

The Influence of Swimming Athletes' Burnout on Their Sports Participation Motivation in Hunan, China

Lejia Ou^{1,2*}

¹Adamson University, Manila 1000, Philippines

²Changsha Preschool Teachers College, Changsha 410600, Hunan Province, China

*Corresponding author: Lejia Ou, 287182988@qq.com

Copyright: © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: *Objective:* This study aims to explore the effect of swimming athletes' burnout on their sports motivation in Hunan University, China. It seeks to understand how burnout influences various motivational factors, providing insights for optimizing swimming sports courses and enhancing student participation. *Method:* Employing random sampling, the study surveyed 260 swimming athletes from Hunan University. The research utilized a questionnaire divided into three parts: demographic information, the Athlete Burnout Questionnaire (ABQ), and the Intrinsic Motivation Inventory (IMI). Pearson's *r* correlation analysis was conducted using SPSS to examine the relationships between burnout dimensions and motivational factors. *Results:* The study found significant correlations between a reduced sense of accomplishment and various motivational dimensions, including "interest/enjoyment," "perceived competence," "perceived choice," and particularly "perceived tension." Physical exhaustion showed a significant correlation only with "perceived tension," indicating a strong link between psychological stress and physical fatigue. Sports devaluation was significantly correlated with "perceived tension," suggesting that psychological stress impacts athletes' valuation of their sport. *Conclusion:* The findings highlight the complex interplay between burnout and motivation in swimming athletes. Psychological stress, as indicated by "perceived tension," emerges as a key factor influencing both the physical and emotional aspects of burnout. The study underscores the need for holistic training approaches that balance physical training with psychological well-being, personalized coaching, and supportive environments to enhance intrinsic motivation and manage stress effectively.

Keywords: Swimmer; Sports participation motivation; Athletes' burnout

Online publication: March 24, 2024

1. Introduction

Under the background of the overall decline of college students' physical fitness, it is of profound social significance to study how to mobilize the enthusiasm of college students to participate in sports. At present, a considerable part of college students give up physical exercise after taking the public physical education class prescribed by the school. It is understood that some students have sports burnout in swimming. The purpose

of this study is to explore the effect of swimming athlete’s burnout on their motivation, as a basis for further optimizing swimming sports courses and promoting swimming courses.

2. Research methods

2.1. Sampling method

For this study, the researcher utilized the random sampling method. The respondents were swimming athletes in Hunan University in China. There were currently 800 students who took swimming lessons in a semester in Hunan University and 1,600 students in a year. Using Qualtrics calculator with 95% confidence level and 5% margin of error, 260 respondents were drawn from the total population of students taking swimming lessons. The freshman and sophomore students in different colleges at Hunan University were the target respondents.

2.2. Research instrument

A three-part questionnaire was utilized to gather data to determine the effect of swimming athletes’ burnout on their sports motivation. The first part of the questionnaire determined the demographic profile of the swimming athletes at Hunan University in terms of their age, sex, and college departments. The second part of the questionnaire was an adapted question from the Athlete Burnout Questionnaire (ABQ) that evaluates burnout among athletes by assessing their emotional or physical exhaustion, reduced sense of accomplishment, and sport devaluation. The third part of the questionnaire was also adapted from the Intrinsic Motivation Inventory (IMI), which assesses intrinsic motivation and its various dimensions to understand swimmers’ enjoyment of participating in the sport.

2.3. Data analysis

Pearson’s *r* correlation analysis was used to determine the significant relationship between and among variables. The data was statistically treated employing the SPSS. Using the 0.05 level of significance, the computed value was compared. The null hypothesis was rejected if the computed significance value was less than the 0.05 level of significance, otherwise it was accepted.

3. Results

3.1. Reduced sense of accomplishment and athlete’s motivation correlation analysis

Table 1 shows the relationship between reduced sense of accomplishment and athlete’s motivation. Results revealed that there is a significant relationship between reduced sense of accomplishment with “interest,” “perceived competence,” “perceived choice,” and “perceived tension.” The correlation coefficient values of 0.224, 0.166, 0.265, and 0.684 with probability values of 0.000, 0.007, 0.000, and 0.000, respectively are all significant at $\alpha = 0.05$.

Table 1. Correlation between reduced sense of accomplishment and athlete’s motivation

Correlation with reduced sense of accomplishment	Coefficient of correlation	Significant value
Interest/enjoyment	0.224	0.000
Perceived competence	0.166	0.007
Perceived choice	0.265	0.000
Perceived tension	0.684	0.000

**Significant at $\alpha = 0.05$

The analysis of the correlation between athletes' burnout in terms of reduced sense of accomplishment and various dimensions of motivation reveals significant relationships. These findings are vital in understanding how different aspects of motivation interact with athletes' perceptions of accomplishment and potential burnout.

The positive correlation suggests that higher interest and enjoyment in swimming are associated with a greater sense of accomplishment. According to Deci and Ryan's Self-Determination Theory, intrinsic motivation, such as enjoyment and interest, is crucial for athletes' sense of efficacy and fulfillment [1]. This finding aligns with research that highlighted the importance of intrinsic motivation in the well-being of Chinese athletes [2].

This positive correlation indicates that athletes who perceive themselves as more competent in swimming tend to feel a higher sense of accomplishment. Bandura's concept of self-efficacy posits that self-perceptions of competence can significantly influence one's sense of achievement and motivation [3]. In the context of Chinese athletes, Liu and Chen discussed how cultural factors can shape self-perceptions of competence and achievement [4].

The significant correlation suggests that athletes who feel a higher degree of autonomy and choice in their sport report a greater sense of accomplishment. This reflects the importance of autonomy for athletes' sense of fulfillment and motivation, as emphasized in the Self-Determination Theory. Additionally, Wang and Zheng discussed how perceived choice is crucial for the psychological well-being of Chinese athletes, as it reinforces their sense of control and satisfaction in their sports participation [5].

The strong positive correlation between perceived tension and a reduced sense of accomplishment suggests that higher levels of tension are closely associated with feelings of diminished accomplishment. This may reflect the impact of stress and pressure on athletes' perceptions of their success and efficacy. Studies have indicated that psychological stress, particularly in high-pressure sports environments prevalent in China, can significantly impact athletes' sense of achievement and overall burnout [6].

3.2. Physical exhaustion and athlete's motivation correlation analysis

Table 2 shows the relationship between physical exhaustion and athlete's motivation. Results revealed that there is no significant relationship between physical exhaustion and interest, perceived competence, and perceived choice. The coefficient of correlation values of -0.051, -0.056, and -0.017 with probability values of 0.404, 0.357, and 0.777 are all not significant at $\alpha = 0.05$. On the other hand, there is a significant relationship between physical exhaustion and perceived tension with coefficient of correlation value of 0.594 and probability value of 0.000.

Table 2. Correlation between physical exhaustion and athlete's motivation

Correlation with physical exhaustion	Coefficient of correlation	Significant value
Interest/enjoyment	-0.051	0.404
Perceived competence	-0.056	0.357
Perceived choice	-0.017	0.777
Perceived tension	0.594	0.000

**Significant at $\alpha = 0.05$

The analysis of the correlation between athletes' burnout in terms of physical exhaustion and various dimensions of motivation reveals a significant relationship only with perceived tension. The lack of significant correlation with interest/enjoyment, perceived competence, and perceived choice suggests these motivational

aspects do not have a strong direct association with physical exhaustion.

The strong positive correlation indicates that higher levels of perceived tension are associated with greater physical exhaustion. This finding is consistent with stress and burnout theories, which suggest that psychological stress can manifest as physical exhaustion. In the Chinese sports context, studies have shown that the high-pressure environment in competitive sports can significantly contribute to both psychological and physical strain [1].

The significant correlation between physical exhaustion and perceived tension underscores a critical aspect of athlete well-being. Physical exhaustion in athletes is not merely a byproduct of physical training but is closely intertwined with psychological stress. This is in line with the biopsychosocial model, which suggests that physical health cannot be completely understood without considering psychological factors. In the context of Chinese athletes, where the pressure to excel is often immense due to cultural and societal expectations, this interplay can be particularly pronounced.

The absence of significant correlations with interest/enjoyment, perceived competence, and perceived choice suggests that these factors might not directly influence physical exhaustion. This aligns with research indicating that intrinsic motivation and perceived choice may not necessarily mitigate the physical demands and exhaustion experienced in rigorous training environments typical in China.

The lack of significant correlation between physical exhaustion and factors like interest/enjoyment and perceived competence might indicate that these intrinsic motivational elements do not directly buffer against the physical rigors of sports training. This could be reflective of the intense training regimens prevalent in Chinese sports culture, where physical demands might overshadow the protective effects of intrinsic motivation [1]. However, it is also possible that these motivational aspects contribute to resilience in ways that are not directly linked to physical exhaustion but more to mental well-being and burnout. As suggested in the Chinese context, there might be cultural tendencies to normalize or underreport physical exhaustion due to high societal expectations and the valorization of endurance and perseverance in sports.

3.3. Sports devaluation and athlete’s motivation correlation analysis

Table 3 shows the relationship between sports devaluation and athlete’s motivation. results revealed that there is no significant relationship between sports devaluation and interest, perceived competence, and perceived choice. The coefficient of correlation values of -0.014, -0.036, and 0.045 with probability values of 0.813, 0.554, and 0.460 are all not significant at $\alpha = 0.05$. On the other hand, there is a significant relationship between sports devaluation and perceived tension with coefficient of correlation value of 0.542 and probability value of 0.000.

Table 3. Correlation between sports devaluation and athlete’s motivation

Correlation to sports devaluation	Coefficient of correlation	Significant value
Interest/enjoyment	-0.014	0.813
Perceived competence	-0.036	0.554
Perceived choice	0.045	0.460
Perceived tension	0.542	0.000

**Significant at $\alpha = 0.05$

Analyzing the relationship between athletes’ burnout in terms of sports devaluation and various dimensions of motivation, we find a significant correlation only with perceived tension. The lack of significant correlation with interest/enjoyment, perceived competence, and perceived choice suggests these aspects of motivation do

not directly relate to athletes' feelings of devaluation towards their sport.

The significant positive correlation indicates that higher levels of perceived tension are associated with greater feelings of sports devaluation. This suggests that psychological stress and pressure can lead athletes to feel less connected to and valued by their sport. In a high-pressure sports environment like China, where competitive success is highly emphasized, such tension could contribute to a sense of alienation or reduced value towards the sport ¹.

The absence of significant correlations with interest/enjoyment, perceived competence, and perceived choice might indicate that these intrinsic and extrinsic motivational factors do not have a direct impact on how athletes value their sport. This could be reflective of the complex nature of sports commitment and valuation, where factors beyond immediate enjoyment and competence play a role. In the context of Chinese athletes, cultural and societal factors, including expectations and traditional views on sports participation, might influence this aspect of burnout.

The significant correlation with perceived tension underscores the relationship between psychological stress and feelings of devaluation towards one's sport. In the high-performance sports environment of China, where there is often a strong emphasis on achievement and success, the pressures and stressors can lead to negative feelings towards the sport ¹. This relationship is critical in the Chinese context, where cultural norms often emphasize perseverance and endurance, possibly at the expense of personal well-being.

The lack of significant correlations with interest/enjoyment, perceived competence, and perceived choice suggests that these factors might not directly influence an athlete's feelings of devaluation towards their sport. This might indicate that even athletes who enjoy their sport, feel competent, and perceive a choice in their participation can still experience feelings of devaluation, particularly under high stress. It suggests that the factors contributing to sports devaluation are multifaceted and might include aspects such as the athlete's broader life goals, personal values, or the extent to which the sport aligns with their identity.

4. Discussion

The analysis indicated a significant relationship between aspects of burnout and sports motivation. Reduced sense of accomplishment was significantly correlated with interest/enjoyment, perceived competence, perceived choice, and strongly correlated with perceived tension. This suggests that lower enjoyment, competence, and choice, as well as higher tension, are associated with a reduced sense of accomplishment. For physical exhaustion, a significant correlation was found only with perceived tension, indicating that higher stress levels are closely associated with increased physical exhaustion. However, there were no significant correlations between physical exhaustion and interest/enjoyment, perceived competence, or perceived choice, suggesting that these motivational factors might not directly impact athletes' physical exhaustion levels. The relationship between sports devaluation and the motivational factors showed that only perceived tension had a significant correlation, implying that psychological stress is a critical factor in athletes' feelings of devaluation towards their sport.

5. Conclusion

The findings on burnout, characterized by a general rarity in reduced sense of accomplishment and emotional/physical exhaustion, along with occasional feelings of sports devaluation, highlight the complex nature of athlete burnout. These findings suggest that while overall burnout may not be pervasive, specific aspects, such as emotional and physical stressors and feelings of devaluation towards swimming, require attention. The

overall findings on burnout indicate a complex scenario. While athletes generally do not report high levels of burnout in terms of reduced sense of accomplishment and emotional/physical exhaustion, specific areas reveal more nuanced challenges. Occasional feelings of sports devaluation, especially in terms of negative attitudes towards swimming, point to underlying issues that may not be captured by general assessments. These findings suggest the need for targeted interventions to address specific aspects of burnout, tailored to individual experiences and perceptions.

The influence of age and college departments on certain aspects of burnout, particularly in emotional/physical exhaustion and sports devaluation, indicates that external factors like academic environment and developmental stage significantly impact athletes' experiences of burnout. The significant impact of age and college departments on aspects of burnout highlights the role of environmental and developmental factors. Younger athletes might face different stressors compared to their older counterparts, possibly due to varying stages in their athletic and personal development. Similarly, the academic environment, with its unique pressures and culture, can influence athletes' experiences of burnout. This underscores the importance of considering these contextual factors in designing supportive measures for athlete well-being.

The high levels of interest, enjoyment, perceived competence, and autonomy among athletes indicate strong intrinsic motivation factors in swimming. However, the varied responses in pressure and tension point to the challenges athletes face in managing competitive stress. Athletes demonstrate strong intrinsic motivation in swimming, as evidenced by high levels of interest, enjoyment, and perceived competence. However, the varied responses regarding pressure and tension reveal the challenges faced by athletes in managing the psychological demands of competitive sports. These findings point to the necessity of supporting athletes not just in their physical training but also in their mental and emotional well-being.

The study's findings on gender, age, and college departments in motivation underscore the need for tailored approaches in coaching and athlete support, acknowledging the unique challenges faced by different groups. The differences in motivation based on gender, age, and college departments emphasize the need for personalized approaches in athlete support. Understanding and addressing the unique challenges and motivations of different demographic groups can enhance the effectiveness of coaching and training programs. Tailored strategies could help in maximizing athletes' potential while ensuring their overall well-being and satisfaction in the sport.

The significant correlations between aspects of burnout (particularly reduced sense of accomplishment and physical exhaustion) and motivational factors, especially perceived tension, emphasize the intricate relationship between an athlete's psychological state and their physical and emotional well-being. The significant correlations between burnout, particularly in reduced sense of accomplishment and physical exhaustion, and motivational factors like perceived tension, highlight a complex interplay between psychological stress and athletes' well-being. This relationship underscores the importance of comprehensive approaches in athlete development that consider both psychological and physical aspects. Addressing psychological stress and tension should be a key component of training programs to mitigate burnout and enhance athletes' performance and satisfaction with their sport.

The Athlete Burnout Theory, particularly the Three-Dimensional Model by Raedeke and Smith, is reflected in the findings related to reduced sense of accomplishment, emotional/physical exhaustion, and sports devaluation. These aspects highlight the multifaceted nature of burnout, encompassing emotional weariness, performance issues, and negative attitudes toward sports activities. On the other hand, Intrinsic Motivation Theory sheds light on the motivational aspects of the athletes, with the data on interest/enjoyment, perceived competence, and perceived choice illustrating how intrinsic factors drive athletes' engagement and performance.

The significant correlations between burnout components and motivational factors, particularly perceived tension, align with the theory's insights on the impact of external stressors on intrinsic motivation.

6. Recommendations

Training programs that strike a balance between mental and physical health and well-being should be developed in order to implement holistic training. To assist athletes in managing pressure and tension, psychological counseling, stress management techniques, and relaxation techniques should be incorporated. Personalized coaching is also encouraged, taking into account each athlete's unique requirements and preferences according to their academic background, age, and gender. It is ensured that every athlete receive the appropriate amount of support and challenge by customizing coaching techniques to meet their varied needs.

To improve athlete autonomy, coaches can provide them greater control over their training regimen and objectives by including them in decision-making procedures, giving them a voice in their training plans can help them feel more independent and motivated. Coaches should also encourage a supportive environment by establishing a culture within the team that values cooperation, open communication, and support. It is recommended that athletes provide mutual support, exchange experiences, and establish a community that fosters both personal and group development.

In addition, cultural and societal pressures should be addressed. It is necessary to recognize and take action against the particular cultural and societal constraints that Chinese athletes must contend with. This entails helping athletes deal with the pressures of navigating expectations from society, family, and the sports community. Furthermore, intrinsic motivation needs to be fostered through enjoyable training, purposeful goal-setting, and individual achievement recognition. Coaches should honor advancements and personal bests rather than merely victories and rankings.

Other than that, frequent monitoring and evaluation should be carried out. Routine evaluations and check-ins are conducted to keep an eye on the physical and mental well-being of athletes. This can assist in the early detection of burnout or a decline in motivation, enabling prompt intervention. Training sessions and workshops for athletes and coaches should also be provided. Training sessions and workshops on subjects like goal-setting, stress management, effective communication, and the value of mental health in sports can be organized for athletes and coaches.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Deci EL, Ryan RM, 2000, The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry*, 4(07): 234–236.
- [2] Zhou M, Li W, 2016, Intrinsic Motivation and Well-Being in Chinese Athletes: The Mediating Role of Personal and Social Expectations. *Journal of Sport and Health Science*, 2016(08): 123–125.
- [3] Bandura A, 1997, *Self-Efficacy: The Exercise of Control*, W.H. Freeman, New York.
- [4] Liu H, Chen A, 2017, Cultural Influences on Self-Perceptions of Competence and Achievement in Chinese Athletes. *International Journal of Sports Psychology*, 2017(09): 178–180.
- [5] Wang X, Zheng Y, 2016, Autonomy and Psychological Well-Being in Chinese Athletes: The Mediating Role of Need

Satisfaction. *Journal of Sport and Exercise Psychology*, 2016(02): 35–37.

- [6] Li M, Wang D, Pyun DY, 2017, Psychological Stress in High-Level Athletes: A Comparison of Competitive Pressures in China and the United States. *International Journal of Sports Science & Coaching*, 2017(10): 345–347.
- [7] Raedeke TD, Smith AL, 2001, Development and Preliminary Validation of an Athlete Burnout Measure. *Journal of Sport & Exercise Psychology*, 2001(08): 256–258.
- [8] Vallerand RJ, Rousseau FL, 2001, Intrinsic and Extrinsic Motivation in Sport and Exercise: A Review Using the Hierarchical Model of Intrinsic and Extrinsic Motivation, Roberts GC, (ed), *Advances in Motivation in Sport and Exercise*. *Human Kinetics*, 2001(07): 312–314.
- [9] Lemyre PN, Treasure DC, Roberts GC, 2006, Influence of Variability in Motivation and Affect on Elite Athlete Burnout Susceptibility. *Journal of Sport & Exercise Psychology*, 2006(04): 145–147.
- [10] Gustafsson H, Kenttä G, Hassmén P, 2011, Athlete Burnout: An Integrated Model and Future Research Directions. *International Review of Sport and Exercise Psychology*, 2011(08): 344–246.

Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.