



ELSEVIER

Psychology of Sport and Exercise 8 (2007) 917–938

Psychology
OF SPORT AND EXERCISE

www.elsevier.com/locate/psychsport

Psychometric item evaluations of the Recovery-Stress Questionnaire for athletes

Henry Davis IV^{a,*}, Tricia Orzeck^b, Patrick Keelan^c

^a*Swimming/Natation Canada, Suite 354, 401-9th Avenue S.W., Calgary, Alta., Canada T2P3C5*

^b*University of Calgary, Canada*

^c*Calgary, Alta., Canada*

Received 2 February 2006; received in revised form 7 October 2006; accepted 10 October 2006

Available online 27 November 2006

Abstract

Objectives: Using an item-based analysis, the factor structure of the Recovery-Stress Questionnaire for Athletes (RESTQ-Sport) [Kellmann, M., & Kallus, K.W. (2001). *Recovery-Stress Questionnaire for Athletes: User manual*. Champaign, IL: Human Kinetics] was assessed as a test of its validity. The RESTQ-Sport is a 76-item questionnaire that was developed to assess the physical and mental impact of training stress and to facilitate the formulation of strategies for the enhancement of recovery. According to [Kellmann, M., & Kallus, K.W. (2001). *Recovery-Stress Questionnaire for Athletes: User manual*. Champaign, IL: Human Kinetics], two factors: Recovery and Stress, comprised the 12 General subscales and seven Sport subscales of the RESTQ-Sport.

Methods: A total of 585 male and female athletes who train at a Canadian national sport center were recruited to complete the RESTQ-Sport. Maximum likelihood factor analyses were performed.

Results: The results confirmed the two-factor structure proposed by Kellmann and Kallus for the Sport-Recovery/Stress Scale but disconfirmed this structure for the General-Recovery/Stress Scale. Item analysis further disconfirmed the two-factor structure for the General Scale and failed to confirm the 19 Subscales proposed by the authors on both of the General and Sport Scales.

*Corresponding author. Tel.: +1 403 262 3737; fax: +1 403 262 3738.

E-mail address: hdavis@cia.com (H. Davis IV).

Conclusions: These results are interpreted to suggest that while the questionnaire should not be considered to be a *diagnostic* tool for under-recovery states, the RESTQ-Sport does, nonetheless, still measure general parameters of training stress which can be tracked in recovery planning.

© 2006 Elsevier Ltd. All rights reserved.

Keywords: Recovery; Stress; Athlete RESTQ

Introduction

A major component of peak performance in athletics is specialized training but Kellmann (2002) states that another key component is proper recovery from the stress of training. Gould and Dieffenbach (2002) found that failure to properly recover from the stress of training produces a state of overtraining, under-recovery, and burnout. According to Silva (1990), under-recovery falls on the lower end of a continuum and burn-out falls on the higher end. There are physiological and psychological consequences to under-recovery (e.g., Budgett, 1998; Kellmann & Gunther, 2000) which, themselves, are believed to result in poor performance (Budgett).

The Recovery-Stress Questionnaire for Athletes [RESTQ-Sport] is a questionnaire reported to identify the extent to which athletes are physically or mentally stressed and their current capabilities towards recovery (Kellmann & Kallus, 2000, 2001). It has been distributed to well over 500 individuals and organizations throughout the world and can therefore be reasonably estimated to have been used on at least several thousand high-performance athletes as a diagnostic tool to detect under-recovery states and to plan recovery practices (Human Kinetics Publishers, personal communication, November 16, 2005). Prominent users include the United States Olympic Committee and the Canadian Sport Centers. The forerunner of this instrument was a General Recovery-Stress Questionnaire (Kallus, 1995) formulated on the idea that people will respond differently to physiological and psychological demands depending on how well-rested they are when faced with these demands (e.g., someone who has just returned from a vacation may perform more effectively at work than someone who has not had a vacation in a long time). In turn, the RESTQ-Sport was constructed based on the notion that an athlete who has proper recovery may perform better than one who is under-recovered. However, theoretical and practical concerns governed the methods used to determine the 19 subscales of the RESTQ-Sport. Kellmann and Kallus (2000, 2001) used an a priori method of identifying each of the subscales, combining to form several scales that reflect various aspects of stress and recovery. Although measuring recovery and stress by using these scales and subscales appears to be “face valid”, the scales may be criticized from an empirically based standpoint since the individual items comprising the subscales were not verified for their utility.

The RESTQ-Sport was developed through continuous bio-psychological research in the area of stress for the General Scale, and the Sport Scale was comprised of items observed to coincide with stress or recovery states in athletes (Kellmann & Kallus, 2001). Recovery involves undertaking behaviors that affect physiological, psychological, behavioral, social, and environmental needs subsequent to a training load (Kallus & Kellmann, 2000). Physiological aspects of recovery include restoring resources such as food, water, and minerals (Kentta & Hassmen, 1998) along with recovery from injuries and the restorative hormonal and biological processes that occur

Download English Version:

<https://daneshyari.com/en/article/895037>

Download Persian Version:

<https://daneshyari.com/article/895037>

[Daneshyari.com](https://daneshyari.com)