

## Comparison of the Center of Pressure, Gait Angle, and Gait Time in Female College Students and Elderly Women

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**Abstract :** Purpose: The purpose of this study was to investigate the effects of aging on center of pressure, gait angle and gait time. Methods: 29 healthy female college students(FCS) and 28 elderly women (EW) were recruited to participate in this study. A gait analysis system( Gaitview, Korea) was used to collect the center of pressure in static state and gait angle with gait time in dynamic state. Results: Results of the center of pressure do not have significant differences between two groups. In the gait angle test, the FCS showed  $1.56\pm 5.2^\circ$  on their left while the EW showed  $9.76\pm 6.54^\circ$  on their left. In their right, the FCS showed  $2.85\pm 6.47^\circ$  and the EW showed  $10.27\pm 6.97^\circ$ . In the gait angle test, there was a significant difference in the gait time between the female college students and elderly women. A significant difference was evident in the gait time. The FCS on the left was  $0.87\pm 0.1\text{sec}$  while the EW's was  $1.28\pm 0.44\text{sec}$ . The FCS on the right was  $0.86\pm 0.09\text{sec}$  and the EW was  $1.1\pm 0.21\text{sec}$ . The results of this study revealed that the elderly participants aging musculoskeletal system and subsequent changes in their posture altered gait angle and gait time. Therefore, this widening is due to their need to leave their feet on the ground longer for stability slowing their movement. Conclusions: In conclusion, it is advisable to develop an exercise program for the elderly focusing on stability the prevention of falls.

**Keywords :** center of pressure, gait angle, gait time, elderly women

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