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PREVALANCE OF PATELLAR TILT AMONG COLLEGE STUDENTS WITH SEDENTARY SITTING PATTERN.

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Background: Prolonged sedentary behavior among college students has been linked to various musculoskeletal issues, including patellar malalignment. Patellar tilt, a form of malalignment, can lead to anterior knee pain and functional limitations. Understanding its prevalence and associated factors is crucial for early intervention.

Purpose: To determine the prevalence of patellar tilt among college students engaged in prolonged sitting and to analyze its association with muscle imbalances, postural deviations, and knee pain.

Methods & Materials: A cross-sectional study was conducted at Sri Venkateshwara College of Physiotherapy, Puducherry, involving 384 college students aged 18–22 years with sedentary sitting patterns. Participants were selected using a random sampling method. Q-angle measurements were taken in both supine and standing positions using a long-arm goniometer. Anatomical landmarks, including the anterior superior iliac spine (ASIS), center of the patella, and tibial tubercle, were identified for accurate measurement. Participants were also evaluated for muscle imbalances, postural deviations, and reported knee pain. The treatment duration for interventions was set at 4 weeks.

Results: Abnormal Q-angle values were observed in 60% of participants for the left limb and 64% for the right limb, indicating a high prevalence of patellar tilt. Significant associations were found between prolonged sitting, muscle imbalances (such as tightness or weakness in the lower limbs), postural deviations, and the presence of knee pain.

Conclusion: The study highlights a substantial prevalence of patellar tilt among college students with prolonged sitting habits. The findings underscore the importance of addressing muscle imbalances and postural deviations to mitigate knee pain and functional limitations. Implementing physiotherapy interventions, including corrective exercises, stretching routines, and ergonomic modifications, is recommended to prevent and manage patellar tilt in this population.

Keywords: Q-angle, Patellar tilt, Postural deviations, Muscle imbalances, Knee pain.