linked with knee pain and the affected knee. Strong correlations were found between PFP and functional difficulties such as sitting, climbing stairs, squatting, and walking, as well as activities like running and jumping. Both knees contributed to the reported problems, with the most affected knee strongly reflecting overall PFP severity. Overall, PFP is closely associated with pain location and functional limitations.

Table 5: Correlation Analysis of SF-12:

The correlation analysis shows that perceived mental health is strongly linked to overall physical and emotional health. Self-rated general health (r = 0.60), limitations in daily activities, moderate physical tasks, and climbing stairs (r = 0.64–0.72) are positively associated with mental well-being. Emotional problems, including depression or anxiety, also show strong correlations with mental health (r = 0.70) and with difficulties in work or daily tasks (r = 0.63–0.70). Short-term mood measures like calmness, energy, and feeling downhearted have weaker associations (r = 0.06–0.35), while social activity interference shows a moderate correlation (r = 0.30). Overall, mental health is most closely related to general health perception, emotional problems, and functional limitations.

Table 6: Correlation Analysis of DVs:

Dependent variable	PFP Prevalence	Mental health status
PFP Prevalence	1.000	-0.671
Mental health status	-0.671	1.000

Table 6 shows a strong negative correlation (r = -0.671) between PFP prevalence and mental health, indicating that higher PFP is linked to poorer mental well-being. This suggests that managing knee pain may improve mental health, and supporting mental health could reduce the impact of PFP.

Chi-Square is a statistical measure which compares the actual and expected results leading to accept or reject null hypothesis. We reject the null hypothesis if the chi-square value is greater than the critical value. If you reject the null hypothesis, you can conclude that your data are significantly different from what you expected. Here we assume three (03) null hypotheses are as under to assess:

- HO1: There is no significant relationship between age and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA1: There is significant relationship between age and prevalence of patellofemoral pain syndrome and

its psychological impact on health among school teachers

- HO2: There is no significant relationship between Gender and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA2: There is significant relationship between Gender and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HO3: There is no significant relationship between marital status and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA3: There is significant relationship between marital status and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HO4: There is no significant relationship between working hours and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA4: There is significant relationship between working hours and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HO5: There is no significant relationship between working days and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA5: There is significant relationship between working days and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HO6: There is no significant relationship between year of experience and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers
- HA6: There is significant relationship between year of experience and prevalence of patellofemoral pain syndrome and its psychological impact on health among school teachers.

Table 8: Chi-Square Tests:

Test Element	Pearson Chi-Square	p-value	Result
Age * PFP prevalence	8.35	0.21	Null hypothesis rejected
Gender * PFP prevalence	0.25	0.88	Null hypothesis rejected
Marital * PFP prevalence	9.43	0.01	Null hypothesis rejected
Working Hours * PFP prevalence	4.28	0.12	Null hypothesis rejected

Working days * PFP prevalence	4.00	0.68	Null hypothesis rejected
Years of Experience * PFP prevalence	4.64	0.33	Null hypothesis rejected
Age * Mental health status	8.03	0.24	Null hypothesis rejected
Gender * Mental health status	4.22	0.12	Null hypothesis rejected
Marital * Mental health status	6.84	0.03	Null hypothesis rejected
Working Hours * Mental health status	2.05	0.36	Null hypothesis rejected
Working days * Mental health status	6.79	0.34	Null hypothesis rejected
Years of Experience * Mental health status	2.40	0.66	Null hypothesis rejected

Table 8 Chi-Square analysis shows that marital status is the only demographic/work-related factor significantly associated with both PFP prevalence ($\chi^2 = 9.43$, $p = 0.01$) and mental health ($\chi^2 = 6.84$, $p = 0.03$). Other variables—age, gender, working hours, working days, and experience—showed no significant associations.

Diagnostic Analysis

Diagnostic analyses in research are to be performed to check that all conditions for application of statistical analysis have verified or not with a substantial degree of accuracy. In this research we have checked (i) reliability and (ii) multicollinearity

(iii) Normality and (iv) homogeneity of all independent variables.

Reliability: Reliability of a questionnaire as a survey instrument ensures the accuracy of measures by assessing its internal consistency. There are different methods available to evaluate the internal consistency of the questionnaire.

Table 10: Reliability Statistics:

Cronbach's Alpha	Cronbach's Alpha	N of sub-scales
SNAPPS	0.920	28
SF-12	0.739	13
Accumulated	0.623	41

Table 10 shows that SNAPPS had excellent reliability (α = 0.920), SF-12 had good reliability (α = 0.739), and the combined scale showed moderate consistency (α = 0.623), indicating high reliability for knee pain, acceptable reliability for health status, and moderate consistency overall.

Normality Test: Normality Test determines whether sample data has been drawn from a normally distributed population. Here we are using the Shapiro- Wilk Test to assess the normality; where value of the Shapiro-Wilk test is greater than 0.05, it assumes the data is normal.

Table 11: Normality test for SNAPPS:

Shapiro-Wilk				
PFP prevalence		Statistic	Sig.	Remarks
Age	Up to 20 Years	0.64	0.00	Normal data
	21-30 years	0.65	0.00	Normal data
	31-40 years	0.60	0.00	Normal data
	Above 40 years			Omitted
Gender	Male	0.75	0.00	Normal data
	Female	0.77	0.00	Normal data
Marital status	Single	0.67	0.00	Normal data
	Married	0.51	0.00	Normal data
Working hours	Up to 5 hours	0.60	0.00	Normal data
	Above 5 hours	0.65	0.00	Normal data
Working days	5 Days	0.63	0.00	Normal data
	6 Days	0.65	0.00	Normal data
	7 Days			Omitted
	8 Days			Omitted
Years of experience	Up to 5 years	0.65	0.00	Normal data
	5-10 years	0.57	0.00	Normal data
	Above 10 years	0.65	0.00	Normal data

The table 11 shows normality of PFP prevalence across different demographic and work-related groups was assessed using the Shapiro-Wilk test. For all age brackets, including “Up to 20 years” (0.64), “21–30 years” (0.65), and “31–40 years” (0.60), the test indicated normal distribution with p-values of 0.00. The “Above 40 years” category was omitted due to insufficient data. Gender-wise, both males (0.75) and females (0.77) demonstrated normal data distribution. Similarly, marital status groups, single (0.67) and married (0.51), showed normality. Regarding work characteristics, respondents working up to 5 hours (0.60) and above 5 hours (0.65), as well as those working 5 days (0.63) or 6 days (0.65) per week, exhibited normal distribution; data for 7 and 8 working days were omitted. For years of experience, all groups, including up to 5 years (0.65), 5–10 years (0.57), and above 10 years (0.65), also met normality assumptions. Overall, the results suggest that PFP prevalence data are normally distributed across most demographic and occupational subgroups, allowing for parametric analyses.

Table 12: Normality test for SF-12:

Shapiro-Wilk				
Mental health status		Statistic	Sig.	Remarks
Age	Up to 20 Years	0.80	0.00	Normal data
	21-30 years	0.75	0.00	Normal data
	31-40 years	0.80	0.00	Normal data
	Above 40 years	0.50	0.00	Normal data
Gender	Male	0.66	0.00	Normal data
	Female	0.64	0.00	Normal data
Marital status	Single	0.76	0.00	Normal data
	Married	0.76	0.00	Normal data
Working hours	Up to 5 hours	0.77	0.00	Normal data
	Above 5 hours	0.77	0.00	Normal data
Working days	5 Days	0.77	0.00	Normal data
	6 Days	0.76	0.00	Normal data
	7 Days			Omitted
	8 Days			Omitted
Years of experience	Up to 5 years	0.77	0.00	Normal data
	5-10 years	0.78	0.00	Normal data
	Above 10 years	0.86	0.14	Normal data

Table 12 shows normality of data for both PFP prevalence and mental health status was assessed using the Shapiro-Wilk test across various demographic and work- related groups. For PFP prevalence, all age groups up to 40 years demonstrated normal distribution (statistics ranging from 0.60 to 0.65, p = 0.00), while the "Above 40 years" category was omitted due to insufficient data. Gender (male = 0.75, female = 0.77), marital status (single = 0.67, married = 0.51), working hours (up to 5 hours = 0.60, above 5 hours = 0.65), working days (5 days = 0.63, 6 days= 0.65), and years of experience (up to 5 years = 0.65, 5–10 years = 0.57, above 10 years = 0.65) all showed normal distribution. Similarly, mental health status showed normal data across most groups: age up to 20 years (0.80), 21–30 years (0.75), 31–

40 years (0.80), and above 40 years (0.50); gender (male = 0.66, female = 0.64); marital status (single = 0.76, married = 0.76); working hours (up to 5 hours = 0.77, above 5 hours = 0.77); working days (5 days = 0.77, 6 days = 0.76); and years of

experience (up to 5 years = 0.77, 5–10 years = 0.78, above 10 years = 0.86). Categories with very small sample sizes, such as 7 and 8 working days, were omitted. Overall, these results indicate that both PFP prevalence and mental health status data are normally distributed, supporting the use of parametric statistical analyses.

Homogeneity Test

In the test of homogeneity, we select random samples from each subgroup or population separately and collect data on a single categorical variable.

Study limitations:

This study has several limitations, including its cross-sectional design, which prevents establishing causal relationships. The use of convenience sampling and a limited sample from selected schools in Karachi reduces generalizability. Self-reported data may introduce bias, and the relatively small sample size limits statistical power. Additionally, important confounding factors such as pre-existing conditions, ergonomics, and lifestyle habits were not considered.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future research can improve by using longitudinal designs to establish causality, applying probability-based sampling for better representativeness, and increasing sample size for stronger analysis. Incorporating objective assessments along with questionnaires and controlling confounding factors would enhance accuracy and validity. Expanding the study across more schools and districts would also improve generalizability.

CONCLUSION

This study aimed to determine the prevalence of patellofemoral pain (PFP) among teachers and examine its relationship with mental health, as well as demographic and occupational factors. The findings revealed a high prevalence of PFP, with many participants experiencing moderate to severe knee pain and functional limitations in daily activities such as sitting, standing, climbing stairs, squatting, and walking. These limitations significantly affected their professional performance and daily routines.

Most participants were young, predominantly female, and early in their careers, yet a considerable number reported knee pain, suggesting that occupational demands may contribute to the early onset of PFP. Although females showed a higher frequency of severe pain, no significant association was found between gender and PFP.

A strong negative relationship was observed between PFP and mental health, indicating that increased pain levels were associated with poorer psychological well-being, greater emotional distress, and reduced participation in daily and social activities. Functional impairments were also strongly linked with knee pain, especially during physically demanding tasks.

Among demographic factors, only marital status showed a significant association, with married individuals experiencing higher levels of PFP and poorer mental health. Other factors such as age, gender, work duration, and experience were not significantly related. The results were supported by reliable and valid measurement tools, with strong internal consistency observed for both questionnaires. Overall, the study highlights that PFP is common among teachers and has a significant impact on both physical functioning and mental health, emphasizing the need for early identification and comprehensive management strategies to improve quality of life and work performance.

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CONFLICT OF INTERST

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