

## 26 Anxiety and performance in young table tennis players

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### 1 Introduction

It has been recognized for many years that psychological factors play an important role in competition. In this way, the relationship between anxiety and athletic performance is widely studied. One of the explanations for this relationship is the multidimensional theory (Liebert and Morris, 1967). This theory suggests that anxiety consists of two subcomponents: cognitive and somatic, and they should influence performance differently. The cognitive anxiety is defined as the mental component of anxiety and in sport it is commonly manifested by negative expectations of performing a task and thus negative self – evaluation. According to Martens *et al.* (1990) there is a negative linear relationship between cognitive anxiety and performance.

The somatic anxiety refers to the physiological elements of the anxiety (Martens *et al.* 1990). It is reflected in such responses as rapid heart rate, shortness of breath, clammy hands, butterflies in the stomach, and tense muscles. Martens *et al.* (1990) suggest that somatic anxiety has an inverted – U shaped relationship with performance, in a curvilinear fashion, with lower and higher levels of somatic anxiety being detrimental to performance.

Although the authors did not propose the self – confidence as a subcomponent of anxiety, they included it in their studies of the relationship between anxiety and performance, referring to the self perceptions of confidence. Martens *et al.* (1990) proposed a linear relationship for self – confidence.

Craft *et al.* (2003) did a meta – analysis considering the multidimensional approach to the study of anxiety – performance relationship and its most employed instrument: the Competitive State Anxiety Inventory – CSAI – 2. The authors suggest that the findings of the studies of anxiety have been inconsistent. In addition, LeUnes and Nation (2002) suggest that the multidimensional

ying with their physical and mental capabilities, there is no relationship among anxiety components and performance. Thus, athletes with different levels of anxiety may perform well if they adapt their personal characteristics to their styles of playing. For example, one athlete with a high level of anxiety could get a great performance playing faster than another one with a lower anxiety level. Therefore, maybe there are no optimal levels of anxiety for table tennis in general but for each athlete in particular.

Finally, it was noted in this study that there were no ideal levels of anxiety for the table tennis task, as in the study of Morgan *et al.* (1987) which did not find any correlation between personality traits or states and performance. We agree with the authors suggesting that it is important to establish the individual zone of optimal functioning (Hanin, 2000; Kamata *et al.*, 2002) before employing psychological interventions. In addition to that, it is essential to identify when this optimal zone should be reached during the tournament (important moments). Maybe in short duration activities this zone could be arranged in pre-game situation, but in long duration activities (all day long or some days), perhaps the most important moment could be only in the final phase. Therefore, it is crucial for athletes to learn to identify their individual zones of optimal functioning related to anxiety levels and develop coping strategies for these situations by themselves, because many times the coach or the psychologist cannot intervene on specific sport settings.

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