28th ECSS Anniversary Congress, Paris/France, 4-7 July 2023

Development and evaluation of the psychometric properties of a new measure of athlete insomnia: Insomnia in Response to Sports-related Stress Test questionnaire

NEDELEC, M., CHAUVINEAU, M., MARTINENT, G.

INSEP

INTRODUCTION:
INTRODUCTION: Impaired sleep is particularly frequent among elite athletes which has been linked to various negative consequences, including lower athletic performance and general health [1]. Several studies have examined potential acute and chronic factors placed on elite athletes resulting in compromised sleep, e.g. training and competition [1]. Candidate risk factors for compromised sleep in elite athletes also include many factors commonly considered to influence sleep in non-athletic individuals and particularly psychological stress and anxiety [2]. The aim of the present study was to develop and validate the Insomnia in Response to Sports-related Stress Test (IRSST) questionnaire, a new specific instrument with the goal of sensitively measuring vulnerability to sport-specific stressful situations among elite athletes.
METHODS: Five hundred and thirty-one competitive elite athletes (mean age = 17.6±4.4 years) completed the Ford Insomnia Response to Stress Test (FIRST) questionnaire, a standardized questionnaire assessing the likelihood of sleep disruption due to common stressful situations (e.g. before having to speak in public, before an important meeting the next day) [3], and the IRSST, a six-item questionnaire developed to assess the level of sleep disturbance in response to the commonly experienced sport-specific stressful situations, i.e. before competition, after daytime competition, after nighttime competition (20:00-21:00), after nighttime training (20:00-21:00), during training camp, after injury. A development and validation process including substantive, structural, and external stages was used in the present study [4].
RESULTS: One eigenvalue of the exploratory factor analyses was greater than 1.0 (i.e., 2.91, 48.52% of explained variance) whereas the scree test provided evidence for a one-factor solution, with all the six items achieving a loading of .40 or higher on the factor. The goodness-of-fit indices of the six-item one-factor confirmatory factor analyses model provided further evidence of the structural stage of IRSST score. The correlation between IRSST and FIRST scores was .47 ($p < .001$, moderate effect size).
CONCLUSION: These results provide strong evidence for construct validity, indicating that the IRSST is a promising scale for assessing the likelihood of sleep disruption due to sports-related stressful situations. The results of reliability and correlational analyses provided further evidence of the promising psychometric properties of the IRSST. We believe that the IRSST could provide to the sport and sleep science communities a sleep screening tool for use in this unique population.
1. Gupta et al. Sports Med. 2017
2. Kalmbach et al. J Sleep Res. 2018
3. Drake et al. Sleep. 2004
4. Nicolas et al. J Sport Health Sci. 2019
METHODS:

RESULTS:

CONCLUSION:

Topic: **Coaching**

Presentation **Oral**