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Psycho-physical unity in sports

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Abstract

The article discusses the importance of cognitive processes in human development and their role in sports performance. Rational-Emotive and Cognitive Behavior Therapy (RE & CBT) teaches clients how to refute cognitive distortions. A literature review shows that sports performance is influenced by physical, mental, technical, tactical, psychological, and social attributes. The Attention Control Scale (ATTC) measures two major components of attention (attention focusing and attention shifting). Prioritizing meaningful activities and healthy foods can help lead a more balanced lifestyle for better mental health. The M.I.Q. questionnaire assesses sensory experiences of individuals and can be used on school students and adults. A study investigated the effects of mental imagery on skill development in sport and identified potential moderating factors. A systematic review investigated moderator variables such as intervention length, skill type, delivery format, and skill level that may influence imagery-performance link. The book offers a novel tool to assess children's and elderly people's mental imagery skills using a psychometric process.

Keywords: Attention, cognitive, mental-imagery, physical- imagery, psycho- physical, systematic

Introduction

Psychophysical unity in sports refers to the integration of psychological and physical aspects in athletic performance. Psychophysical: allies with one's internal (psychic) and external (physical) worlds. "Psychophysical Unity" can be interpreted as the integration of psychological processes, such as metacognition, with the physical aspects of cognition, potentially including neural correlates and psychophysical measures. The relationship between one's internal (psychic) and external (physical) worlds is known as psychophysical Unity.

Mental-imagery: When sensory information is experienced along with representations without a direct outward stimulus, this is referred to as "mental imagery." Recalling these representations from memory causes one to relive the initial stimulus or an entirely new set of stimuli.

Physical-imagery: Individuals address spatial issues related to form, position, viewpoint shift, and navigation. Physical problems including forces, resistances, and how one thing affects another are also solved by people. To a great extent, studies on solving physical difficulties have focused on people's attitudes and qualitative theories regarding physical actions, and studies on solving spatial problems have focused on people's analogue representations of visual perception.

The literature suggests that both psychological and physical readiness are essential for athletes to return to sports after injuries, emphasizing the need for a multidisciplinary approach to facilitate effective recovery (Petruk & Snizhko, 2023) ^[11]. The concept of psycho-physical unity in sports is an interdisciplinary approach that recognizes the inseparability of mental and physical processes in athletes. This perspective is essential for understanding and optimizing athletic performance, development, and well-being. Additionally, the field of psychophysiology provides insights into how psychological states can influence physical performance, highlighting the importance of mental training and stress management in enhancing athletic performance (Navabinejad & Rostami, 2023) ^[10]. Contradictions in the literature are minimal, but there is an interesting expansion on the concept of psychophysical unity through the design of compression athletic wear, which considers the psychophysical and

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psychophysiological properties to optimize performance and comfort (Wang, 2009) ^[13]. Furthermore, sports psychology research underscores the importance of psychological preparation in sports, which can significantly improve performance when combined with physical training (P. Kumar & Shirotriya, 2010) ^[4].

Resources and techniques

1. **(Derryberry & Reed, 2002)** ^[2]: The Attention Control Scale (ATTC) is a self-reportscale that is designed to measure two major components of attention (attention focusing and attention shifting). The ATTC consists of 20 items that are rated on a four-point likert scale from 1 (almost never) to 4 (always).
2. **(Nuovo, 2014)**: The book offers a novel tool that may be used to assess children's and elderly people's mental imagery skills using a psychometric process. A number of imaging jobs that require the creation and processing of images are offered. For comparison, visual perception and memory tasks that do not require imagery are suggested. The purpose of the tests is to separate images from other cognitive functions in advance of educational and/or therapeutic interventions that rely on creative ability.
3. **(Moran, 2017)** ^[8]: Successful athletic performance is thought to be significantly influenced by attentional processes like "concentration," or the capacity to concentrate mental energy on the activity at hand while tuning out distractions. Some theoretical support exists for the use of the following strategies: simulation training, performance goal-setting, preperformance routines, trigger words and mental practice.
4. **(Bhadauriya & Tripathi, 2018)** ^[1]: Stressors affect mood, well-being, behavior, and health. Acute stress responses in healthy individuals are adaptive, but long-term effects can damage health. This paper examines strategies for sports coaches to manage stress in sports competitions, including competition-based stress, stress management in sports psychology, and sources of stress. The relationship between stressors and disease is affected by nature, number, persistence, biological vulnerability, psychosocial resources, and learned patterns of coping. The paper highlights specific stress management strategies and educational implications for sports competition.
5. **(Shebalina, 2019)**: An overview of science and education is provided in this article. The authors specifically examine the following sources: (a) official government documents on the growth of sports and physical education in our nation; (b) Russian university experiences in organizing training, physical culture, and athletic events; and (c) the authors' personal experiences gained from their work as coaches, psychologists, and pedagogues at the Altai State Medical University and Altai State Pedagogical University. N. I. Platonova demonstrates how volleyball improves three key physiological aspects of a student's body: neurotism, balance of the nervous system, and adaptability. She uses the example of examining volleyball's impacts on students' organisms.
6. **(Lindsay et al., 2019)** ^[7]: The study investigated the effects of mental imagery on skill development in sport and identified potential moderating factors, using predefined keywords in five databases. ["Pre-ferred Reporting Items for Systematic Reviews and Meta-

Analyses" (PRISMA) guidelines] Investigating moderator variables such as intervention length, skill type, delivery format, and skill level that may influence the imagery-performance link was the goal of the present one systematic review.

7. **(Motevalli et al., 2022)** ^[9]: The thinking process has a unique role in the creation, direction, and persistence of human moods and actions, making cognitive processes important for human development. Rational-Emotive and Cognitive Behavior Therapy (RE & CBT), which is based on the cognitive approach, teaches clients how to refute cognitive distortions, or basic flawed thinking, in order to replace their illogical, counterfactual beliefs with more useful and accurate ones through cognitive restructuring techniques.
8. **(Rajamanickam)**: M.I.Q. is designed to assess the sensory experiences of the individuals. This Questionnaire consists of six subtests referring to six areas of sensory experiences- (i) visual, (ii) auditory, (iii) gustatory, (iv) olfactory, (v) tactual, and (vi) bodily. Thus, on the whole $15 \times 6 = 90$ items were included in the Questionnaire. It can be used on school students and adult population.
9. **(S. Kumar & Devi, 2023)** ^[5]: Sports performance is determined by physical, mental, technical, tactical, psychological, and social attributes. Mental health is one of the factors that affect sports performance. Prioritizing meaningful activities and healthy foods can help lead a more balanced lifestyle for better mental health.
10. **(Haghighat & Stull, 2024)** ^[3]: Elite athletes' rigorous training regimens can lead to overtraining syndrome, which affects medical and mental health. A literature review using PubMed revealed the multidimensional composition and complexity of OTS in athletes. OTS progresses along a continuum without adequate recovery, resulting in decreased athletic performance and changes in mood, motivation, and general well-being. Overtraining is a maladaptive response to an imbalance between exercise and recovery.

Discussion

Recent data has demonstrated a marked increase in the number of athletes experiencing mental health-related issues, including identity crises, overtraining, and concussions. This emphasizes the urgent need to address these concerns (Schinke et al., 2018) ^[12]. Research indicates that maintaining a good harmony among the physical and psychological domains is crucial for achieving optimal performance, given the close and intricate relationship between the two (Ldokova et al., 2022) ^[6].

Conclusion

In summary, the concept of psychophysical unity in sports is supported by a body of research that acknowledges the interdependence of psychological and physical factors in athletic performance. The literature calls for a holistic approach to athlete training and recovery, integrating psychophysiological principles and psychological skills training to enhance overall performance and well-being. This comprehensive view is essential for developing targeted interventions and strategies that address both the mind and body of athletes.

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