

The Relationship between Coaches' Independent Support Behavior, Psychological Tenacity, and Athlete Engagement

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Abstract

Original Research Article

Athlete engagement is not only a lasting, positive cognitive and emotional experience in sports, but also an important indicator to measure the positive aspect of athletes, which can effectively avoid psychological fatigue in athletes. Therefore, it is particularly important to explore the influencing factors of athletes' investment and to explore the ways to improve athletes' investment for them to play their sports skills steadily in sports training and competition. **Results:** Coach autonomy support significantly positively predicts athlete engagement level; Instructor self-support significantly positively predicts mental toughness. **Conclusion:** From the above results, Good behavior of coaches can promote better participation in sports training and competition.

Keywords: Athlete engagement, psychological fatigue, sports skills.

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1. INTRODUCTION

In the field of competitive sports psychology, athlete engagement has become a popular research direction. Sport engagement is defined as a sustained and positive cognitive and emotional experience in sports. Athlete engagement is not only a lasting, positive cognitive and emotional experience in sports, but also an important indicator to measure the positive aspect of athletes, which can effectively avoid psychological fatigue in athletes. Therefore, it is particularly important to explore the influencing factors of athletes' investment and to explore the ways to improve athletes' investment for them to play their sports skills steadily in sports training and competition. Although previous studies on athletes investment influence factors made certain contribution and draw some meaningful conclusions, but it is important to note that the existing research more examine a single environment or individual factors in the prediction of athletes, and for the potential mechanism of athletes, especially for the coaches independent support behavior, psychological tenacity and the relationship between athletes input mechanism.

2. LITERATURE REVIEW

Various internal and external factors in the sports situation may affect the input of athletes, including basic psychological needs, self-determined motivation, positive psychological capital, etc. The external factors

include coaches' coaching behavior, leadership style, coach-athlete relationship and social support. Domestic and foreign researchers found that social support can significantly positively predict athlete investment in [1, 2]. Among the social support, the support from the coaches is the most direct [3]. Balk with 96 elite athletes as the investigation object of [4], coaches independent support the influence on the athletes, the results show that the coaches independent support behavior on athletes can produce positive prediction, in other words, the athletes feel the coaches independent support, so the higher the degree of athletes. In addition, relevant studies have shown that coaches' independent support behavior can not only significantly and positively predict athlete input, but also significantly and positively predict athlete input by satisfying the three basic psychological needs of autonomy, ability and relationship.

3. METHODS

3.1. Participants

Based on the principle of convenience, this study selected the active athletes from the provincial sports teams in Zhejiang Province and Shandong Province, as well as the municipal sports schools in Jinhua City and Linyi City. After the athletes completed the training, the sports psychology graduate students who had received systematic professional training served as the main test, carefully interpreted the guidelines for

filling in the questionnaire, and distributed the paper questionnaire to the athletes, requiring them to fill in the questionnaire independently and carefully according to their own actual situation. It takes an average of 15 minutes to complete the survey. The survey was conducted voluntarily and anonymously. After the questionnaire was completed, the examiner checked and collected it on the spot, and thanked each participant. All the questionnaires come from active service athletes, who have more than three years of training experience, and at least reach the level of second-class athletes and above in the Technical Grade Standard of athletes issued by the State Administration of Sports. A total of 400 questionnaires were sent out, and 377 valid questionnaires were finally obtained after invalid questionnaires were removed, with an effective recovery rate of 94.3%. Sports include track and field, basketball, football, volleyball, gymnastics and so on.

3.2. Instruments

3.2.1. Perceived Autonomy Support : the Sport Climate Questionnaire, SCQ-PAS

The study adopts G.C. Williams *et al.*, [5] Perceived Autonomy Support: the Sport Climate Questionnaire, SCQ-PAS, revised by domestic scholars Zhu Xiao na, Li Na and others, SCQ-PAS has a total of 3 dimensions and a total of 15 questions. The scale uses a 7-level evaluation, and the higher the score, the higher the level of the coach's self-support coaching. The overall internal consistency coefficient of the scale is 0.96.

3.2.2. Athlete Engagement Questionnaire, AEQ

Using the Athlete Engagement Questionnaire, AEQ, compiled by Lonsdal *et al.*, and translated and revised by domestic scholar Wang Bin *et al.*, [6], the questionnaire has a total of 16 items, including four dimensions of confidence, dedication, vitality and enthusiasm. In this study, the overall internal consistency coefficient of the athlete input scale was 0.96.

3.2.3. Mental Toughness Index, MTI

The Mental Toughness Index (Mental Toughness Index) compiled by Gucciardi *et al.*, translated and revised by Niu Pengcheng [6], is used in this study. It has 8 items and is of a single dimension. Likert 7-point score is adopted, with 1 indicating 100% non-compliance and 7 indicating 100% compliance. In this study, the internal consistency coefficient of the mental toughness scale was 0.95.

3.3. Data Analysis

Data Analysis SPSS 22.0 (IBM, Armonk, NY, USA) is used to enter questionnaire data for descriptive analysis, reliability analysis, and correlation analysis.

4. RESULTS

Table 1 illustrates the mean (M) and standard deviation (SD) of coach autonomy support, athlete input, and mental toughness, and Pearson analysis is used for correlation coefficients between coach autonomy support, athlete engagement and mental toughness. The results showed that all variables were significantly correlated.

Table 1: Variable Means, Standard Deviation and Correlation Coefficients (n=287)

	Mean	Std	1	2	3
Coach autonomy support	5.55	1.01	1		
Athlete engagement	4.10	0.58	0.54***	1	
Mental toughness	2.41	0.79	0.34***	0.41***	1

5. DISCUSSION

5.1 The direct role of coach autonomy support on athlete engagement

Drawing on the SEM constructed by predecessors, it is shown that structural equations support the chain mediation role of basic psychological needs, coaches improve the level of autonomy support, meet the basic psychological needs of athletes, promote the formation of autonomous motivation, and ultimately improve the level of athletes engagement.

5.2 The direct effect of mental toughness on athletes engagement

Similar empirical studies at home and abroad also found that in the field of sports, as a special psychological advantage of athletes, athletes' mental toughness can positively predict sports involvement [1]. Similarly, Ye Lu also pointed out that mental toughness is one of the individual influencing factors of sports involvement [1]. In addition, in a study conducted by

Zhang Chao in 2016, he selected 232 volleyball players as a sample to analyze the correlation between sports mental toughness and subjective well-being and athlete engagement. The results show that mental toughness has a significant positive predictive effect on athletes' sports involvement.

5.3 Revelation

This study is a practical application of interpersonal dynamics theory to affect athletic performance. Good behavior of coaches can promote better participation in sports training and competition.

5.4 Limitations and Outlook

Shortcomings in this study. Cross-sectional studies. The data collected in this study are cross-sectional in nature and lack tracking data to accurately infer causal relationships between variables.

6. CONCLUSION

Three hypotheses presented in this study are supported. Coach autonomy support significantly positively predicts athlete engagement level; Instructor self-support significantly positively predicts mental toughness.

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