

大学剣道および柔道競技者のバランス能の比較について

前阪茂樹, 木原健太, 藤田英二, 竹中健太郎, 下川美佳, 竹島伸生
鹿屋体育大学

キーワード: バランス能, 大学生, 剣道, 反応時間, 移動速度

【要旨】

本研究は大学生剣道競技者を対象に同じ武道の柔道競技者との比較から剣道競技者のバランス能の特徴を評価した。15年程度継続している剣道競技者10名と同柔道競技者10名の総数20名を対象(平均年齢 22±1歳)とした。バランス能の指標は, 1)静的バランスとして重心動揺速度(Sway Velocity: SV), 2)動的バランス指標として安定性の限界値(Limits of Stability: LOS)とした。SVは, 固い台上および柔らかい台上での開眼および閉眼時とそれらを総合した変数(composite: comp)で評価した。LOSは, 初期到達点(EXE), 最高到達点(MXE), 反応時間(RT), 平均移動速度時間(MVL)および方向制御(DCL)とした。テストは, 8方向(前後左右斜め)の総合値(comp)を指標とした。2群間の身長, 体重およびBMIには有意差が認められず, 形態的な相違がなかった。静的バランス指標はいずれの指標も群間に有意差が認められなかった。動的バランス指標は, RTcompとMVLcompに有意差が認められた。大学剣道競技者は柔道競技者に比べ, 反応時間, 移動速度が速いという特徴が示された。このことから敏捷性, 神経-筋機能の点で柔道選手よりも反応時間が短く, 移動速度が速いという能力が示唆されたが, 競技の継続による縦断的観察を含めてさらに検討する必要がある。

スポーツパフォーマンス研究, 7, 381-389, 2015年, 受付日: 2015年6月25日, 受理日: 2015年12月27日

責任著者: 竹島伸生 鹿屋市白水町1番地 鹿屋体育大学 takeshima@nifs-k.ac.jp

* * * * *

Comparison of balance ability of university kendoka and Judoka

Shigeki Maesaka, Kenta Kihara, Eiji Fujita, Kentaro Takenaka, Mika Shimokawa
Nobuo Takeshima

National Institute of Fitness and Sports in Kanoya

Key words: balance ability, university student, kendo, reaction time, movement velocity

[Abstract]

The present study aimed to use a Balance Master Platform System to determine the characteristics of the balance ability of a group of male university student athletes who were training in either kendo or judo. Out of 20 students (mean age 22±1) who volunteered to join this study, 10 were kendoka and 10 were judoka. All of them had practiced regularly in their respective sport for about 15 years. In the study, the

participants' static balance was measured by their Sway Velocity (SV), and their dynamic balance, by their Limits of Stability (LOS). Sway Velocity was measured while each man was standing on each of two surface conditions (firm pad or foam pad) of the Balance Master Platform System with his eyes open or closed. The Composite Sway Velocity (SVcomp) scores were calculated based on the sway velocity conditions as an index of Sway Velocity. Components of the Limits of Stability (endpoint excursion [EPE], maximum excursion [MXE], reaction time [RT], movement velocity [MVL], and directional control [DCL]) were evaluated in eight different directions by a computerized balance assessment device, and the composite value of each component (EPEcomp, MXEcomp, RTcomp, MVLcomp, DCLcomp) was used in the analysis. No significant differences were obtained in height, weight, or body mass index between the groups, indicating that the athletes in both groups were similar in physique. No significant differences were obtained in the Sway Velocity parameters between the groups. Among the components of the Limits of Stability, the kendo group had significantly higher scores on RTcomp and MVLcomp, compared to the judo group. These results suggest that these student athletes had improved their balance ability remarkably since entering the university. The discussion contends that further study is needed.