

ROMANIAN JOURNAL OF PSYCHOLOGICAL STUDIES



HYPERION UNIVERSITY www.hyperion.ro

THE EFFICIENCY OF COGNITIVE-BEHAVIORAL THERAPY IN REHABILITATION PROCESS OF THE INJURED ATHLETES - A REVIEW

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Abstract

Sport injuries threaten athletes' career and success and determine rehabilitation costs. The purpose of this paper is to underline the psychological effects of sports injury and the efficiency of cognitive-behavioral therapy in rehabilitation process of the injured athletes. In a study concerning the psychological aspects of sport-injury rehabilitation, Brewer (2003) concluded that psychological factors play an integral role in the recovery and rehabilitation from sport injury.

Cognitive-behavioral therapy is aimed to educate people to change their philosophy of life, to think rationally in order to cope effectively with negative mental states.

Keywords: Cognitive-behavioral therapy, athletes injury, sport psychology.

1. INTRODUCTION

Participation in different types of athletics has increased over time, as has the incidence of athletic injury among such athletes. An injury affects physical capabilities, but also determines negative emotions and other mood disturbances, so during the rehabilitation process the intervention of a psychologist is recommended.

Becoming injured and fast recovering from injury are common outcomes of participation in all kind of performance sports. Taking in consideration the negative physiological effects of injury, psychological effects have also been found to negatively affect injured athletes. Factors such as stress, anxiety, and depression

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are among the most known outcomes associated with injury.

Researches made by sports medicine professionals found that approximately 5%-13% of injured athletes experience different levels of psychological distress (Cupal & Brewer, 2001; Wiese-Bjornstal, Shaffer, 1999).

Cognitive-behavioral therapy is one of the most used method for helping people suffering from stress, anxiety, depression to deal with emotional difficulties, to overcome their negative thinking patterns and replace them with healthier, more efficient thoughts (Rizeanu 2012, 2014).

This paper aims to discuss the psychological symptoms athletes players experience when injured during the games, as well as possible cognitive-behavioral therapy techniques the kynesio-therapist and sport psychologist can implement when working with injured athletes.

2. THE LITERATURE REVIEW

There is a lack in the literature about sport injuries and their consequences and few psychological studies on sport injury prevention.

Gustafsson, Lundqvist and Tod (2017) published a case study in which they presented the most efficient cognitive-behavioral procedures recommended to treat anxiety problems in sports: behavioral analysis, psycho-education and exposure.

The original stress-injury model developed by Andersen and Williams (1988) proposes that when sport participants experience a stressful situation their personality characteristics, history of stressors and coping resources contribute to the stress response.

In a study concerning the psychological aspects of sport-injury rehabilitation, Brewer (2003) concluded that psychological factors play an integral role in the recovery and rehabilitation from sport injury.

Research conducted by Asken (1999) has shown that the psychological responses to injury, such as stress, anxiety or depression are amplified in cases of severe injury and lead to the increasing of the rehabilitation process. Stress is a factor that negatively affects the individual, both on the psychological and physiological level (Rizeanu, Mihăilă, 2015).

A study conducted by Mittly, Németh, Berényi and Mintál (2006) showed that in order to an earlier return to their sport activity, injured athletes need psychological interventions as well as social support in their post-injury period.

Andersen (2009) found that cognitive-behavioral techniques are effective in helping athletes to control irrational cognitions or negative emotions and behaviours. The use of rational emotive behavior therapy in sport helps athletes eradicate dysfunctional thought processes and emotions, as it help people in any other domain (Rizeanu, 2012, 2014). The studies conducted by Bernard (1985),

Elko and Ostrow (1991), Yamauchi and Murakoshi (2001), Larner and his collaborators (2007), Si and Lee (2008), Marlow (2009), Turner and Barker (2013), Nippert and Smith (2008) and Bratu (2014) showed the efficiency of applicability of REBT in sports.

Sordoni, Hall and Forwell (2000) conducted a study which concluded that cognitive-behavior therapy techniques, especially imagery can be helpful in the rehabilitation period of injured athletes.

Using CBT techniques such as relaxation and mindfulness-based practices when working with injured athletes can shorten the period of rehabilitation, considering that post injury depression rates are ranging from 5% to 21% and such strategies could lead to decreased depression (Manuel, Shilt, Curl et. al., 2002).

Increasing evidence supports the use of cognitive-behavioral therapy (CBT) for injured basketball players with chronic pain and researches concluded that physical therapists should incorporate CBT techniques when treating these patients (Thorn, Cross, Walker, 2007). The results of the study conducted by Naoi (2003) concerning the effectiveness of cognitive-behavioral interventions on negative emotions of injured athletes showed improvements in the mood of the participants of the study.

Brewer (2017) stated that "psychological readiness to return to sport after injury is an emerging concept that cuts across cognitive, emotional, and behavioral responses to sport injury." In a study concerning the stressors and psychological responses to sport injury, Rees (2010) concluded that the performance standard of the athletes can influence the relationship between psychological responses and stressors to sport injury.

REBT is an effective intervention aimed to reduce irrational beliefs of injured athletes and their performance anxiety and to improve competitive performance in sport (Wood et al., 2016).

3. CONCLUSIONS

Sport psychology is a relatively new field of science and researches concluded that around 19% of athletes should experience a negative psychological impact of their suffered sport injury (Chan, Michelli, Smith et al, 2006; Clanton, Matheny, Jarvis & Jeronimus, 2012). The stress, frustration and anxiety are not generated by the seriousness of the injury, but the insecurity whether how long the recovery would take (Hamson-Utley, Martin, & Walters, 2008; Rizeanu, Bratu, Rizeanu, 2017).

An effective rehabilitation process should comprise the treatment of anxiety and depression of the athletes, which is also related to the possible recurrence of the injury (Baum, 2005; Bratu, 2012, 2013).

This paper is aimed to analyze the psychological symptoms of athletes experience as a result of becoming injured and the most effective psychological techniques which can be used during their rehabilitation process. Cognitive-behavioral therapy techniques such as relaxation, cognitive-restructuring and mindfulness are most recommended by the clinicians.

Received at: 02.02.2018, Accepted for publication on: 12.02.2018

REFERENCES

American College of Sports Medicine (ACSM). (2006). Psychological issues related to injury in athletes and the team physician: A consensus statement. *Medicine & Science in Sports & Exercise*, 2030-2034.

Andersen, M. B. (2009). The "canon" of psychological skills training for enhancing performance, in *Performance Psychology in Action: A Casebook for Working with Athletes, Performing Artists, Business Leaders, and Professionals in High-Risk Occupations*, ed. K. F. Hays. Washington, DC: American Psychological Association, 11–34.

Asken, M. J. (1999). Counseling athletes with catastrophic injury and illness. In: Ray, R., Wiese-Bjornstal, D. M, editors, eds. *Counseling in Sports Medicine*. Champaign, IL: Human Kinetics; 293-309.

Bratu, M. (2014). The Efficiency of Physical Therapy Associated with Psychotherapy in the Treatment of Generalized Anxiety. *Procedia - Social and Behavioral Sciences*. Vol. 140, Pages 348-352.

Bratu, M. (2013). *Comunicare si consiliere in kinetoterapie*. Bucuresti: Universitara.

Bauman, J. (2005). Returning to play: The mind does matter. Clin J Sport Med 15: 432-435.

Bernard, M. E. (1985). A rational-emotive mental training program for professional athletes, in *Clinical Applications of Rational-Emotive Therapy*, eds. Ellis, A. and Bernard, M. E. New York, NY: Plenum, 227–309.

Brewer, B. (2017). Psychological Responses to Sport Injury. Oxford Research Encyclopedia of Psychology.

Brewer, B. W. (2003). Developmental differences in psychological aspects of sportinjury rehabilitation. *Journal of Athletic Training*, *38*, 152-153.

Clanton, T.O., Matheny, L.M., Jarvis, H.C., Jeronimus, A.B. (2012). Return to play in athletes following ankle injuries. *Sports Health* 4: 471-474.

Chan, K.M., Michelli, L., Smith, A., Rolf, C., Bachl, N., et al. (2006). *Team physicians manual.* 2nd edition. FIMS Publications.

Cupal, D. D. & Brewer, B. W. (2001). Effects of relaxation and guided imagery on knee strength, reinjury anxiety, and pain following anterior cruciate ligament reconstruction. *Rehabilitation Psychology*, 46, 28-43.

- Driediger, M., Hall, C. & Callow, N. (2006). Imagery use by injured athletes: A qualitative analysis. *Journal of Sports Sciences*, 24, 261-271.
- Elko, K. P., & Ostrow, A. C. (1991). Effects of a rational-emotive education program on heightened anxiety levels of female collegiate gymnasts. *Sport Psychol.* 5, 235–255. doi: 10.1123/tsp.5.3.235.
- Gustafsson, H., Lundqvist, C. & Tod, D. (2017). Cognitive behavioral intervention in sport psychology: A case illustration of the exposure method with an elite athlete. *Journal of Sport Psychology in Action Vol. 8, Iss. 3*.
- Hamson-Utley, J. J., Martin, S., & Walters, J. (2008). Atletic trainers' and physical therapists' perceptions of the effectiveness of psychological skills within sport injury rehabilitation programs. *Journal of Athletic Training*, 43, 258-264.
- Larner, C., Morris, T., & Marchant, D. (2007). The management of directional trait anxiety in competitive sports with rational-emotive behavior therapy. *Paper Presented at the European Congress of Sport Psychology*. Available at: http://www.fepsac.com/congresses/congress_2007.
- Manuel, J. C., Shilt, J. S., Curl, W. W., et al. (2002). Coping with sports injuries: an examination of the adolescent athlete. *J Adolesc Health*. 31:391-393.
- Marlow, C. (2009). "Creating positive performance beliefs: the case of a tenpin bowler," in *Applied Sport Psychology: A Case Based Approach*, eds Hemmings, B. and Holder, T. London: John Wiley & Sons Ltd., 65–87.
- Mittly, V., Németh, Z., Berényi, K., Mintál, T. (2016). Mind Does Matter: The Psychological Effect of Ankle Injury in Sport. *J Psychol Psychother* 6:278. doi: 10.4172/2161-0487.1000278
- Naoi, A. (2003). The effects of cognitive and relaxation interventions on injured athletes' mood, pain, optimism, and adherence to rehabilitation. West Virginia: University Libraries.
- Naoi, A. & Ostrow, A. (2008). The effects of cognitive and relaxations interventions on injured athletes' mood and pain during rehabilitation. *The Online Journal of Sport Psychology*, 10(1).
- Nippert, A., Smith, A. (2008). Psychologic stress related to injury and impact on sport performance. *Physical Medicine & Rehabilitation Clinics of North America*, 19, 399-418.
- Perna, F. M., Antoni, M. H., Baum, A., Gordon, P., & Schneiderman, N. (2003). Cognitive behavioral stress management effects on injury and illness among competitive athletes: A randomized clinical trial. *The Society of Behavioral Medicine*, *25*, 66-73.
- Rees, T., Mitchell, I., Evans, L. & Hardy, L. (2010). Stressors, social support and psychological responses to sport injury in high and low performance standard participants. *Psychology of Sport and Exercise*, 11, pp.505-512 39.
- Rizeanu, S. (2014). The efficacy of cognitive-behavioral intervention in pathological gambling treatment. *Procedia Social and Behavioral Sciences*. Vol. 127, pp 626-630. DOI: 10.1016/j.sbspro.2014.03.324
- Rizeanu, S. (2012). Proposal for a Cognitive Model to the Treatment of Pathological Gambling. *Procedia Social and Behavioral Sciences*. Vol. 33, pp 742–746. DOI: 10.1016/j.sbspro.2012.01.220
- Rizeanu, S., Bratu, M., Rizeanu, R.E. (2017). Optimization of medical rehabilitation process in orthopedic traumatic pathology in athlets through cognitive-behavioral

approaches. Romanian Journal of Experimental Applied Psychology, vol. 8, Special Issue 1/2017, Psiworld 2016 Proceedings, p. 384-388. DOI: 10.15303/rjeap.2017.si1.a62

Rizeanu, S., Mihăilă, T. (2015). A Correlative Study between Pain Perception at the Doctor and the Level of Self-perceived Stress at Undergraduate Students at Psychology – a Pilot Study. *Procedia - Social and Behavioral Sciences by Elsevier, Volume 187, Pages* 719-722

Santi, G., Pietrantoni, L. (2013). Psychology of sport injury rehabilitation: A review of models and interventions. *Journal of Human Sport and Exercise* 8:1029-1044.

Si, G., & Lee, H. (2008). Is it so hard to change? The case of a Hong Kong Olympic silver medallist. *International J. Sport Exerc. Psychol.* 6, 319–330. doi: 10.1080/1612197X.2008.9671876

Sordoni, C., Hall, C., & Forwell, L. (2000). The use of imagery by athletes during injury rehabilitation. *Journal of Sport Rehabilitation*, *9*, 329-338.

Thorn, B.E., Cross, T. H., Walker, B.B. (2007). Meta-analyses and systematic reviews of psychological treatments for chronic pain: relevance to an evidence-based practice. *Health Psychol*; 26:10–12.

Turner, M. J. (2016). Rational Emotive Behavior Therapy (REBT), Irrational and Rational Beliefs, and the Mental Health of Athletes. *Front. Psychol.*, 20 September 2016 https://doi.org/10.3389/fpsyg.2016.01423

Turner, M. J., & Barker, J. B. (2013). Examining the efficacy of Rational-Emotive Behavior Therapy (REBT) on irrational beliefs and anxiety in elite youth cricketers. *J. Appl. Sport Psychol.* 25, 131–147. doi: 10.1080/10413200.2011.574311

Wiese-Bjornstal, D. M., Shaffer, S. M. (1999). Psychosocial dimensions of sport injury. In: Ray, R., Wiese-Bjornstal, D.M., editors, eds. *Counselling in Sports Medicine*. Champaign, IL: Human Kinetics; 21-40.

Wood, A., Barker, J. B., & Turner, M. J. (2016). Developing performance using rational-emotive behavior therapy (REBT): a case study with an elite archer. *Sport Psychol.* 1–27. doi: 10.1123/tsp.2015-0083

Yamauchi, R., & Murakoshi, S. (2001). The effect of rational-emotive behavior therapy on female soft-tennis players experiencing cognitive anxiety. *Jpn. J. Sport Psychol.* 28, 67–75.

Yang, J., Peek-Asa, C., Lowe, J. B., Heiden, E., & Foster, D. T. (2010). Social support patterns of collegiate athletes before and after injury. *Journal of Athletic Training*, 45, 372-379

Yang, J., Peek-Asa, C., Corlette, J. D., Cheng, G., Foster, D. T., & Albright, J. (2007). Prevalence of and risk factors associated with symptoms of depression in competitive collegiate student athletes. *Clinical Journal of Sports Medicine*, 17, 481-487.