

# Analysis of the athlete burnout phenomenon: The past, the present and the future of athlete burnout research

## Authors' Contribution:

- A Study Design
- B Data Collection
- C Statistical Analysis
- D Data Interpretation
- E Manuscript Preparation
- F Literature Search
- G Funds Collection

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## abstract

The paper describes traditional and alternative conceptualizations of athlete burnout, measurement instruments, the most recent studies investigating athlete burnout and potential prevention and intervention strategies.

Athlete burnout, being an extremely aversive experiential state, is a serious problem for athletes and their coaches. It needs special treatment and discussion because of the severe consequences it leads to. Burned-out athletes are likely to withdraw from sport despite time, efforts and money they invested into it. However, the decision to leave sport usually does not relieve symptoms of burnout, but may also worsen athletes' moral state. Therefore, it is not surprising that this topic has become a subject of scientists' interest.

Athlete burnout has been a matter of scientific dispute since mid-1970s. A number of theoretical conceptualizations explaining burnout in athletes have been introduced, three various tools for its measurement have been suggested, a number of empirical studies have been conducted and are in the process of being conducting at this very moment, but still there are plenty of issues in the area of athlete burnout awaiting explanations.

The research on burnout constantly continues. The development of positive psychology and increased attention to positive organizational behavior of workers contribute to burnout being viewed as lack of engagement, and this perspective of burnout is likely to lead to the understanding of burnout as a negative pole on the continuum of employee well-being. Thus, future research would need to establish which factors are responsible for job engagement and employee well-being in order to explore possible burnout intervention and prevention strategies.

**Key words** burnout, sport, athlete burnout, sport psychology

## article details

### Article statistics

**Word count:** 4,089; **Tables:** 2; **Figures:** 0; **References:** 44

**Received:** May 2016; **Accepted:** August 2016; **Published:** September 2016

**Full-text PDF:** <http://www.balticsportscience.com>

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**Indexation:** AGRO, Celdes, CNKI Scholar (China National Knowledge Infrastructure), CNPIEC, De Gruyter - IBR (International Bibliography of Reviews of Scholarly Literature in the Humanities and Social Sciences), De Gruyter - IBZ (International Bibliography of Periodical Literature in the Humanities and Social Sciences), DOAJ, EBSCO - Central & Eastern European Academic Source, EBSCO - SPORTDiscus, EBSCO Discovery Service, Google Scholar, Index Copernicus, J-Gate, Naviga (Softweco, Primo Central (ExLibris), ProQuest - Family Health, ProQuest - Health & Medical Complete, ProQuest - Illustrata: Health Sciences, ProQuest - Nursing & Allied Health Source, Summon (Serials Solutions/ProQuest, TDOne (TDNet), Ulrich's Periodicals Directory/ulrichsweb, WorldCat (OCLC)

**Funding:** This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

**Conflict of interest:** Authors have declared that no competing interest exists.

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## INTRODUCTION

The notion “*burnout*” first appeared and was coined by psychologist-psychologist Freudenberg [1]. The investigation of this phenomenon has gone through two developmental phases: the pioneering and the empirical one. The pioneering phase started with the very first theoretical articles which appeared in the mid-1970s in the United States of America [1, 2]. They contained theoretical explanations and discussion of burnout that were based on interviews and observations. The empirical phase, which started in the 1980s, was represented by quantitative research with the use of questionnaires and surveys on a larger subject sample. In 1981 the most widely known and used psychometric scale measuring burnout was developed – the Maslach Burnout Inventory (MBI) [3].

## ATHLETE BURNOUT

### THE PRESENT AND THE PAST OF ATHLETE BURNOUT

Athlete burnout is a frequent topic of discussion and debate that has become a matter of concern in both psychological and sport science all over the world. The investigation of burnout in sport began with a study on coaches’ burnout in 1984 [4], while empirical research on burnout in athletes only appeared in mid-1990s. Being a relatively new phenomenon, athlete burnout is still understudied. The importance of investigating athlete burnout lies not only in lack of knowledge about the phenomenon, but also in its negative consequences for athletes. The fact that burnout in many cases leads to athlete withdrawal from a sports career [5] and adverse psychological and physiological states confirms the necessity to explore this phenomenon in order to effectively prevent, diagnose and treat burnout in athletes.

### DEFINITIONS AND CONCEPTUALIZATIONS OF ATHLETE BURNOUT

Burnout is a long-term result of emotional or physical exhaustion, lower productivity and depersonalization [6]. Quite often athlete burnout is preceded by athlete staleness [7, 8, 9]. Staleness means the period of poor performance caused by maladaptive physical and emotional state of an athlete [6]. Slump, a more specific performance-related phenomenon, may occur together with staleness or become its result. Staleness and slumps can be induced by a number of psychological, physical and environmental causes, such as lack of motivation, being constantly worried, chronic fatigue, anxiety, boredom, minor body aches, stomach upsets, headaches, poor nutrition, or eating disorders [6].

Smith proposed the earliest sport-specific model of burnout in 1986. It was based on the early observations of workplace burnout as well as the social exchange theory [10]. Smith’s Cognitive-Affective Model of Stress suggests that burnout can be a potential consequence of chronic stress. Smith [11] described athlete burnout as a psychological, emotional and physical withdrawal from an activity that was previously pleasant and joyful thus becoming an aversive source of stress. This model of burnout includes four components that influence each other and are influenced by motivational and personality variables.

The first component is situational factors, such as communication between environmental demands and personal and environmental resources. Accor-

ding to Smith [11], stress can result from imbalance between demands and resources. The second component is cognitive appraisal of various aspects of behavior; in a burnout situation appraisals include constant feelings of overload or underload, a lack of control, a perceived absence of significant accomplishment and devaluation of the activity or the person oneself. The third component is a physiological response that is set by cognitive appraisal processes of demands, resources and consequences of their interplay; in the case of burnout constant stress produces fatigue, sleep disorders, lethargy and other negative physiological symptoms. The last component of the model is athletes' behavioral response and their coping and performing strategies; burnout results in reduced effectiveness and physiological or even physical withdrawal from sport. Thus, this conceptualization of athlete burnout is strongly connected with the Social Exchange Theory [10], which states that people's behavior is influenced by their aspiration to minimize negative experiences (e.g. costs) and maximize positive experiences (e.g. benefits). According to this theory, the decision about starting off an activity is made not only based on the assessment of costs and benefits of any activity, but also on potential outcomes of alternative activities [10]. According to Smith [11], burnout occurs when stress-related costs rise so high that they exceed benefits of sport involvement. Smith's Cognitive-Affective framework was accepted by the scientific society [12] but also received criticism with regard to vague differentiation between dropout and burnout [13].

Schmidt and Stein [13] are the authors of the sport commitment model that states that athletes can continue sport involvement for a long period of time because they enjoy the involvement or because they have other reasons not related to enjoyment; burnout here is viewed as more than just a reaction to chronic stress. As Table 1 illustrates, commitment to sport depends on five stable positive and negative components related to the activity: athletes' satisfaction with their sport activity based on rewards and costs associated with sport, perceptions and attractiveness of potential alternative activities and convictions about the resources they have invested in sport. If the obtained rewards are high, costs are low, consequently, an athlete is satisfied, invests in sport and does not find a worthwhile alternative to sport; such an athlete experiences commitment to sport based on enjoyment and may be less prone to burnout. According to Schmidt and Stein [13], athletes are vulnerable to experiencing burnout risk if they are not satisfied with their sport involvement due to high costs and low rewards but cannot withdraw because of efforts and resources they have already invested in together with the perceived absence of meaningful alternative routes; in such a case continuing the activity leads to burnout. The third described possibility included decreasing rewards, increasing costs, reduced satisfaction and resources, and availability of better alternatives than sport; as a result, an athlete is able to discontinue sport involvement because of presence of more pleasant alternatives and the situation ends by dropout.

Table 1. Sport Commitment Model [13]

	Commitment (enjoyment-based)	Commitment (burnout)	Dropout
Rewards	Increasing (or high)	Decreasing	Decreasing
Costs	Low	Increasing	Increasing
Satisfaction	High	Low	Decreasing
Alternatives	Low	High	Increasing
Investments	High	High (or increasing)	Decreasing

The sport commitment model was investigated by Raedeke [14], who is also the author of one more significant conceptualization of athlete burnout - the sport commitment perspective [14, 15]. According to Raedeke, the burnout syndrome among athletes is manifested in prolonged experience of emotional and physical exhaustion, sport devaluation and reduced accomplishment. Nowadays this definition is widely supported in the scientific literature [16, 17]. This concept has its roots in the aforementioned Multidimensional Theory of Burnout [18]. In particular, the chronic experience of physical exhaustion was added to the concept construct due to its specific importance in the field of sport, and the dimension of depersonalization, which had little relevance to athletes' job, was replaced by "sport devaluation" - an oppressed and cynical attitude towards sport involvement. Both these alterations are consistent with the broader notions of exhaustion and depersonalization constructs in the third edition of the MBI manual [3, 18]. Raedeke's concept [14] presents the notion of sport commitment with two models: attraction-based and entrapment-based ones. Attraction-related commitment happens when athletes see their involvement inherently rewarding so that they want to be involved; in the case of entrapment-related commitment athletes find the activity no more rewarding but feel that they must maintain their involvement. In order to prove this idea, Raedeke [14] conducted a study on 236 swimmers (84 males, 145 females) aged between 13 and 18. Overall, results demonstrated that athletes with psychological characteristics reflecting sport entrapment are more likely to experience signs of burnout than athletes without entrapment characteristics. Moreover, it was demonstrated that social constraints may be responsible for developing entrapment-based commitment to sport and that athletes prone to burnout are likely to perceive high social constraints on the basis of the sense of duty to significant other that expect them to continue their sport career. Raedeke's study [14] was the first study that empirically examined athlete burnout while not being based on a stress perspective [19,20].

Coakley proposed an alternative explanation of burnout in young athletes in 1992 [21]. According to Coakley's social model, burnout is a social phenomenon rooted in social elements inherent in the organization of professional sport which make young athletes feel powerless to such a degree they believe they have no control over important areas of their life due to sport involvement. Because of burnout, young athletes do not have personal resources and power to construct their roles and identities unrelated to sport. Coakley [21] claims that burnout as a social problem is based on the social organization of high performance sport itself. It is a type of sport termination or unwarranted withdrawal that can happen to highly competitive young athletes after intense sport involvement and considerable achievement. Two factors leading to young athlete burnout were named: a restricted set of experiences resulting in the

development of various dimensions of self-concept, and power relationship in and around sport that reduces athletes' control over their lives. Restriction of identity development in young athletes beyond the athletic role results in athlete dropout from sport involvement to manifest their personal autonomy and explore other dimensions of themselves apart from the athletic one. This conceptualization explains burnout as a social problem rather than a personal failure and considers burnout as a type of sport termination; therefore, it significantly differs from the existing conceptualizations, viewing dropout as a potential, but not necessary component of the burnout syndrome [16]. Results of Black's and Smith's study [22] only partially support Coakley's model [21], where athletic identity and perceived control contributed 3% to 13% of the explained variance in burnout dimensions. Therefore, more research based on Coakley's model [21] should be conducted.

Another alternative conceptualization was offered by Silva in 1990 [20]. The athlete burnout is represented as the most severe of three maladaptive phases in negative adaptation to training and characterized by a variety of psychological and physiological symptoms. The development of the burnout syndrome starts with the first phase that includes athlete's experiencing of training plateaus or detraining effects; the more severe second phase represents remarkable psychophysiological dysfunctions of physical execution and mental orientation; finally, in the last phase the person's ability to respond to training stress is exhausted which leads to experience of burnout symptoms and, in some cases, withdrawal. This conceptualization differs from conventional psychosocial conceptualizations in the definition of burnout, which Silva describes as a final product of an on-going process of regression rather than aversive state with negative consequences that the person experiences through its progression. Moreover, Silva [20] strongly links the burnout syndrome and overtraining syndrome postulating that burnout cannot occur without excessive and chronic exposure to training stimuli, while there is enough evidence that maladaptive levels of burnout may develop without significant training stress [18].

One more perspective on athlete burnout was presented by Lonsdale, Hodge and Rose [17] who examined the athlete burnout through the prism of Self-Determination Theory [24]. This theory is based on the idea that humans experience basic mental needs for competence, autonomy and relatedness. In sport, competence is athlete's perception of being effective in sport involvement, autonomy refers to experience of will, free choice and independence, and relatedness is a feeling of untidiness with others. If these needs are fulfilled, an athlete experiences optimal well-being, while dissatisfaction leads to expressions of ill-being including burnout. Apart from this, there are three broad types of motivation that determine to which degree the abovementioned needs are satisfied: amotivation, extrinsic motivation and intrinsic motivation [24]. These motivation types can be presented on the self-determination continuum starting from low self-determination (e.g. amotivation) ending with high self-determination (e.g. intrinsic motivation). According to Sarrazin, Vallerand, Guillet, Pelletier, and Cury [25], a motivation or controlled motivation prevail among individuals with unsatisfied basic needs, which may lead to withdrawal from sport. In their study Lonsdale, Hodge, and Rose [17] examined 201 athletes (121 females, 80 males) drawn from 51 different sports. The obtained data showed that athletes with controlled extrinsic motivation

and a motivation were prone to burnout, while autonomous forms of intrinsic motivation were linked to lower levels of athlete burnout.

Finally, one of the most comprehensive models of burnout was presented by Gustafsson, Kenttä, and Hassmén [26] which they called an Integrated Model of Athlete Burnout. This model consists of a number of aspects of athlete burnout: major antecedents, early signs, personality, coping and environment, entrapment, key dimensions of burnout and consequences. Major antecedents in the Integrated Model [26] might include chronic stress, excessive training, lack of recovery and too many competitions and/or games (too much sport engagement [28]), work and school demands, sport and money hassles, negative performance demands, psychosocial stress in forms of interpersonal conflicts (pressure from coaches and parents) and coaching behavior (for example, burned-out coach [27]). Early signs of burnout according to the Integrated Model can embody distress such as exhaustion and negative affect, mood disturbances, like mood swings and feelings of frustration, fading of motivation and a motivation, frustration at lack of accomplishment, lack of perceived ability and performance decline and stagnation. When it comes to the factors that have their roots in personality, coping and environment, Gustafsson et al. [26] list perfectionism (especially together with maladaptive motivation [29]), trait anxiety, lack of coping skills, low autonomy, low social support and unfulfilled psychological needs as factors that are noticed to be present in burnout and withdrawal cases. Entrapment and restraining factors suggest reasons because of which athletes experience burnout and also why they stay in sport experiencing this aversive state; they include high investments, low alternative attractiveness, performance-based self-esteem, inflexible organization and social constraints. Key dimensions of burnout in accordance with Gustafsson et al. [26] are emotional, mental and physical exhaustion, a reduced sense of accomplishment and devaluation of sport, while consequences may comprise withdrawal, long-term performance impairment, impaired immune function and chronic inflammation. Thus, the Integrated Model of Athlete Burnout unites an old canonical notion of burnout with modern research. Gustafsson et al. [26] claim that this model seeks to explain burnout both as a long-term process and as a state with severe outcomes. Authors highlight the necessity of taking into account every facet of athlete burnout: knowledge of early signs as well as major antecedents may help coaches and sport scientists to early detect burnout and prevent its further development; understanding of personality, environmental and situational factors can contribute to more efficient identification of athletes with a heightened risk of developing burnout, whereas restraining and entrapment factors may explain behaviors of athletes suffering from burnout and remaining in sport at the same time. This model, being the most conceptual model of athlete burnout at present, suggests ideas for future empirical research and guidelines for practical application.

#### **MEASUREMENT OF ATHLETE BURNOUT**

Table 2 demonstrates three different measurement tools that are used nowadays in studies exploring athlete burnout: Maslach Burnout Inventory-General Survey (MBI-GS) [3], Eades Athletic Burnout Questionnaire (EABI) [16] and Athlete Burnout Questionnaire (ABQ) [34].

Table 2. Measures assessing athlete burnout

Variable or Concept	Source	Measure	Subscales
Burnout	Maslach, Jackson, & Leiter [3]	Maslach Burnout Inventory-General Survey (MBI-GS)	Professional efficacy (6 items), cynicism (5 items), and exhaustion (5 items)
Athlete burnout	Eades [19]	Eades Athletic Burnout Inventory (EABI)	Emotional and physical exhaustion (9 items), psychological withdrawal (7 items), devaluation by coach and teammates (6 items), negative self-concept of athletic ability (8 items), congruent athlete and coach expectations (3 items), and personal and athletic accomplishment (3 items)
Athlete burnout	Raedeke, & Smith [30]	Athlete Burnout Questionnaire (ABQ)	Reduced sense of accomplishment (5 items), sport devaluation (5 items), and emotional and physical exhaustion (5 items)

The Maslach Burnout Inventory-General Survey (MBI-GS) [3] with minor word replacement was shown to be applicable for assessing burnout in athletes [31]. This inventory contains 16 items measuring burnout in three dimensions corresponding to the first and second versions of the MBI (professional efficacy, cynicism and exhaustion). The MBI-GS has been reported to display acceptable reliability and factorial validity across athlete samples [31].

The Eades Athletic Burnout Inventory (EABI) was created by Eades [19] for her master thesis. The 36 items in the inventory were established based on the scientific literature on burnout, the MBI [32,33], and personal stories of athletes considered to have experienced burnout [30]. Although the inventory was first met with great enthusiasm, testing of the EABI demonstrated a number of theoretical and psychometric shortcomings. Initially, the blend of burnout syndrome facets and antecedents in certain subscales complicated an interpretation of the obtained data [15]. Apart from this, even after removal of problematic items or subscales [31, 32], unsatisfactory internal consistency and weak factors structure were revealed. Despite not being currently used, the EABI considerably contributed to the development of research on athlete burnout.

Being interested in athlete burnout and stimulated by the discrepancy of the EABI, Raedeke [14, 15, 30] developed the Athlete Burnout Questionnaire (ABQ). This questionnaire includes 16 items distributed among three subscales: a reduced sense of accomplishment, sport devaluation and emotional and physical exhaustion. Additionally, Raedeke and Smith [15,30] suggested minor word substitution to make the tool more specific for a particular sample tested (e.g. replacing the word *sport* with *swimming*). The ABQ was reported to produce construct validation evidence and acceptable internal consistency reliability and test-retest reliability [15]. Apart from this, Cresswell and Eklund [31] reported the ABQ validity based on multitrait-multimethod analysis of results collected from elite amateur sporting New Zealand rugby players. The results of the analysis demonstrated “acceptable convergent validity, with matching subscales highly correlated, and satisfactory internal validity, with

lower correlations between non matching scales" [30].

#### RECENT STUDIES ON ATHLETE BURNOUT

It is true to say that the issue of athlete burnout is becoming more and more popular among researchers nowadays. The analysis of recent available literature shows that the most examined features connected to athlete burnout are: perfectionism, mindfulness, coach's behavior influence, and positive psychological phenomena, e.g. optimism, hope and gratitude.

To begin with, Madigan, Stoeber, and Passfield [35] investigated the link between different dimensions of perfectionism and burnout in junior athletes. Perfectionism in their study was described through the prism of two dimensions: perfectionistic strivings and perfectionistic concerns. The study was conducted on 101 athletes aged from 16 to 19 years involved in different sport disciplines. The results showed that perfectionism indeed appears to be a factor contributing to the development of athlete burnout in such a way that perfectionistic concerns predicted longitudinal increases in the burnout level, while perfectionistic strivings predicted a longitudinal decrease in burnout. It suggests that athletes with self-oriented aspirations at perfection seem to be protected from burnout until they are overly concerned with avoiding mistakes and being overly critical toward their performance [35]. Another study conducted by Gustafsson, Hill, Stenling, and Wagnsson [36] was aimed at identifying the difference between burnout levels of junior athletes in terms of their perfectionism and perception of parent-initiated (achievement) climate. They collected data from 237 athletes aged 16-19 about athlete burnout, multidimensional perfectionism, and parent-initiated motivational climate. The results of the study demonstrated that athletes experiencing high levels of perfectionism are more likely to experience higher levels of burnout, especially if their parents express concerns about failure and winning without doing one's best [36]. In one more study [34] researchers referred to the Self-determination Theory [23, 24] in attempt to explore whether autonomous motivation and controlled motivation mediated the relationship between perfectionism and burnout. 211 junior athletes were asked to complete questionnaires measuring multidimensional perfectionism, motivational regulation, and athlete burnout. It was found that autonomous motivation and controlled motivation partially mediated the relationship between perfectionism and burnout; at the same time perfectionist concerns mediated by controlled motivation were proven to have a positive relationship with burnout, while perfectionist strivings mediated by autonomous motivation were reported to have a negative relationship with burnout [35]. However, based on these findings, the scientists conducted another study [38] investigating basic psychological needs underlying the relationship between burnout and perfectionism. It was found that perfectionist concerns had a negative relationship (via need satisfaction) with athlete engagement and a positive relationship (via need satisfaction and thwarting) with athlete burnout, while perfectionist strivings were reported to have an exactly reversed relationship with athlete burnout.

Another popular topic in recent articles about athlete burnout is mindfulness. A study conducted by Zhang, Si, Chung, and Gucciardi [39] investigated the association between mindfulness, experiential avoidance and three dimensions of athlete burnout. They examined 387 athletes aged 12 to 18. The data analysis showed that mindfulness had significant and negative effects on experiential



avoidance and all three dimensions of athlete burnout; this result suggests that mindfulness may indeed be treated as a protective factor that can be implemented in order to reduce symptoms of athlete burnout during training and competition [38] and lessen tendencies to experientially avoid negative private events. Another group of scientists conducted a study [40] examining the relationship between dispositional mindfulness and burnout and whether it can be mediated by perceived stress and affect. 233 participants aged 15 to 19 years were measured in terms of mindfulness, athlete burnout, self-appraised stress and its frequency and affect. It was established that positive affect fully mediates the relationship between mindfulness and sport devaluation; also, perceived stress and positive and negative affect partially mediated the link between mindfulness and physical and emotional exhaustion as well as reduced sense of accomplishment. Thus, mindfulness was reported to be negatively associated with all the dimensions of athlete burnout [36].

The relationship between coaches' behavior and athletes' burnout is a topical question in recent publications. Amorose and Anderson-Butcher [41] attempted to investigate the independent and interactive effects of perceived autonomy-supportive and controlling coaches' behavior on adolescent athletes' motivation. A sample of 301 athletes aged from 14 to 18 completed measures estimating their coaches' behaviors, need satisfaction, motives for sport, and burnout level. It was revealed that positive motivational responses are likely to increase if perceptions of autonomy support increase (when the athletes perceived a relatively lower level of controlling behaviors), and the most positive motivational outcomes were associated with the perceptions of relatively high autonomy support and relatively low controlling behaviors. Thus, coaches' behaviors have a significant effect on athletes' motivation and therefore the development of burnout [41].

Apart from this, scientists are also interested in investigating the relationship between athlete burnout and a number of positive psychological phenomena, e.g. optimism, hope or gratitude. Gustafsson and Skoog [42] conducted a study exploring the link between optimism and burnout symptoms as well as stress as a mediator of this relationship. They collected data from 217 athletes aged 16 to 19. The analysis of the results showed that optimism is negatively associated with both burnout and stress; apart from this, perceived stress fully mediates the relationship between optimism and emotional or physical exhaustion and sport devaluation, and partially mediates optimism and reduces a sense of accomplishment. Thus, encouraging an optimistic attitude can be an effective prevention strategy against athlete burnout. These researchers in cooperation with other colleagues [43] also examined the link between hope and athlete burnout and whether this relationship is mediated by positive and negative affect. 238 athletes aged 15 to 19 years completed measures of trait hope, perceived stress, positive and negative affect, and athlete burnout. The results indicated a significant negative relationship between hope and all three burnout dimensions. In particular, the relationship between hope and every dimension of burnout was partially or fully mediated by positive affect, while the negative effect was not found to mediate hope and athlete burnout. Thus, high-hope athletes are less likely to experience stress and consequently burnout [43]. Lastly, Chen, and Chang [44] examined a longitudinal relationship between gratitude and adolescent athlete burnout. 293 adolescent athletes were measured twice with a three-month' interval in terms of dispositional

gratitude and athlete burnout. The results of the study demonstrated a negative association between gratitude measured second time and athlete burnout measured first time, so that athletes experiencing burnout are likely to experience a decrease in dispositional gratitude.

To sum up, a lot of different aspects possibly associated with athlete burnout are being investigated at the present time. Research on athlete burnout is becoming more and more sophisticated, but there are still a lot of issues in need of further exploration.

## CONCLUSIONS

The research on burnout constantly continues. The development of positive psychology and increased attention to positive organizational behavior of workers contribute to burnout being viewed as lack of engagement, and this perspective of burnout is likely to lead to the understanding of burnout as a negative pole on the continuum of employee well-being [43]. Thus, future research would need to establish which factors are responsible for job engagement and employee well-being in order to explore possible burnout intervention and prevention strategies.

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**Cite this article as:**

**Akhrem A, Gazdowska Z.** Analysis of the athlete burnout phenomenon: The past, the present and the future of athlete burnout research. *Balt J Health Phys Act.* 2016;8(3):60-70.