

عنوان مقاله:

The Spatiotemporal Parameters of Stair Locomotion in Individuals with Congenital Sight Loss and Full-sight

محل انتشار:

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خلاصه مقاله:

Stair ascent and descent is a challenging task for people with sight loss. Identifying the effects of lack of visual input in people with sight loss while stair ascent and descent can be effective in planning rehabilitation program and improving locomotion pattern. The purpose of the present study is to evaluate the spatiotemporal variables in stair ascent and descent in people with sight loss and comparing them with people with full-sight. In this study, the spatiotemporal variables of stair ascent and descent in people with sight loss were measured using 3D motion analysis device Vicon with frequency of 100-HZ. For within group analysis, repeated measure test and for that of between groups, independent sample t-test were used with level of significance of $p < .05$. The spatial-temporal gait parameters during stair ascent and descent were collected. The results showed that the people with sight loss had less speed, cadence and stride length comparing with people with full-sight ($p < .05$). Moreover, stride and step time, single and double support time and stance time were significantly more in people with sight loss comparing with the people with full-sight ($p < .05$). There was a significant difference in variables such as cadence and stance time between stair ascent and descent ($p < .05$) and in both groups the mentioned difference was the same ($p > .05$). Decreased speed and cadence and increased stance time represent motion deficiency in people with sight loss. Regarding the mentioned results, people with sight loss have cautious stair locomotion pattern and spatiotemporal variables in closed eye state in people with full-sight had weaker patterns comparing with people with loss sight.

کلمات کلیدی:

Sight loss, Spatiotemporal variables, Stair ascent and descent, Open and closed eyes

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