

Frequency of Patellofemoral Pain in Female Athletes of Different Universities.

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Highlights:

- Pain is measured one of the most recognized types of knee storms, and adults, adolescents and physically dynamic population.
- These are irregularities in the frequency and omnipresence announced in relation to the distribution of human services and subsidies to research.
- There is an unequivocal need to recognize with precision the study of the transmission of patellofemoral torment diseases.

Abstract

Objective:

The objective is to determine frequency of patellofemoral pain in university female athletes.

Methodology:

A cross sectional study was conducted and data was collected through Non- probability convenient sampling. Study sample of 106 females was selected. This study was followed in a period of 6 months. This study was conducted from university of Lahore, university of central Punjab, and comsats university Lahore. Analysis was done by the spss versoin 25.0. Factual instruments applied in the current investigation incorporate frequencies, rate, mean and standard deviation.

Results:

The results concluded that most of the female athletes had patellofemoral pain. 160 females were taken for the test from which 34/160(21.3%) feel limp, 104/160(65%) felt pain while walking, all of them felt difficulty climbing stairs, 25/160(15.6%) were unable to run, and

54/160(33.8%) felt slight pain while 73/160(45.6%) felt severe pain. Overall most of them were in pain after patellofemoral syndrome.

Conclusions:

The study highlighted that a high frequency of patellofemoral pain was found in female athletes. The athletic females needed strategies to overcome the patellofemoral pain. It will reduce the frequency of patellofemoral pain. There is a need of further research to investigate the occurrence of patellofemoral pain experienced by the females.

Key Words:

Patellofemoral pain, athletes, knee pain, epidemiology, assessment questionnaire, overweight.

Introduction:

Patellofemoral pain (PFP) has a great dominance when all is said in practice, orthopedic and sports environments. Pain is exacerbated by enterprises that increase the stack of the patellofemoral joint (PFJ), including running, squatting, and pedaling, with word-related and physical limits being regularly reduced. The condition affects a wide range of ages and frequently begins in early adulthood. It is now and then called "sprinter's knee" or "jumper's knee" since it is normal in individuals who take an interest sports especially females and youthful grown-ups. Walking is the best known route on which an individual can stay physically active¹. In any case, knee torture can be a major problem among the most dynamic population, for example, juvenile adults.¹ The dominance of knee torture

was 3.9% among offspring of 9-10 years, 3.3 % in the age range 10-19 years, 25% in adults aged 18-35 years, 42.8% in the more established than 45 years, and approximately 37% in the older age group 65 years and older.² In the US, an predictable 126.6 million Americans have suffered the ill effects of a musculoskeletal problem, with an estimated \$ 213 billion a year in social security costs and carelessness of disorder.³ With the appearance of neurodynamic hypothesis, a few scientists have recommended that minor nerve harm or modified mechanosensitivity of the femoral nerve may add to foremost knee torment.⁴ Knee torture is the second most pervasive illness, and patellofemoral torture (PFP) is considered one of the best known types of knee torture, with a transparency of between 15% and 45% is depicted as not hideous in nature, with a diffuse front knee torment on exercises that accumulate in the joint, such as stairs, running, climbing and sliding.^{5,6} In China, 39% of youth aged 16 years or older had knee pain. In women, 2.23 occasions are more likely to have patello-femoral torment than men. In a study, Smith BE claimed that fewer perinatal ailments, higher neonatal burden, the more live births and less complexities, for example preeclampsia, can occur in women with latent versus dynamic illnesses at the time of onset. Such benefits have been accounted for by fundamental lupus erythematosus (SLE), rheumatoid joint pain (RA), antiphospholipid immune response disorder (APS), ankylosing spondylitis, sclerosis, vasculitis and the fiery myopathies.⁷ The incidence of anterior knee torture among women aged 18-35 was 12-13%.⁸ An extensive Q score of 2-3 degrees is seen to cause knee pain in young women who are 15-23 years old. A 16-year follow-up was done after young female ladies who had idiopathic front knee torture, 71% of young women continued to have knee torture for 20 years. It is working on transferring the whole body weight in many exercises in our daily lives.⁹ Several pathologies that cause knee

torture are patello-femoral agony disorder (PFPS) 13 / sprinter's knee, patellar malfunction, synovial al plica, chondromalacia patella, ilio-tibial band (ITB), contact syn-drems, meniscal tears, ligaments - two wounds for the most part ACL, patellar tendonitis, Osgood schlatter's disease, Hoffa's fat cushion, ailment sitis (prepatellar, infra-patellar, pes ancerine), dough puncher's sore, Reiter's disorder, septic arthritis, bipartite patella and stress fractures¹⁰ All of these pathologies are normal at a more juvenile age, as there are no degenerative procedures involved. To calculate age, female gender, extended record weight (BMI), smoking, previous knee jury, business-related components, body exercise and foot angulations, the most likely risk factors for knee injury incidence, business-related components, body exercise and foot angulations.¹¹ On the other hand, due to the large influence on authentic tests, this methodology may be overestimated.¹² The course and effect of forces through the tibial plateau.¹³ There are many other factors that make the females vulnerable to knee torture, for example female sex hormones that impede load shedding and, moreover, give a higher view of torment, higher rates of stiffness in female gender, use of p-peptic pills and wearing high obedient shoes. Psychological variables such as stress, despondency and poor perception also assume a job in higher perception of knee torture and disability.¹⁴ The purpose of the study which was conducted from females was to check the frequency of patellofemoral pain, what they are suffering, how many females are at risk of this pain so that we can recommend some cures, treatment and exercise to make them feel free of pain. There were a few studies which focused on this issue before so we thought this issue should be highlighted. Through this study we assessed a high frequency of female had knee pain, some were suffering from chronic pain.

Methodology:

A cross sectional study was used. Data was collected through non-probability sampling

technique from 106 female athletes. Data was collected in time period of 6 months including females with the ages (20 to 40) years from university of Lahore, university of Central Punjab and Comsats university Lahore. Data was collected through self-made questionnaire. The data was then analyzed using SPSS 25.0 version and Excel. For question variables mean and standard deviation was collected. For qualitative variables frequency and percentages were calculated. Participates were selected on the basis of inclusion criteria; 1-Female students, 2- Age between 20-40 years and exclusion criteria; 1- any other history of trauma, 2-Knee fracture. After taking the filled surveys the data was then analyzed by the SPSS 25.0 version and Excel to get the results. Mean and standard deviation values were collected for qualitative variables. Accurate statistical test was used for the analysis. Where P value was $P=0.54$

Results:

The data was taken from 160 different female athletes from different universities and institutes with the help of a self-made questionnaire. Then the data was analyzed through spss 22.0 and results were drawn. These results contain eleven tables and each table has its own figure or graph.

Characteristics	Frequency(%)				
	None	Slight	Severe	Unable to perform	Total
limp feel	10(6.3)	116(72.5)	34(21.7)	22(13.8)	160(100)
Pain while walking	4(2.5)	104(65.0)	33(20.6)	19(11.9)	160(100)
Difficulty stairs	4(2.5)	113(70.6)	4(2.5)	43(26.9)	160(100)
Pain running	8(5.0)	54(33.8)	73(45.6)	25(15.6)	160(100)
Pain prolonged sitting with knee flexed	8(5.0)	93(58.1)	37(23.1)	22(13.8)	160(100)
Swelling around knee	6(3.8)	73(45.6)	68(42.5)	13(8.1)	160(100)
Abnormal painful kneecap	16(10.0)	108(67.5)	36(22.5)	22(13.8)	160(100)
Atrophy of thigh	61(38.1)	93(58.1)	6(3.8)	93(58.1)	160(100)
Flexion deficiency	64(40.0)	81(50.6)	15(9.4)	108(67.5)	160(100)
Pain while squatting	16(10.0)	90(56.3)	108(67.5)	54(33.8)	160(100)

Table 1: Demographical Representation of Characteristic

Discussion:

Patellofemoral pain which is also known as patellofemoral pain syndrome describes pain of front knee and around the patella or kneecap. Previously studies were done to find patellofemoral pain's frequency in athletes. This research study was conducted in the duration of 6 months after the approval of synopsis. The above outcomes examine that a large proportion of the female participants had patellofemoral torment. 160 women were taken for the test from which 21.3 percent felt asleep, 75 percent felt torment while walking, each of them experienced difficulty climbing stairs, 15.6 percent failed to run, 33.8 percent felt slightly painful, while 45.6 percent experience severe torment. Generally, the majority of them were in pain following patellofemoral torment and decreased hip quality, while a current study by Roush et al (2012) examined the commonality of knee torture in women at an average time of 24.74 year. 12-13%.¹⁵ In the present study, 40.2 percent had female knee torment in the most important perspectives, and the majority of them showed left knee pain, and others noted knee torture in the right knee, while Roush also had the knee torment has 13% in the right side knee and 12% in the left side knee among the woman. Population of 18 to 35 years.¹⁶ The results of the current study show that female members had knee pain in exercises such as lethargy while walking 65.0%, climbing 11.9%, while 70.6% having slight torment, while 26.9% extreme had torment, with delayed sitting 58.1 had mild torment and 23.1 percent had severe torment, while an investigation by Sandow also found that female members between the ages of 10 to 20 years had a background characterized by by knee torture at the expulsion session (48.1%), climb the stairs (half) and squat. 15 Similarly, another study by Witonski showed that female members between the ages of 15 and 23 had similar knee torment to step down, climb stairs and sit out. Consequently, the findings of the present investigation are reliable with past investigations.¹⁷ Most members of this

investigation revealed that they had knee pain all the time without improving or aggravating their torment. A study by Stathopulu et al (2003) also showed similar outcomes that 91% of their members (at an average age of 22 years) were still in knee torment.¹⁸ He also noted that the only four members of his investigation did not have any treatment for their knee pain, which is inconsistent with this investigation, where most extreme members, for example 105 out of 165, have in no way addressed their knee torment, to any therapeutic expert.¹⁹ Our findings showed that there was a high ratio of female who had complain of patella femoral pain while resting as well as walking, climbing stairs, prolonged standing, prolonged sitting while a study done by Kannus and Nittymaki said that Ptallofemoral pain affects both male and female equally but comparing with female to becoming pain free, the prognosis for male was good more than twice but no further differences were found in sexes. Regarding the pain, athletes with a hypermobile joint seems to have a less good prognosis.²⁰

Conclusion:

The study highlighted that a high frequency of patellofemoral pain was found in female athletes. The athletic females needed strategies to overcome the patellofemoral aching. It will reduce the frequency of patellofemoral aching. Additional investigation is desirable to investigate the occurrence of patellofemoral aching experienced by the females.

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