

The Effect of Elastic Taping to Ankle Joint on Postural Stability of Round Kick in  
Youth's Taekwondo Players: A Pilot Study

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Abstract

**Background:** Taekwondo competition regulation has scored kick at head more than kick at trunk. The athlete always try to perform head kicking especially by using round – kick. Factors affecting the height of round-kick include flexibility, leg strength, balance and postural stability during round-kick. Furthermore, the present regulation of competition also count score when the athlete kicks with one leg repeatedly and accurately to the head of the competitor. Therefore, some types of sports taping might help improve postural stability during round-kick and yield more score in taekwondo competition.

**Purpose:** To investigate the effect of different types of taping on flexibility, leg strength balance and postural stability of round kick in youth's Taekwondo players.

**Methods:** Ten black belt youth's Taekwondo players between aged 13 -18 years, participated in this study. Trunk flexibility by sit and reach, leg strength by back – leg dynamometer, balance by stork balance stand test and postural stability of round kick by score and time between kick were measured before and immediately after one of the three condition including no tape, wearing Rigid plaster tape and wearing elastic tape. Friedman tests were used to examine difference in measurements between conditions and wilcoxon signed-rank test was used to compare within-group measurement.

**Result:** There were significant differences among the measures obtained using the three conditions for flexibility ( $p=0.008$ ), and leg strength ( $p=0.003$ ), but were no significant differences among obtained using the three conditions for balance ( $p=0.15$ ), score using round- kick ( $p=0.119$ ), and times of round – kick ( $p=0.058$ ).

**Conclusion:** Elastic taping to the ankle joints may provide improve on trunk flexibility, leg strength, balance and postural stability during round-kick in youth's taekwondo players. A further study using larger sample size is suggested.

**Keywords:** Elastic taping, Ankle, Postural Stability, Round Kick, Taekwondo Players