

عنوان مقاله:

The Neurophysiological Effect of Attentional Focus as a Function of Expertise in Postural Task

محل انتشار:

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خلاصه مقاله:

Background: Examining effects of attention on motor performance at the neurophysiological level, considering the skill level, seems there are still ambiguities. Objectives: The purpose of the present study was to examine the neurophysiological effect of Attentional Focus on in postural task as a function of skill level. The performance (postural sways) and muscular activity changes was recorded shift concurrently in two attentional conditions. Methods: ۲۰ gymnasts (۱۹-۲۶ Years old) participated and assigned to groups of skilled (۱۰ years' experience) and novices (۳-۵ years history of training in Gymnastics). All participant of both groups performed ten trails of semi-dynamic balance (۱۰ seconds) in tow conditions of internal and external focus in a counterbalanced order. Postural sways were measured using Biodex Stabilometer and Electromyography (EMG) signals of Tibalis Anterior and Soleus muscles recorded using ME۶۰۰۰ device. Data were data were analyzed using ۲×۲ mixed ANOVA. Results: Results showed higher performance (less postural sways) and reduced EMG under external focus condition for novices and lower EMG activity for experts. Conclusion: Research findings (enhanced performance and reduced EMG) support Constraint action hypothesis. Focus of attention can have profound effects on motor behavior and the underlying .neurophysiologic factors regardless of skill level but in behavioral level of analyze it effects depended on expertise

کلمات کلیدی:

Attentional Focus, Electromyography, Postural Sway, Balance, Athlete

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