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## Evaluation of lower limb flexibility and injury occurrence among professional dancers in Lagos, Nigeria

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**Objective:** Dancers are highly trained athletes who are at the significant risk for injury due to intense competition and repetitive nature of their movement patterns. The study was designed to determine the lower limb flexibility and injury occurrence among professional dancers.

**Method:** This study used a convenience sampling technique to select the dance groups and conservative sampling technique was used for the dancers that met the inclusion criteria. The study adopted a prospective cross sectional survey design. A total of eighty two participants (Indigenous=28, ballet=26 and hip-pop=28) recruited from four dance companies in Lagos State participated in the study. Participants were made to complete a questionnaire on the epidemiological investigation of dance injuries. The flexibility of the hip abductors, medial and lateral rotators, hamstrings and the gastrocnemius muscles of all participants were measured in degree prior to warm up or stretching using goniometer.

**Results:** There was a significant relationship ( $p<0.043$ ) between the flexibility of hamstring group of muscles and injury occurrence among all participants. There was a significant relationship ( $p<0.001$ ) between the flexibility of the medial rotators and injury occurrence among indigenous participants, a significant relationship ( $p<0.002$  and  $p<0.043$ ) between the flexibility of both the hamstring and abductor group of muscles and injury occurrence respectively among ballet participants and a significant relationship ( $p<0.046$ ,  $p<0.017$  and  $p<0.047$ ) between the flexibility of the hamstring, abductor and medial rotator group and injury occurrence respectively among hip-hop participants. Also, there was a significant association ( $p<0.001$ ) between gender and injury occurrence and a significant association ( $p<0.009$ ) between type of dance and injury occurrence.

**Conclusion:** This study has shown that there is a significant relationship between flexibility and injury occurrence among dancers thus the lower the flexibility, the higher the injury occurrence. This suggests that flexibility is an intrinsic factor for injury prevention and that difficult choreographies should be performed in a manner that will not cause the dancers pain or discomfort and should be discontinued whenever it is causing pain.

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