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## Manual Therapy

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## Letter to the Editor

## How much is Kinesio taping a psychological crutch?

Dear Editors,

We read with interest the paper by Lins et al. (2012) regarding the immediate effects of the application of Kinesio Taping (KT) on the neuromuscular performance of quadriceps. The authors stated that KT was not capable of altering lower limb muscle strength or function in healthy women, confirming the results of another recent study (Wong et al., 2012). Shortly before the acceptance of these papers we published a placebo-controlled trial (Vercelli et al., 2012) comparing the effects of two KT conditions (applied with the aim of enhancing or inhibiting muscle strength, respectively) and a placebo KT application on the quadriceps of 36 healthy subjects. The main outcome measures were concentric peak knee extensor torque at 60 and 180°/sec, and single-leg triple hop for distance. No significant differences between baseline and KT application were observed, regardless of the type or direction of tape application. Such findings are perfectly in line with those more recently reported by Lins et al. (2012) and Wong et al. (2012), and confirm the lack of evidence on this topic. It should also be stressed that, to date, the mechanisms by which KT application might conceivably increase muscular strength have not been fully elucidated or confirmed (Lins et al., 2012).

In the absence of an observed change in physiological or performance variables, however, our secondary exploratory analysis revealed that participants' subjective perception of strength increased, irrespective of the KT condition. In a post-experiment interview in which we asked our subjects if they felt stronger, unchanged, or weaker after tape application, about 45% declared that they felt stronger after experimental KT (regardless of whether the technique was facilitating or inhibiting), while this percentage was about 30% after placebo application. Placebos could have specific effects on both objective (e.g. muscle power or strength, heart rate, running speed, jump height or length) and subjective (e.g. perceived exertion, internal states, feelings of wellbeing and safety) variables (Berdi et al., 2011). In a recent meta-analysis of the evidence for KT effectiveness in treatment and prevention of sports injuries, the placebo effects on objective variables showed conflicting results, but the types of tape used as placebo and their application in the different papers were not standardized (Williams et al., 2012). To our knowledge, our study is the first analyzing the placebo effects of KT on a subjective variable (perceived strength), similar results having been previously reported for non-elastic taping in ankle instability (Sawkins et al.,

2007). In our opinion, these psychological attributes might help to explain the widespread use of KT by athletes observed during sports competitions, like the London Olympic Games or the 2012 European Football Championship. Whatever the mechanisms underlying the placebo effects of KT, we believe that this aspect merits further investigation with an appropriate study design, with the particular scope of preventing sporting injuries and/or enhancing athletic performance.

**Conflict of interest**

The authors of this letter have no financial interest to disclose.

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Stefano Vercelli\*, Giorgio Ferriero, Elisabetta Bravini,  
Francesco Sartorio  
*Unit of Occupational Rehabilitation and Ergonomics,  
Fondazione "Salvatore Maugeri",  
Clinica del Lavoro e della Riabilitazione,  
IRCCS, Via per Revislate 13, I-28010 Veruno (NO), Italy*

\* Corresponding author. Tel.: +39 (0)322884711.  
E-mail address: [stefano.vercelli@fsm.it](mailto:stefano.vercelli@fsm.it) (S. Vercelli)

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