

Differences in perception of burnout syndrome among young athletes from individual and team sports

Ana Clécia Alves dos Santos¹, Daniel Alvarez Pires^{2*}, Camila Moura Ferreira Vorkapic³, Afrânio de Andrade Bastos⁴

ORIGINAL ARTICLE

ABSTRACT

The purpose of this study was to compare the perception of the burnout syndrome related to the variables gender, sport, and age in young swimmers and volleyball players. A total of 194 athletes of both genders, aged 14 to 17 years, completed the Athlete Burnout Questionnaire (ABQ). The data analysis consisted of descriptive statistics and a comparison of the studied variables using the Kruskal-Wallis and Mann-Whitney tests. The results showed that the athletes did not have high burnout syndrome indicators. We found no effect of the gender variable on the perception of burnout dimensions. Swimmers had greater physical and emotional exhaustion than their volleyball peers. Conversely, volleyball players perceived more sport devaluation than their swimming peers.

Keywords: Sports Psychology, Stress, Swimming, Volleyball

INTRODUCTION

The quest for high performance in sports exposes young athletes to an excessive workload, exacerbated accountability for results, and a highly exhausting training routine, which are prerequisites for excellence in competition performance. However, at times, this process exceeds the limits of the athlete's ability to adapt and, together with stress, has negative consequences on sports performance and health (Markati, Psychountaki, Kingston, Karteroliotis, & Apostolidis, 2018).

The pressure on athletes during a season has increased dramatically in recent years due in large part to financial, advertising, and status benefits achieved by successful trainers and athletes (Weinberg & Gould, 2017). Excessive accountability for results by managers, the media, and fans, coupled with excessive training and travel loads, have caused and increased the onset of chronic stress in young athletes (Isoard-Gauthier, Guillet-Descas, & Gustafsson, 2016).

The reaction to this chronic stress causes burnout syndrome (Smith, 1986).

Burnout is understood as a psychophysiological response to exhaustion caused by excessive training and competition (Smith, 1986). It is characterized by a three-dimensional profile comprising physical and emotional exhaustion (resulting from the accumulation of demands inherent to the sporting context), reduced sense of sporting accomplishment (resulting from a perceived lack of recognition and absence of the expected sports performance) and sport devaluation (resulting from loss of interest in sports participation). When combined, these dimensions may result in a decreased level of performance (Gustafsson, Hill, Stenling, & Wagnsson, 2016). Over the past two decades, there has been increasing concern about the negative implications of burnout among athletes, which has generated a large number of studies in this area (Gustafsson, Defreese, & Madigan, 2017). A survey of citations of burnout

Manuscript received at December 10th 2018; Accepted at August 5th 2019

¹ State Secretariat for Education, Sport and Culture, Aracaju-SE, Brazil.

² Federal University of Pará, Castanhal-PA, Brazil.

³ Tiradentes University, Aracaju-SE, Brazil.

⁴ Federal University of Sergipe, Aracaju-SE, Brazil.

* Corresponding author: Federal University of Pará. Av. dos Universitários, s/n. Jaderlândia, Castanhal, Pará, Brazil. CEP 68746-360. Email: danielpires@ufpa.br

syndrome in the sports context identified more than 100 published studies (Gustafsson, Hancock, & Côté, 2014).

Individual and collective sports have different technical, tactical, and psychosocial characteristics (Gustafsson, Kentta, Hassmen, & Lundqvist, 2007), which may have repercussions on different perceptions regarding the manifestation of burnout. When making a mistake, a swimmer can immediately lose the competition, whereas a volleyball player can be helped by their teammates, who can perform well and win the match. Coakley (1992) noted that the occurrence of burnout in collective sports is less frequent than in individual sports, suggesting that interpersonal relationships among team members favor the construction of social identities that extrapolate the sporting context. This was not the case with athletes of individual sports, who were accustomed to perceiving other athletes as opponents. In addition, in sports teams, the teammates play the role of allies against the control exercised by parents, coaches, and other individuals of the sports context, favoring the experience of autonomy and independence.

Burnout has become one of the main concerns in youth sports (Isoard-Gauthier, Guillet-Descas, & Duda, 2013; Isoard-Gauthier et al., 2016). Appleton, Hall, and Hill (2009) and Curran, Appleton, Hill, and Hall (2011) showed that young athletes are affected by burnout syndrome and abandon the sport (a phenomenon known as dropout), freeing and distancing themselves from sports practice. Due to the difficulty of diagnosing burnout syndrome (Gustafsson et al., 2017), it is possible that significant numbers of young athletes of various sports, whether collective or individual, are affected by the syndrome, with its manifestations, causes and consequences going unnoticed. Therefore, studies of this nature contribute to the discussion about the variables associated with burnout in the sports environment.

Thus, this study measures the dimensions of burnout syndrome in volleyball and swimming athletes to provide support to coaches for the

prevention of harmful behaviors to athletes. The purpose of this study was to compare the perception of the syndrome related to the variables gender, sport, and age.

METHOD

Participants

The study was conducted with 194 athletes of both genders (66 women and 128 men) from different Brazilian states, aged 14 to 17 years (117 aged 14-15 years old and 77 aged 16-17 years old, $M=15.21\pm 1.35$), who practiced swimming ($n=128$, $M=15.05\pm 0.67$) or volleyball ($n=66$, $M=15.52\pm 2.09$) and participated in the Brazilian Youth Swimming Championship and the Northeast Volleyball Cup. Participants presented $M=3.84\pm 2.29$ years of time of practice (swimming $M=4.86\pm 2.10$ and volleyball $M=1.86\pm 0.97$). The sample was selected using a simple random method among the participants of the competitions.

Instruments

The ABQ is the most commonly used inventory for the assessment of burnout syndrome in athletes (Gerber et al., 2018; Goodger, Gorely, Lavallee, & Harwood, 2007). It was originally developed by Raedeke and Smith (2001) and later validated and translated into other languages such as Spanish (Fernández, Palacios, Fernández, Otero, & Raedeke, 2012) and Portuguese (Pires, Brandão & Silva, 2006; Guedes & Souza, 2016). The ABQ consists of 15 questions answered on a five-point Likert scale ranging from (1) "Almost never" to (5) "Almost always", with the following intermediate frequencies: (2) "Rarely", (3) "Sometimes" and (4) "Often". Scores are calculated for each subscale and are obtained from the arithmetic mean of the answers given to the five items corresponding to each burnout dimension and to a total burnout value calculated by the arithmetic mean of all 15 instrument items. The questions assess the frequency of burnout-related feelings based on antecedent and consequent symptoms in three dimensions or subscales, namely, physical and emotional exhaustion; reduced sense of sports accomplishment, and sport devaluation.

Procedures

Direct contact was made with the presidents of the Sergipe Aquatic Federation and the Sergipe Volleyball Federation, and the study was explained. It was also necessary to contact the President of the Brazilian Confederation of Aquatic Sports, which organized the championship, to gain access to the venue.

Team coaches or managers were contacted next, who then informed the parents/guardians and athletes about the study, providing authorization for the application of the questionnaires as long as it did not affect the competitions. Athletes were contacted at the beginning of the tournaments and instructed on how to complete the ABQ and sociodemographic data collection form. Athletes completed the instruments in an average time of 10 minutes.

The study was approved by the Committee of Ethics in Research with Humans of Federal University of Sergipe (Universidade Federal de Sergipe - UFS), according to CEP/UFS opinion n. 36928214.1.0000.5546.

Statistical analysis

The data were analyzed in phases. The first phase consisted of a descriptive data analysis (mean and standard deviation) to characterize the sample and to identify burnout syndrome scores. The Kolmogorov-Smirnov test was then used to test normality, which indicated a nonparametric distribution of the data. Lastly, the following variables were compared relative to the three burnout dimensions: gender, sport modality, and age, using the Kruskal-Wallis and Mann-Whitney tests. The data were analyzed using the statistical program SPSS for Windows, version 18.0, adopting a 5% level of statistical significance (Dancey & Reidy, 2013).

RESULTS

Overall, the athletes did not have manifestations of burnout syndrome (Table 1). The athletes obtained moderate scores on the ABQ, indicative of a frequency of burnout-related feelings that varied from rarely to

sometimes according to the classification of Raedeke and Smith (2001). The same frequency was observed for the dimension reduced sense of sports accomplishment. Regarding the other burnout dimensions, the participants obtained low scores in the physical and emotional exhaustion and the sport devaluation dimensions, indicative of a frequency of burnout-related feelings ranging from almost never to rarely.

Table 2 presents the results of the comparisons between the burnout dimensions and the gender variable. Regarding the physical and emotional exhaustion and sport devaluation dimensions, both female and male athletes obtained approximate mean scores, corresponding to a frequency interval between almost never and rarely. In the reduced sense of sports accomplishment dimension, the mean scores of the female and male athletes corresponded to a frequency range between rarely and sometimes. No significant differences were found in the perceived burnout dimensions between male and female athletes.

Table 3 presents the indicators of the burnout dimensions between swimmers and volleyball players. Regarding the physical and emotional exhaustion dimension, we observed a frequency of feelings between almost never and rarely in both groups, but swimmers perceived themselves as more exhausted than their volleyball peers.

For the dimension reduced sense of sports accomplishments, the mean scores found in both swimmers and volleyball players correspond to a frequency range between rarely and sometimes, with no significant difference between these groups.

Regarding the results of the sport devaluation dimension, the athletes of both modalities presented mean scores corresponding to a frequency range between almost never and rarely, but volleyball players manifested a greater devaluation of the modality than their swimming peers.

Table 1
Mean and standard deviation of total burnout and its dimensions.

Dimension	N	Mean	Standard deviation
Physical and emotional exhaustion	194	1.79	0.58
Reduced sense of sports accomplishment	194	2.54	0.40
Sport devaluation	194	1.82	0.90
Total burnout	194	2.09	0.42

Table 2
Comparison between the variable gender and the burnout dimensions in athletes.

Dimension	Gender	N	Mean	Standard deviation	<i>p</i>
Physical and emotional exhaustion	Female	66	1.79	0.57	0.81
	Male	128	1.78	0.59	
Reduced sense of sports accomplishment	Female	66	2.54	0.40	0.73
	Male	128	2.53	0.40	
Sport devaluation	Female	66	1.75	0.89	0.39
	Male	128	1.85	0.90	

Table 3
Comparison between the sports modalities and burnout syndrome dimensions.

Dimension	Modality	N	Mean	Standard deviation	<i>p</i>
Physical and emotional exhaustion	Swimming	128	1.88	0.59	0.00*
	Volleyball	66	1.58	0.51	
Reduced sense of sports accomplishment	Swimming	128	2.56	0.41	0.53
	Volleyball	66	2.50	0.37	
Sport devaluation	Swimming	128	1.72	0.91	0.01*
	Volleyball	66	2.00	0.86	

* $p \leq 0.05$

Table 4
Comparison between age and burnout dimensions.

Dimension	Age (years)	N	Mean	Standard deviation	<i>p</i>
Physical and emotional exhaustion	14-15	117	1.83	0.55	0.04*
	16-17	77	1.70	0.61	
Reduced sense of sports accomplishment	14-15	117	2.54	0.41	0.97
	16-17	77	2.53	0.39	
Sport devaluation	14-15	117	1.74	0.92	0.08
	16-17	77	1.92	0.85	

* $p \leq 0.05$

Table 4 shows the distribution of the athletes according to the age variable, organized in two ranges: 14-15 years and 16-17 years, as well as their respective burnout dimension scores. Both groups had reduced scores on the physical and emotional exhaustion dimension, but younger athletes (14-15 years) perceived themselves to be more exhausted than their 16-17-year-old peers. Regarding the reduced sense of sports accomplishment dimension, both groups presented a frequency ranging from rarely to sometimes, with no significant difference. Lastly, both groups presented reduced scores of

the sport devaluation dimension, also with no significant difference.

DISCUSSION

The purpose of this study was to compare the perception of the burnout syndrome related to the variables gender, sport, and age in young swimmers and volleyball players. Despite the context of accountability and pressure for results in youth sports, the indicators of total burnout, physical and emotional exhaustion, reduced sense of sports accomplishment, and sport depreciation were reduced.

Raedeke (1997) classified a mean of approximately 3 as a high burnout score, emphasizing that for an athlete to be classified as having severe burnout, high scores in the three dimensions are necessary since the syndrome is multidimensional. The athletes participating in the study are generally not at risk for the syndrome and cannot be classified as having severe burnout according to this classification. Our results are similar to those observed in university athletes in seven sports modalities in the United States (Raedeke & Smith, 2001) and in players belonging to the amateur New Zealand Rugby Union (Cresswell & Eklund, 2005).

Because burnout is located at the extreme end of a continuum that starts with negative adaptation responses to stress, progresses to a state of overtraining and reaches exhaustion, which can lead to an abandonment of the sports career (Silva, 1990), it is difficult to find active athletes with high burnout syndrome scores, since there is a great possibility that they have already ended their athletic careers, and thus did not participate in published studies. This process is known in the literature as the healthy worker effect (Zanatta & Lucca, 2015). As our study was performed on competing athletes, they did not have high burnout syndrome scores, and this result is similar to that found in Brazilian youth tennis players (Casagrande, Andrade, Viana, & Vasconcellos, 2014).

The results of the present study corroborate the findings of Costa, Oliveira, Farah, Guimarães, and Santos (2014). These authors compared the dimensions of burnout in relation to gender in the group of exposed athletes and did not notice differences between the groups. Given such evidence, there seems to be no relationship between the occurrence of burnout and gender, and this result diverges from the perspective that females have more frequent perceptions of the syndrome because they are more emotional and more involved with care, diet, and concern for the well-being of others. Thus, females would be more prone to the development of physical and emotional exhaustion (Silva & Carlotto, 2003). The

absence of gender differences was also observed in beach volleyball athletes (Vieira, Carruzo, Aizava, & Rigoni, 2013). This concurs with the findings of Goodger et al. (2007), who, after evaluating 27 studies of burnout in athletes of individual and collective sports, did not consider the gender variable as a factor in the perception of the syndrome.

The sports literature has shown in great depth the influence of the gender variable on the perception of burnout in studies of coaches. A meta-analysis by Goodger et al. (2007) found no significant difference in 60% of the studies surveyed. However, significant differences were found in 40% of the studies, which indicated high rates of reduced sense of sports accomplishment among women.

Individual and collective sports have different technical, tactical, and psychosocial characteristics. Collective sports are characterized mainly by a division of tasks, greater support from teammates and a greater number of interpersonal relationships, whereas individual sports are characterized mainly by aloneness at the time of the match, that is, there are no teammates during a competition, only opponents (Coakley, 1992). Due to these characteristics, Smith (1986) suggested that burnout seems to be more often associated with athletes who practice individual sports.

The findings only partially corroborate the study by Smith (1986), which states that athletes in individual sports are more likely to develop the syndrome than athletes of collective sports. The young swimmers perceived themselves as more exhausted than their volleyball peers. A possible explanation for this result is the demanding routine of swimming training and competitions, and its practice is conducive to the development of feelings of loneliness and monotony (Noce & Simim, 2009). This also may be due to the fact that swimmers start their sporting courses earlier than volleyball athletes.

The reduced sense of sports accomplishment was the most prevalent feeling in athletes of both modalities. Factors such as not being able to achieve the desired results, or not achieving

dreams as an athlete, correspond to this dimension. There is excessive concern with sports results in adolescence, since performance at this stage may determine the continuity of the athletic career into adulthood (Goodger, Wolfenden, & Lavallee, 2007). Because of the pressure involved combined with the emotional insecurity characteristic of adolescence and the current sports system that promotes heightened competition among young athletes (Coakley, 1992), abandonment of the sport (dropout) has been observed frequently in this age group (Isoard-Gauthier et al., 2016).

The sports devaluation dimension refers to the lack of desire, interest, and concern with the sport (Raedeke, 1997). In the present study, we observed a reduced frequency of feelings corresponding to this dimension, indicating that the young athletes remain committed and motivated by their sports careers. Intrinsic motivation (associated with the search for personal satisfaction and self-knowledge) is a protective factor against burnout (Gustafsson, Carlin, Podlog, Stenling, & Lindwall, 2018). Conversely, Cresswell, and Eklund (2005) found a close relationship between the onset of burnout and loss of motivation by the athlete. In the present study, volleyball players scored higher in the sports devaluation dimension. These findings contradict the argument of Coakley (1992) that individual sport athletes are more susceptible to the perception of burnout. Considering that individual sport athletes have, on average, a higher training load, which is a factor that could lead to a greater risk of burnout, the observation of higher indicators among collective sports athletes may be related to factors external to training (Gustafsson et al., 2007).

Regarding the effect of the age variable on the perception of burnout, the findings of the present study suggest higher indicators of the physical and emotional exhaustion dimension among athletes aged 14-15 years than in their 16-17-year-old peers. A possible explanation for this result is that younger athletes participating in competitions at the national and regional levels have not yet mastered strategies for

controlling emotions and coping with the stressors of competition (Nicholls, Taylor, Carroll, & Perry, 2016). Diverging from the present study, Costa et al. (2014) did not find significant differences in a comparative analysis of age groups among young Brazilian swimmers. Therefore, there seems to be no relationship between burnout perception and chronological age.

In addition, research on burnout in Brazilian sports has not yet addressed the manifestation of burnout based on demographic, psychological, and situational variables such as age, training load, and personality type (Pires, Santiago, Samulski, & Costa, 2012). One perspective to be considered is that the relationship between burnout and the stages of maturational development has not yet been investigated (Malina, 2010), since categories in competitions are determined by chronological age and not by maturational stage, which may negate the influence of age as an indicator of burnout.

We emphasize the cross-sectional design of this study as a limitation. Future studies should continue to analyse burnout in young athletes, considering the onset, development, and peaks of burnout syndrome in a longitudinal perspective. Thus, covering different contexts of competitive seasons, as some studies (e.g., Cresswell & Eklund, 2006, 2007; Lai & Wiggins, 2003; Pires, Bara Filho, Debien, Coimbra, & Ugrinowitsch, 2016) indicate that burnout tends to increase throughout the season, with higher scores observed at the end of the season.

Therefore, closer monitoring by parents and coaches of athletes with burnout scores closer to the values classified as high may be necessary. The fact that, in this study, the data were collected in the middle of the season may explain the low burnout scores, which would not necessarily remain low until the end of the season. Other perceived limitations were the small sample size and the absence of comparative variables with the burnout dimensions. According to a recent expert statement (Madigan, Gustafsson, Smith, Raedeke, & Hill, 2019), future research should, therefore, adopt a multidisciplinary approach

that aims to identify endocrine (e.g., cortisol) and immunological (e.g., salivary IgA) markers associated with burnout.

CONCLUSION

We observed a reduced average score of total burnout and its dimensions among the young athletes. We did not find an effect of gender on the perception of the burnout dimensions. Swimmers had greater physical and emotional exhaustion than their volleyball peers. Conversely, volleyball players had greater perceived sport devaluation than their swimming peers. Athletes in the 14-15-year-old age group presented greater physical and emotional exhaustion than their 16-17-year-old peers, which is a warning sign that must be considered to prevent these athletes from abandoning their careers early.

Acknowledgments:

Nothing to declare.

Conflict of interests:

Nothing to declare.

Funding:

Authors thank PROPESP/UFPA for support funding English translation.

REFERENCES

- Appleton, P., Hill, H., & Hill, A. (2009). Relations between multidimensional perfectionism and burnout in junior-elite male athletes. *Psychology of Sport & Exercise, 10*(4), 457-465.
- Casagrande, P., Andrade, A., Viana, M., & Vasconcellos, D. (2014). Burnout em tenistas brasileiros infante-juvenis. *Motricidade, 10*(2), 60-71.
- Coakley, J. (1992). Burnout among Adolescent Athletes: A Personal Failure or Social Problem? *Sociology of Sport Journal, 9*(3), 271-285.
- Costa, M., Oliveira, S., Farah, B., Guimarães, F., & Santos, M. (2014). Síndrome de burnout entre jovens nadadores: frequências de sentimentos independentes do gênero e da categoria de competição. *Journal of Physical Education, 25*(2), 173-180.
- Cresswell, S., & Eklund, R. (2007). Athlete burnout: a longitudinal quantitative study. *The Sport Psychologist, 21*(1), 1-20.
- Cresswell, S., & Eklund, R. (2006). Changes in athlete burnout over a 30 week "rugby year". *Journal of Science and Medicine in Sport, 9*(1), 125-134.
- Cresswell, S., & Eklund, R. (2005). Motivation and burnout among top amateur rugby players. *Medicine and Science in Sport and Exercise, 37*(3), 469-477.
- Curran, T., Appleton, P., Hill, A., & Hill, H. (2011). Passion and burnout in elite junior soccer players: the mediating role of self-determined motivation. *Psychology of Sport & Exercise, 12*(6), 655-661.
- Dancey, C., & Reidy, J. (2013). *Estatística sem matemática para a psicologia* (5ª ed.). Porto Alegre: Penso.
- Fernández, C., Palacios, C., Fernández, E., Otero, M., & Raedeke, T. (2012). Adaptación del ABQ para la evaluación del burnout en deportistas colombianos. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte, 7*(2), 271-286.
- Gerber, M., Gustafsson, H., Seelig, H., Kellmann, M., Ludyga, S., Colledge, F.,... Bianchi, R. (2018). Usefulness of the Athlete Burnout Questionnaire (ABQ) as a screening tool for the detection of clinically relevant burnout symptoms among young elite athletes. *Psychology of Sport & Exercise, 39*, 104-113.
- Goodger, K., Gorely, T., Lavallee, D., & Harwood, C. (2007). Burnout in sport: a systematic review. *The Sport Psychologist, 21*(2), 127-151.
- Goodger, K., Wolfenden, L., Lavallee, D. (2007). Symptoms and consequences associated with three dimensions of burnout in junior tennis players. *International Journal of Sport Psychology, 38*(4), 342-364.
- Guedes, D., & Souza, R. (2016). Propriedades psicométricas do Athlete Burnout Questionnaire para uso em atletas jovens brasileiros. *Journal of Physical Education, 27*(1), e-2708.
- Gustafsson, H., Carlin, M., Podlog, L., Stenling, A., & Lindwall, M. (2018). Motivational profiles and burnout in elite athletes: A person-centered approach. *Psychology of Sport & Exercise, 35*, 118-125.
- Gustafsson, H., Defreese, J., & Madigan, D. (2017). Athlete burnout: review and recommendations. *Current Opinion in Psychology, 16*, 109-113.
- Gustafsson, H., Hancock, D., & Côté, J. (2014). Describing citation structures in sport burnout literature: A citation network analysis. *Psychology of Sport & Exercise, 15*(6), 620-626.
- Gustafsson, H., Hill, A., Stenling, A., & Wagnsson, S. (2016). Profiles of perfectionism, parental climate, and burnout among competitive junior athletes. *Scandinavian Journal of Medicine and Science in Sports, 26*(10), 1256-1264.
- Gustafsson, H., Kentta, G., Hassmen, P., & Lundqvist, C. (2007). Prevalence of burnout in competitive adolescent athletes. *The Sport Psychologist, 21*(1), 21-37.

- Isoard-Gauthier, S., Guillet-Descas, E., & Duda, J. (2013). How to achieve in elite training centers without burning out? An achievement goal theory perspective. *Psychology of Sport & Exercise*, 14(1), 72-83.
- Isoard-Gauthier, S., Guillet-Descas, E., & Gustafsson, H. (2016). Athlete Burnout and the Risk of Dropout Among Young Elite Handball Players. *The Sport Psychologist*, 30(2), 123-130.
- Lai, C., & Wiggins, M. (2003). Burnout perceptions over time in NCAA division I soccer players. *International Sports Journal*, 7(2), 120-127.
- Malina, R. (2010). Early sport specialization: roots, effectiveness, risk. *Current Sports Medicine Reports*, 9(6), 364-371.
- Madigan, D., Gustafsson, H., Smith, A., Raedeke, T., & Hill, A. (2019). The BASES Expert Statement on Burnout in Sport. *The Sport and Exercise Scientist*, 61, 6-7.
- Markati, A., Psychountaki, M., Kingston, K., Karteroliotis, K., & Apostolidis, N. (2018). Psychological and situational determinants of burnout in adolescent athletes. *International Journal of Sport and Exercise Psychology*, DOI: 10.1080/1612197X.2017.1421680
- Nicholls, A., Taylor, N., Carroll, S., & Perry, J. (2016). The Development of a New Sport-Specific Classification of Coping and a Meta-Analysis of the Relationship between Different Coping Strategies and Moderators on Sporting Outcomes. *Frontiers in Psychology*, 7.
- Noce, F., & Simim, M. (2009). Análise dos fatores estressantes que interferem no rendimento do atleta de natação no período pré-competitivo. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 4(1), 45-58.
- Pires, D., Bara Filho, M., Debien, P., Coimbra, D., & Ugrinowitsch, H. (2016). Burnout e Coping em Atletas de Voleibol: uma análise longitudinal. *Revista Brasileira de Medicina do Esporte*, 22(4), 277-281.
- Pires, D., Brandão, M., & Silva, C. (2006). Validação do Questionário de Burnout para Atletas. *Journal of Physical Education*, 17(1), 27-36.
- Pires, D., Santiago, M., Samulski, D., & Costa, V. (2012). A síndrome de burnout no esporte brasileiro. *Journal of Physical Education*, 23(1), 131-139.
- Raedeke, T. (1997). Is athlete burnout more than just stress? A sport commitment perspective. *Journal of Sport and Exercise Psychology*, 19(4), 397-417.
- Raedeke, T., & Smith, A. (2001). Development and Preliminary Validation of an Athlete Burnout Measure. *Journal of Sport and Exercise Psychology*, 23(4), 281-306.
- Silva, J. (1990). An analysis of training stress syndrome in competitive athletics. *Journal of Applied Sport Psychology*, 2(1), 5-20.
- Silva, G., & Carlotto, M. (2003). Síndrome de burnout: um estudo com professores da rede pública. *Psicologia Escolar e Educacional*, 7(2), 145-153.
- Smith R. (1986). Toward a cognitive-affective model of athletic burnout. *Journal of Sport Psychology*, 8(1), 36-50.
- Vieira, L., Carruzo, N., Aizava, P., & Rigoni, P. (2013). Análise da síndrome de burnout e das estratégias de coping em atletas de vôlei de praia. *Revista Brasileira de Educação Física e Esporte*, 27(2), 269-276.
- Zanatta, A., & Lucca, S. (2015). Prevalence of burnout syndrome in health professionals of an onco-hematological pediatric hospital. *Journal of School of Nursing – University of São Paulo*, 49(2), 251-258.
- Weinberg, R., & Gould, D. (2017). *Fundamentos da Psicologia do Esporte e do Exercício* (6ª ed.). Porto Alegre: Artmed.

