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Screening for central sensitization in individuals with osteoarthritis knee: A cross sectional study

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**SCREENING FOR CENTRAL
SENSITIZATION IN INDIVIDUALS WITH
OSTEOARTHRITIS KNEE: A CROSS-
SECTIONAL STUDY**

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ABSTRACT

Study design: Cross-sectional study

Background: Knee osteoarthritis is primarily caused by wear and tear of the articular cartilage. Central sensitization is a central nervous system hyperexcitability responsible for chronification of pain. Its presence has been proven in many chronic pain conditions in previous studies. Therefore, the purpose of this study is to screen for the presence of central sensitization among knee osteoarthritis population.

Methods: 42 individuals with knee osteoarthritis diagnosed according to the ACR criteria were recruited. The participants were asked to fill the Central Sensitization Inventory questionnaire and along with that the Pain Pressure Threshold and Light Detection Threshold were assessed objectively. The descriptive statistics of the outcome measures were calculated for the statistical analysis. The comparison between each outcome measure was analyzed by using McNemar's and Fishers exact test. Statistical significance was inferred from $p < 0.05$.

Results: The three measurements failed to correlate with each other. Therefore, we calculated the positive response rate for each outcome individually. The questionnaire showed 9.51%, pain pressure threshold showed 38.1% and light detection threshold showed 21.3% positive rate among the population. Pain pressure threshold was found to be statistically significant during comparison.

Conclusion: In our study, we found pain pressure threshold showed a statistically significant response and positive response was seen among a higher proportion of females. Furthermore, we found a higher VAS score to be associated with a lower threshold at both the remote and local sites.

Keywords: Knee osteoarthritis, osteoarthritis knee, central sensitization, central pain modulation, central augmentation of pain.

