## World Academy of Science, Engineering and Technology International Journal of Sport and Health Sciences Vol:11, No:08, 2017

## The Effects of Self-Efficacy on Challenge and Threat States

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Abstract: The Theory of Challenge and Threat States in Athletes (TCTSA) states that self-efficacy is an antecedent of challenge and threat. These states result from conscious and unconscious evaluations of situational demands and personal resources and are represented by both cognitive and physiological markers. Challenge is considered a more adaptive stress response as it is associated with a more efficient cardiovascular profile, as well as better performance and attention effects compared with threat. Self-efficacy is proposed to influence challenge/threat because an individual's belief that they have the skills necessary to execute the courses of action required to succeed contributes to a perception that they can cope with the demands of the situation. This study experimentally examined the effects of self-efficacy on cardiovascular responses (challenge and threat), demand and resource evaluations, performance and attention under pressurised conditions. Forty-five university students were randomly assigned to either a control (n=15), low self-efficacy (n=15) or high self-efficacy (n=15) group and completed baseline and pressurised golf putting tasks. Self-efficacy was manipulated using false feedback adapted from previous studies. Measures of self-efficacy, cardiovascular reactivity, demand and resource evaluations, task performance and attention were recorded. The high self-efficacy group displayed more favourable cardiovascular reactivity, indicative of a challenge state, compared with the low self-efficacy group. The former group also reported high resource evaluations, but no task performance or attention effects were detected. These findings demonstrate that levels of self-efficacy influence cardiovascular reactivity and perceptions of resources under pressurised conditions.

Keywords: cardiovascular, challenge, performance, threat

Conference Title: ICSPMS 2017: International Conference on Sport Psychology, Motivation and Sport

**Conference Location :** Barcelona, Spain **Conference Dates :** August 17-18, 2017