

【Practice Article】

Relationship between Footwear and Walking Awareness, Physical Activity among Female University Students

Seiji Sakate¹⁾, Shusaku Sasada¹⁾

Abstract

Objective: To elucidate the relationship between walking awareness and physical activity in female university students wearing different types of footwear.

Methods: Two different studies were performed: (Study 1) a questionnaire-based survey on the relationship between walking awareness and footwear in 471 female university students (response rate: 73.1%) and (Study 2) a study of 9 healthy female university students (mean age: 20.8 ± 0.4 years) who do not exercise regularly. In study 2, their daily steps and physical activity intensity were measured for 4 consecutive weekdays using an accelerometer, and the results were compared between those who wear sneakers (Sn group) and those who wear other types (N-Sn group).

Results: In study 1, duration of comfortable walking was significantly longer in the following order: Sneakers; Sandals; High heel shoes, and has no relation to history of exercise, current exercise habits, and others. In study 2, since the numbers of steps were: $10,969 \pm 3,277$ steps in the Sn group and $9,591 \pm 2,212$ steps in the N-Sn group, there was no significant difference between them. Also, no significant difference in the intensity of physical activity was found between the following groups; 3-6 METs (Metabolic equivalents), more than 6 METs, and MVPA (moderate to vigorous intensity physical activity).

Conclusion: It was elucidated that although in female university students, each of the footwear types provides individuals with a different walking awareness, the types of footwear do not affect their daily step count and physical activity intensity.

Key words: footwear, physical activity, young women

1) Sagami Women's University, Sagamihara, Japan